

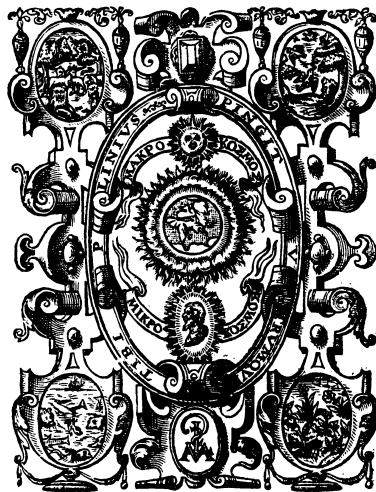
W. Sandys
THE HISTORIE
OF THE WORLD:

Commonly called,
THE NATVRALL HISTORIE OF
C. PLINIVS SECVNDVS.

Translated into English by PHILEMON HOLLAND
Doctor of Physicke.

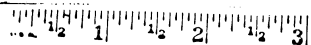
The first Tome:

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LONDON,
Printed by Adam Iſſip.

1634.



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William Stenhouse

The copie of the said Letter, written as touching the
Translation of Plinie.

MI beloued, in twentie yeeres and better, so many tokens of our mutual
loue passing betweene vs, I need not now to professe my affection to
your selfe; and my daily conuersing with you, hath yielded my approba-
tion of your tedious labor in translating Plinie. These few lines there-
fore shall onely serue to witnesse vnto others the deserued account
which for your learning I haue alwaies made of you, and my conceit of
this your trauaile in opening to your countrymen the treasure of Nature: therein to see
and to admire the wisdom, power, and the goodnesse of the onely true God, the Fram-
er of Nature. I am not of their minds, who desire that all humane learning in Arts and
Naturall Philosophie should be reserved vnder locke and key of strange language, with-
out the which no other man should haue access vnto it: For as such knowledge is a branch
of that excellencie wherein man was formed, so the repaire thereof (though it bee not the
chiefe) is yet a thing unworthily neglected, as well in regard of our owne comfort therein
gained, as for the glory of God thereby promoted. And it was the wisdom and provid-
ent hand of the All-sufficient, so to guide the wise heathen in Arts and Nature, that they
should publish such their skill vnto their countrymen in mother tongue: partly to correct
the rudenesse which is in ignorance, and in part to leaue them the more inexcusable: In
which regard, they may in some sort be called, The Prophets and Teachers of the heathen.
And though Plinie and the rest were not able by Natures light to search so far as to find
out the God of Nature, who sitteth in the glorie of light which none attaineth, but contra-
rily in the vanitie of their imagination bewrayed the ignorance of foolish hearts, some
doting vpon Nature her selfe, and others vpon special creatures as their God: yet feare
we not that Christians in so cleare light should be so farre bewitched by such blind teachers,
as to fall before these heathen Idols. Yea, though some of them (as namely Plinie) haue
spoken dishonourably of the onely true God and of his providence, because they knew him
not; which speeches (if it might stand with the lawes of Translation) I could wish were
utterly omitted; yet may we hope that Christian men so long taught by the light of grace
out of the holy word of God, will no lesse therefore giue him his deserued honour, than
when they doe in like sort heare the blasphemie of Sannacherib king of Assur, who sent to
raile vpon the liuing God. I feare not the corrupting of unstable minds anything so much
by these foolish Gentiles which are without, as by the deceitfull spirit of error speaking
in the mouth of men within: such I meane as are within the bosome of the Church. These are
the foxes by whom we feare the spoile of the Lords vines when as the grapes first begin to
cluster; for whose taking I desire that all Gods husbandmen would be more carefull. As
for the speeches of these blind heathen, the true Christian may well thereby be provoked to
extoll the mercie of God, who sitteth in so glorious a light as hath dalled the sharpest sight
of Nature; but for our comfort hath put a raile vpon his glorie, and by his grace hath so
cleared

The Preface to the Reader.

cleared the eye of our vnderstanding, that we might see his face in his beloved, and know him to be the ouely true God, and his blessed prouidence vpon all his creatures. And when they shall perceiue that the wisest Clarke in naturall skill could not learne by the booke of heauen and earth to know their Maker, whose glorie they declare, and handiworkes see out; nor who it was that framed Nature, when by his word he first created them in such excellencie, and then, by his blessing gaue, and by his prouidence working all in all, doth yet maintaine such an operative power, as by the which they are still continued in their kindes: nor how it came to passe that Nature lost her excellencie in all creatures, and her power vnto good was not onely weakened (whence we see her faile in many of her purposes) but also peruerued vnto euill; then (I say) they will the more be stirred up by Gods grace to make reuerent account of the holy Scriptures, which God in rich mercie hath giuen to them to be a light in all things; for to direct them through the errors in Natures blindnesse, and to bring them to the beauenly Ierusalem and happie world of all the bolie where he dwelleth, whom they worship in vnitie and trinitie. Proceed then my beloved friend to bring vnto the birth your second labour; whereof I pray that God may haue honour in the praise of his works throughout nature, and wish you comfort in good acceptance with the reader and your countrie vnto rise and pleasure in the skill thereof. Vnto him which onely hath immortalitie and dwelleth in that light which none attaineth, to God only wise be all honour and glorie. Iunij xij. 1601.

Your louing friend in the Lord,

H. F.

TO THE RIGHT HONOURABLE
SIR ROBERT CECIL KNIGHT, PRINCIPALL
SECRETARIE TO THE QUEENS MAIESTIE,
MASTER OF COVET OF THE WARDES AND LIVERIES,
Chancellor of the Vniuersitie of Cambridge, and one of her
Most Honourable Privie Counsaile.



His friendly acceptance which T. Livius of Padua, hath found in this Realme, since time hee showed himselfe in English need vnto her sacred Maiestie, hath trained over vnto him his neighbour Plinius Secundus, from Verona. Whome, being now arraied in the same habit, yet fearefull to set foot forward in the forreine ground, without the countenance of some worthy personage, who might both giue him his hand at his first entrance, in token of welcome, and also grace him afterwards with a favourable regard to win acquaintance, I humbly present vnto your Honour. For considering the qualitie of the man, a Philosopher discoursing so deeply in all Learning, where may hee looke for better acceptance than of him, who is most iustly styled, Patron of Learning? Which dignitie conferred of late vpon your H. by the generall suffrages of a Noble Vniuersitie (and that for your singular insight in all literature) as a complement to those high places whereto the fauour of a most prudent and iudicious Princeesse hath aduanced you, and the same correspondent to the same wisdom, justice, and eloquence, which concur in your person, like the severall beauties of the Rubie, Amethyst, and Emeraud meeting in one faire Opal, giue the lovely lustre to your other titles, no lesse, than if the nine Muses and Apollo, represented naturally in that rich Agat of K. Pyrrhus, were inserted therein. Now if, as wee read of * Alexander * Magnificus and * Demetrius, two mightie monarchs, who amid their desseines and making conquests and besieging cities, beheld other whiles Apelles and Protogenes how they handled their pencils; it may please your Honour betweene the managing of State-affaires vnder her Maiestie, to cast your eie eftsomnes vpon Plinie for your recreation, and see how liuely hee depeincth, not Venus Anadyomene, drawne haply to the patterne of Campaspe a courtizan; nor Ialysus with his dog, in which picture, fecit Fortuna naturam; but euen Nature her selfe, the immediat mother and nourse of all things vnder the Almighty; I shall not onely thinke him patronized thereby and sufficiently commended to the world, but also acknowledge my selfe much deuoted to your H. and bound for euer to pray for the increase thereof, with long life and true happinesse.

Your Honours most readie at command,

Philemon Holland.

The Preface to the Reader.

HAppie were they in times past reputed (and not vnworthily) who had that gracious and heavenly gift, *aut facere scribenda, aut scribere legenda*: that is to say, either to do such things as deserued to bee written, or to write that which was worth the reading. Those that could not attaine to these two branches of felicitie, and yet vtterly misliked idlenes, contented themselves in a third degree, namely to take in hand the old workes of their ancestors, and by new labours to immortalize their memorie. Thus *Nicophanes* (a famous painter in his time) gaue his mind wholly to antique pictures, partly to exemplifie and take out their patternes after that in long continuance of time they were decayed; and in part to repaire and reforme the same, if haply by some iniurious accident they were defaced. The ingenious mind of this artizan thus deuoted to antiquitie, as I doe highly commend; so I cannot chuse but embrace his policie, seeking hereby to auoid the enuie and reproofe of others. In this number I must range those learned men in feuerall ages, who to illustrate the monuments left by former writers, haue annexed vnto them their Commentaries; to saue them entire and vncorrupt, haue set thereto iudiciall obseruations; and to publish them for a generall benefit of posteritie, haue translated the same into their mother language. As for my selfe, since it is neither my hap nor hope to attaine to such perfection, as to bring forth somewhat of mine owne which may quit the paines of a reader; and much lesse to performe any action that might minister matter to a writer; and yet so farre bound vnto my native country and the blessed state wherein I haue liued, as to render an account of my yeeres passed and studies employed, during this long time of peace and tranquillitie, wherein (vnder the most gracious and happy gouernement of a peerlesse Princeesse, assisted with so prudent, politique, and learned Counsell) all good literature hath had free progresse and flourished, in no age so much: mee thought I owed this dutie, to leaue for my part also (after many others) some small memoriall, that might giue testimonie another day what fruits generally this peaceable age of ours hath produced. Endeauoured I haue therefore to stand in this third ranke, and bestowed those houres which might be spared from the practise of my profession, and the necessarie cares of this life, to satisfie my countrimen now liuing, and to gratifie the age ensuing, in this kinde. Like as therefore I haue trauelled alreadie in *Titus Livius* a renowned Historiographer, so I haue proceeded to deale with *Plinius Secundus* the elder, as famous a Philosopher. Now albeit my intention and only scope was, to doe a pleasure vnto them that could not read these authours in the original: yet needs I must confesse that euen my selfe haue not only gained thereby encrease of the Latine tongue (wherein these workes were written) but also growne to further knowledge of the matter and argument therein contained. For this benefit wee reape by studying the bookes of such ancient authours,

That

That the oftner we read them ouer, the more still we find and learne in them: as beeing so iudiciously and pitifully penned, that, as the Poet said very well, *decies repetita placent*. Well may the newest songs and last deuised plaies delight our ears at the first, and for the present rauish our senses: like as horarie and carely Summer fruits content our tast and please the appetite: but surely it is antiquitie that hath giuen grace, vigor, and strength to writings; euen as age commendeth the most generous and best wines. In which regard, and vpon this experience of mine owne, I nothing doubt but they also whom I might iustly feare as hard censours of these my labours, will not onely pitie mee for my paines, but also in some measure yeeld mee thanks in the end, when either by the light of the English (if they be young students) they shall bee able more readily to goe away with the darke phrase and obscure constructions of the Latine; or (being great schollers and taking themselves for deepe Critiques) by conferring the one with the other, haply to espie wherein I haue tripped, they shall by that meanes peruse once againe, and consequently gather new profit out of that authour whom peraduenture they had laid by for many yeers as sufficiently vnderstood. When some benefit (I say) shall accrew vnto them likewise by this occasion, I lesse dread their fearefull doome, to which so wilfully I haue exposed my selfe. Well I wist, that among the Athenians, order was taken by law, That an entervlude newly acted should be heard with silence and applause: which custome, as it was respectiue and fauourable to the first endeaours of the actors, so it implied an ineuitable danger of hissing out an vtter disgrace, if afterwards they chanced to misse and faile in their parts. Hauing shewed my selfe once before vpon the stage, presuming vpon this priuiledge and the curesse of the theatre, I might haue now sitten still and so rested: In mounting vp thus soon againe, I may seeme either in the assured confidence of mine owne worthinesse, to proclaime a challenge to all mens censures; or else vpon a deepe conceit of some generall conuiniencie make reckoning of an extraordinarie and wonderfull fauor. But as the choise that I haue made to publish the monuments of other men, without fathering any thing of mine owne, doth excuse and acquit mee for the one; so the froward disposition of carpers in these daies wherein wee liue, will checke the other. Howbeit considering such paines vndergone by me one man, for the pleasure of so many; so much time spent of mine, for gaining time to others; and some opportunities of privat lucre ouerslipped and lost, to win profit vnto all; I feare not but these regards may deserue a friendly acceptance, & counterweigh all defects and faults escaped, whatsoeuer. The persuasion hercof, but principally the priuite of my affectionat loue vnto my country (which assured me of a safe-conduct to passe peaceably through their hands who are of the better sort and well affected) induced mee to a resolution not onely to enter vpon this new taske, but also to breake through all difficulties, vntill I had brought the same, if not to a full and absolute perfection, yet to an end and final conclusion. Besides this naturall inclination and hope which carried mee this way, other motiues there were that made faile and set mee forward. I saw how diuerse men before me had dealt with this authour, whiles some laboured to reforme whatsoeuer by iniurie of time was growne out of frame: others did their best to translate him into their own tongue, and namely, the Italian and French: moreover, the Title prefixed thereto so vniuersall as it is, to wit, *The Historie of the World*,

The Preface to the Reader.

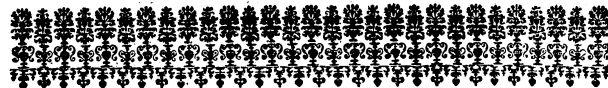
or *Reports of Nature*, imported (no doubt) that hee first penned it for the general good of mankind. Ouer and besides, the Argument ensuing full of varietie, furnished with discourses of all matters, not appropriate to the learned only, but accommodat to the rude peasant of the country; fitted for the painefull artizan in towne and citie: pertinent to the bodily health of man, woman, and child; and in one word, suiting with all sorts of people living in a societie and common-weale. To say nothing of the precedent giuen by the authour himselfe who entitled the same, not with any affected phrase, but sorting well with the capacitee euen of the meanest and most vnlettered: who also translated a good part thereof out of the Greeke. What should I alledge the example of former times, wherein the like hath euermore been approued and practised? Why should any man therefore take offence hereat, and enuie this good to his naturall country, which was first meant for the whole world? and yet some there be so grosse as to giue out, That these and such like bookes ought not to be published in the vulgar tongue. It is a shame (quoth one) that *Linie* speaketh English as hee doth: Latinitis onely are to bee acquainted with him: as Who would say, the fouldrour were to haue recourse vnto the vniuersitie for militarie skill and knowledge: or the scholler to put on armes and pitch a campe. What should *Plinie* (saith another) bee read in English, and the mysteries couched in his bookes divulged: as if the husbandman, the mason, carpenter, goldsmith, painter, lapidarie, and engrauer, with other artificers, were bound to seeke vnto great clerkes or linguists for instructions in their feuerall arts. Certes, such *Mom* as these, besides their blind and erroneous opinion, thinke not to be honourably of their native country and mother tongue as they ought: who if they were so well affected that way as they should be, would wish rather, and endeavour by all meanes to triumph now ouer the Romans in subduing their literature vnder the dent of the English pen, in requitall fo the conquest sometime ouer this Island, achieved by the edge of their sword. As for our speech, was not Latine as common and naturall in Italie, as English here with vs. And if *Plinie* faulted not but deferred well of the Romane name, in laying abroad the riches and hidden treasures of Nature, in that Dialect or Idiom which was familiar to the basest clowne: why should any man be blamed for enterprising the semblable, to the commoditie of that country in which and for which he was borne. Are wee the onely nation vnder heauen vnworthie to tast of such knowledge? or is our language so barbarous, that it will not admit in proper termes a forreine phrase? I honor them in my heart, who hauing of late daies troden the way before mee in *Plutarch*, *Tacitus*, and others, haue made good prooue, that as the tongue in an Englishmans head is framed so flexible and obsequent, that it can pronounce naturally any other language; so a pen in his hand is able sufficiently to expresse Greeke, Latine, and Hebrew. And my hope is, that after mee there will arise some industrious *Flavij* who may at length *cornicum oculos configere*. For if my selfe, a man by profession otherwise carried away, for gifts farre inferior to many, and wanting such helps as others bee furnished with, haue in some sort taught those to speake English who were supposed very vntoward to bee brought vnto it; what may be expected at their hands, who for leisure may attend better; in wit are more pregnant; and being graced with the opinion of men and fauour of the time, may attempt what they will, and effect whatsoever

The Preface to the Reader.

uer they attempt with greater felicitie? A painfull and tedious trauaile I confesse it is; neither make I doubt but many doe note mee for much follie in spending time herein, and neglecting some compendious course of gathering good, and pursuing vp pence. But when I looke backe to the example of *Plinie*, I must of necessity condemn both mine owne sloth, and also reprove the supine negligence of these daies. A courtiour he was, and great fauourit of the *Vespasians* both father and sonne: an oratour besides, and pleaded many causes at the barre: a marriall man withall, and serued often times a leader and commander in the field: within the citie of Rome hee managed civile affaires, and bare honourable offices of State. Who would not thinke but each one of these places would require a whole man? and yet amid these occasions wherewith he was possessed, he penned Chronicles, wrote Commentaries, compiled Grammaticall treatises, and many other volumes which at this day are vterly lost. As for the Historie of Nature now in hand, which sheweth him to be an excellent Philosopher and a man accomplished in all kinds of literature (the onely monument of his that hath escaped all dangers, and as another *Palladium* benee reserved entire vnto our time) wherein hee hath discoursed of all things euen from the starrie heauen to the centre of the earth; a man would marueile how hee could possibly either write or doe any thing else. But considering the agilitie of mans spirit alwaies in motion: an ardent desire to benefit posteritie, which in these volumes hee hath so often protested; his indefatigable studie both day and night, euen to the iniurie of nature, and the same continued in euerie place, as well abroad as within-houfe; in his iourney vpon the high way, where his manner was to read and to indite; in his ordinarie passage through the streets betweene court and home, where he gaue himselfe no rest, but either read, or else found his notarie worke to write; and for that purpose rode vsually in an easie litter, with the said Notarie close by his side: lesse wonder it is, that hee performed his service to Prince and state according to his calling; and withall deliuered vnto posteritie so many fruits of wit and learning. For what is not the head of man able to compasse? especially making saile with a seruent desire and resolution to see an end, and besides taking the vantage of all moments, and losing no time, whereof hee was *minus omnium parcissimus*. Touching his affection to search into the secrets of Nature, it was that and nothing else that shortened his daies, and hastened his vntimely death: for hauing liued not much about the middle age of man, desirous he was to know the reason, Why the hill *Nesuvius* burned as it did? and approached so neare, that with the strong vapours and smoake issuing from thence, his breath was suddenly stopped, and himselfe found dead in the place: a man worthie to haue liued for euer. What remaineth now, but onely to recommend vnto my countrymen this worke of his (which for mine owne part I wish to bee immortal) were it not for one scruple to bee cleared, which at the first troubled my selfe a little, and might peraduenture otherwise offend some readers. In attributing so much vnto Nature, *Plinie* seemeth to derogat from the Almighty God, to him *omnipotens*; and therefore dangerous (saith one) to bee divulged. Farre be it from mee, that I should publish any thing to corrupt mens manners, and much lesse to preiudice Christian religion. After conference therefore with sundrie diuines about this point, whom for their authoritie I reuerence; whose learning I honor and embrace; and in whom for iudgement & synceritie of religion

The Preface to the Reader.

I rest, confirmed I was in my first purpose, and resolved to finish that which I had begun, namely, not to defraud the world of so rich a gem, for one small blemish appearing therein. And that it may appeare how I did not abound in mine owne sence, but had regard as well to satisfie the conscience of others as mine owne, I haue thought good to annex immediately hereunto, in manner of a Collarie, the opinion of one graue and learned preacher concerning this doubt, as it was deliuered vnto mee in writing; which for that it is grounded vpon sufficient reasons, and according with the iudgement of the rest, the lesse I respect the rash projects of some fantasticall spirits: nothing doubting but the same will settle the minds of the weake, and free my labours from the taint of irreligion.



THE FIRST BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Preface or Epistle Dedicatorie to * Prince Vespasian, his [friend]
C. Plinius Secvndus sendeth greeting.

* i. Titus



Hese bookes containing the Historie of Nature, which a few daies since I brought to light (a new worke in Latine, and namely among the Romanes your Citizens and Countrymen) I purpose by this Epistle of mine to present and consecrate vnto you, most sweet and gentle Prince [for * this title accordeth fittest vnto you, seeing that the name of [* Most mighty] forteth well with the age of the Emperor your father:] which haply might seeme boldnesse and presumption in me, but that I know how at other times * you were wont to haue some good opinion of my toies and fooleries. Where, by the way, you must giue me leaue to mollifie a little the verses which I borrow of my countryman Catullus. (See also how I light vpon * a word vsed among souldiers, which you are acquainted with, since time we serued both together in the campe:) For he as you wot full well, changing the former fillables of his verses one for another, made himselfe somewhat more harsh than he would seeme to be vnto the fine eares of his familiar friends, the Veranioli & Fabulli. And withall, I would be thought by this my malapert writing vnto you, to satisfie one point, which, as you complained in your answer of late to another rude & audacious letter of mine, I had not performed, to wit, That all the world might see (as it were vpon record) how the Empire is managed by you and your father equally: and notwithstanding this imperial majestie wherunto you are called, yet is your affability and maner of conuersing with your old friends, fellow-like, & the same that alwaies heretofore it had been. For albeit you haue triumphed with him for your noble victories, bin Censor in your time, and Confull * six times, executed the sacred authoritie of the Tribunes, Patrones, and protectors of the Commons of Rome, together with him: albeit I say you haue otherwise shewed your noble heart in honouring and gracing both the court of the Emperor your father, and also the whole state of Knights and Gentlemen of Rome, whiles you were captaine of the guard, and grand-master of his house and roiall pallace (in which places all, you carried your selfe respectiue to the good of the Commonweale) yet to all your friends, and especially to my selfe, you haue borne the same countenance as in times past within the campe, when wee serued vnder the same colours, and lodged together in one pauilion. So as in all this greatnesse and high estate whereunto you are mounted, there is no other change and alteration scene in your person but this, That your power is now answerable to your will, & able you are to doe and performe that good which you euer meant, and still intend.

* Suetonius

* Maximus

* Namque in
solibus m. ad
esse aliq. p.
tari m. ad.
* Cometrans.

It seems the
Pliny read out
in a casual
place. namque
N. ad. esse aliq.
gu. a mea sol
tari, with his
ded was but
an ha d con
solition and
couching g
of the words.

* Six times, or re
the Sextilis,
out of Saturne
nim.

And howeuer this great maiestie, resplendent in you on euery side, in regard of those high dignities aboue rehearsed, may induce the whole world besides to reuerence your person in all obeisance; yet I for my part am armed onely with a kinde of audacitie and confidence to shew my dutie and deuoir vnto you, after a more familiar manner than others: and therefore, this my aduenturous rashnes, whatsoeuer, you must impute vnto your own courtisie: and if I chauce to fault therein, thanke your selfe therefore, and seeke pardon at your own hands. Well, bawfulnesse I haue laid aside, and put on a bold face, and all to no purpose. For why? although your gentlenesse and humanitie be one way attractive, and induceth me to draw neare vnto your presence, yet another way you appeare in great maiestie: the sublimitie I say of your mind, your deepe reach, high conceit, and rare perfections, set me as far back: no lictors & huishers marching before you, so much, that I dare not approach. In the first place: was there euer any man, whose words passed from him more powerfull, & who more truly might be said to flash forth as lightning the force of eloquence? What Tribune was there known at any time to perswade & moue the people with good language, more effectually? How admirable was your vtterance in those publicke Orations, wherein you hundred out the praise-worthy acts of the Emperour your father, that all the grand-place rung therewith? what a singular testimonie shewed you of rare kindnesse & affection to your brother, in setting out his praises to the full? As for your skill in Poesie, how excellent, how accomplished is it. Oh the bounty of your mind! Oh the fertility of your pregnant spirit: that you should find means to imitate, yea, and to match your * brother in that kind. But who is able boldly to giue an estimate of these gifts to their worth? How may a man enter into the due consideration thereof, without feare of exquisit censure, and exact iudgement of your wit, especially being prouoked and challenged thereunto as you are. For to say a truth, the case of them who publish a worke in generall tearmes, is farre vnlike to theirs that will seem to dedicat it particularly, and by name, to a Prince so iudicious as your selfe. For had I set forth this my booke simply, and staied there without any personal dedication, the I might haue come vpon you & said, Sir, what should a mightie Commander and Generall of the field, as you are, busie himselfe to read such matters? written these treatises were to the capacitie of the vulgar people, for base commons, rude husbandmen, and peasants of the countrie, for poore artificers; and in one word, to gratifie them who had no other means of great emploiment, nor time & leisure but to studie vpon such points and nothing else: What should you make your selfe a censor of this worke: and verily, when I made first shew of this enterprise of mine, I never reckned you in the number of those iudges that should passe their sentence vpon these writings; I wist full well, that you were a greater person far, & I supposed that you would neuer abase your selfe nor stoupe so low as to read this booke of mine. Ouer and besides, a common case it is, and incident to men of deepe learning and great conceit, that otherwhiles exception may be taken against them, and their iudgement reiecte in this behalfe. Euen *M. Tullius* that renowned Orator, and who for wit and learning had not his fellow, taking the vantage of that libertie, with the benefit thereof: and (whereat wee may well maruell) maintaineth the action by an aduocate, and taketh example (for his defence) from *Lucilius*: for in one part of his workes thus hee saith, *I would not haue learned Perseus to read these bookes of mine, lest I am that hee should censure mee.*

As

As for *Laelius Decimus*, I am content to submit them to his opinion. Now if such an one as *Lucilius*, who was the first that durst controule the writing of others, and tooke vpon him to scoffe at their imperfections, had rather thus to say; if *Cicero* tooke occasion to borrow the said speech of him for to serue his owne turne, and namely in his Treatise of Politiques, where he wrote of a Common-weal; how much greater cause haue I to distrust my self, and to decline and auoid the censure of some iudge of deepe vnderstanding? But cut I am from this refuge and meanes of defence, in that I expressly make choise of you in this dedication of my worke: for one thing it is to haue a iudge, either pricked by pluralitie of voices, or cast vpon a man by drawing lots; and a farre other thing to chuse and nominate him from all others: and great difference there is between that cheare and prouision which we make for a ghost solemnly bidden and invited, and the suddaine fare and intertainment which is ready for a stranger who commeth to our house vnlooked for. *Cato*, that professed enemy of ambition, vain-glory, and indirect suit for offices, who took as great contentment in those estates and dignities which he refused and reiecte, as in them which he enioied, attained to this good name of vprightnesse and sinceritie, that when in the hottest broile about election of Magistrates that euer was in his time, they that stood therefore, put into his hands their mony vpon trust as a cautionary pawne and assurance of their integritie and fidelitie that way; they professed that they did it in testimony of their conceit of his equitie and innocence, the chiefe and onely thing that a man is to regard in this life: whereupon ensued the noble and memorable exclamation of *M. Cicero*, who speaking of the said *Cato*, brake out into these words: Oh gentle *M. Porcius*, how happy and blessed art thou, whom no man was euer so hardie as to sollicite to any leaud thing, or contrary to right and honestie! *L. Scipio*, surnamed *Africaneus*, at what time as hee appealed vnto the Tribunes of the Commons, and besought their lawfull fauour (among whom, *C. Gracchus* was one, a man whom hee tooke for his mortall enemy) presuming vpon the goodness of his cause, gaue out and said, That his very enemies, if they were his iudges, could not chuse but quit him, and giue sentence on his side. Thus wee see how euerie man maketh him peremptorily the supreme and highest iudge of his cause, whom himselfe chuseth and appealeth vnto: which manner of choise the Latines call *Prouocatio*. As for your selfe verily, who are set in the most eminent & chiefe place among men, and otherwise endued with singular eloquence and profound knowledge, no maruell is it, if those that doe their dutie vnto you, salute you, kisse your hand, and come with great respect and reuerence: In which regard, exceeding care aboue all things would be had, that whatsoeuer is said or dedicated vnto you, may becom your person, and be worth acceptation. And yet the gods reiect not the humble prayers of poore countrey peasants, yea, and of manie nations, who offer nothing but milke vnto them: and such as haue no Incense, find grace and fauour many times with the oblation of a plaine cake made onely of Meale and salt; and neuer was any man blamed yet for his deuotion to the gods, so he offered according to his abilitie, were the thing neuer so simple.

For mine owne part, challenged I may be more still for this my importune and inconsiderat boldnesse, in that I would seeme to present these bookes vnto you, comprised of so slender stuffe and matter as they be: for therein can be touched no

Plinies Epistle to T. Vespasian.

great wit (which otherwise in me was euer meane and simple) neither admit they any digressions, orations, speeches, and discourses, ne yst admirable cases and variable chanes, or any other occurrent, either pleasant to rehearse, or delectable to heare. The truth is this, the nature of all things in this world, that is to say, matters concerning our daily and ordinarie life, are here deciphered and declared, and that in barrein terms, without any goodly shew of gay and glorious phrases: and whatsoeuer I haue put downe, concerne it doth the basest points thereof, inso-much as for the most part I am to deliver the thing in hand, either in rusticall speech, or else in forraigne, nay, in barbarous language, such also as may not well be vttered, but with refering honour to the hearers, and reuerence to the readers.

Moreouer, the way that I haue entred into, hath not bin troden beforetime by other writers, being indeed so strange and vncommon, as a mans mind would not willingly trauell therein. No Latin author among vs hath hitherto once ventured vpon the same argument, no one Grecian whatsoever hath gone through it and handled all: and no maruell, for many of vs loue not to take any paines, but study rather to pen matters of delight and pleasure. True it is, I must needs say, that others haue made profession hereof, but they haue done it with such subtiltie and deepenesse, that all their trauels and writings by that means, lie as they were dead and buried in darkenesse. Now come I, and take vpon me to speake of euery thing, and to gather as it were a compleat body of arts and sciences (which the Greeks call *ἐπιστήμη*) that are either altogether vnknowne, or become doubtfull, through the ouermuch curiositie of fine wits: again, other matters are deciphered in such long discourses, that they are tedious to the readers, inso-much as they loath and abhor them. A difficult enterprise it is therefore to make old stufte new, to giue authoritie & credit to nouelties, to polish and smooth that which is worne and out of vse, to set a glosse and lustre vpon that which is dim and darke, to grace & countenance things disdained, to procure beleefe to matters doubtful; & in one word, to reduce nature to all, and al to their own nature. And verily to giue the attempt only and shew a desire to effect such a desseigne as this, although the same be not brought about and compassed, were a braue and magnificent enterprise. Certes of this spirit am I, that those learned men and great students, who making no stay, but breaking through all difficulties, haue preferred the profit of posteritie before the tickling and pleasure of itching eares in these daies; which I may protest that I haue aimed at, not in this worke only, but also in other of my bookes already: and I professe, that I wonder much at *T. Livius*, otherwise a most renowned & famous writer, who in a preface to one of his bookes of the Roman history which hee copied from the foundation of Rome, thus protested, That hee had gotten glorie ynough by his former writing, and might sit still now & take his ease, but that his mind was so restless, and so ill could abide repose, that contrariwise it was fed and nourished with trauel, & nothing else. But surely me thinks, in finishing those Chronicles, he should in dutie haue respected the glory of that people which had conquered the World, and aduanced the honour of the Romane name, rather than displayed his owne praise and commendation: Ywis, his demerit had bene the greater, to haue continued his story as he did, for loue of the subiect matter, and not for his priuat pleasure; to haue I say performed that peece of worke more to gratifie the state of Rome, than to content his owne minde and affection. As touching my selfe (forasmuch as *Domitius Pison* saith, That bookes ought to be

Plinies Epistle to T. Vespasian.

treasuries & store houses indeed, and not bare and simple writings) I may be bold to say and averse, That in 36 bookes I haue comprised 20000 things, all worthe of regard & consideration, which I haue recollected out of 2000 volumes or thereabout, that I haue diligently read (and yet very few of them there be that, men learned otherwise, and studious, dare meddle withall, for the deepe matter and hidden secrets therein contained) and those written by 100 feuerall elect and approved authors: besides a world of other matters, which either were vnknowne to our forefathers and former writers, or else afterward inuented by their posteritie. And yet I nothing doubt that many things there be, which either surpass our knowledge, or else our memorie hath ouerslipped: for men we are, and men employed in many affaires. Moreouer, considered it would be, that these studies wee follow at vacant times and stollne houres, that is to say by night season onely; to the end that you may know, how wee to accomplish this haue neglected no time which was due vnto your seruice: The daies we wholly employ and spend in attendance about your person; we sleepe onely to satisfie nature, euen as much as our health requireth, and no more; contenting our selves with this reward, That whiles wee study and muse (as *Varro* saith) vpon these things in our closet, we gaine for many houres to our life; for surely we liue then only, when we watch and be awake. Considering now those occasions, those lets and hinderances aboue-named, I had no reason to presume or promise much; but in that you haue emboldened me to dedicate my bookes vnto you, your selfe performeth whatsoever in me is wanting: not that I trust vpon the goodness and worth of the worke, so much, as that by this means it will be better esteemed and shew more vendible: for many things there be that seeme right deare and be holden for precious, only because they are consecrate to some sacred temples.

As for vs verily, we haue written of you all, your father *Vespasian*, your selfe, and your brother *Domitian*, in a large volume which wee compiled touching the historie of our times, beginning there where *Aufidius Bassus* ended. Now if you demand and aske me, Where that historie is? I answer, that finished it was long since, and by this time is iustificed and approved true by your deeds: otherwise I was determined to leave it vnto my heire, and giue order that it should be published after my death, lest in my life time I might haue bin thought to haue curried fauour of those, whose acts I seemed to pen with flatterie, & beyond all truth. And therefore in this action I do both them a great fauour who haply were minded before me to put forth the like Chronicle, and the posteritie also which shall come after; who, I make reckning and know, will enter into the lists with vs, like as we haue done with our predecessors. A sufficient argument of this my good mind & frank hart that way you shall haue by this, That in the front of these bookes now in hand, I haue set down the very names of those writers, whose help I haue used in the compiling of the: for I haue euer bin of this opinion, That it is the part of an honest minded man, & one that is full of grace & modesty, to confesse frankly by whom he hath profited & gotten any good: not as many of those vnthankful persons haue done, whom I haue alledged for my authors. For to tell you a plain truth, know thus much from me, that in conferring the together about this worke of mine, I haue met with some of our moderne writers, who word for word haue exemplified & copied out whole bookes of old authors, and neuer vouchsafed so much as the naming of them, but haue taken their labors & trauels to themselves.

Plinies Epistle to T. Vespasian.

And this they haue not done in that courage and spirit to imitate, yea & to match them as *Virgil* did *Homer*: much lesse haue they shewed that simplicitie and apert proceeding of *Cicero*, who in his bookes of *Pollicie* and *Common-weale* professeth himselfe to hold with *Plato*; in his *Consolatorie Epistle* written to his daughter, confesseth and saith plainly thus, I follow *Crantor*, and *Panæti* likewise in his *Treatise* concerning *Offices*. Which worthy monuments of his (as you know well) deserue not onely to be seene, handled, and read daily, but also to be learned by heart euery word. Certes, I hold it for a point of a base and feruile mind, and wherein there is no goodnesse at all, to chuse rather to be surprisid and raken in theft, than to bring home borrowed good, or to repay a due debt, especially when the occupying, vse, and interest thereof, hath gained a man as much as the principall.

Now as touching the titles and inscriptions of Bookes, the Greekes therein haue a wonderfull grace and great felicitie: some haue intituled them *ἑαυτοῖς*, whereby they would giue vs to vnderstand of A sweet hony-combe: * others *ὅπως ἀναγινώσκῃς*, that is to say, The horne of plenty and store: in such sort, that whosoever readeth these goodly titles, must needs hope for some great matters in such bookes, and as the proverb goeth, looke to drinke there or else no where, a good draught of hens milke. You shall haue moreouer their bookes set out with these glorious inscriptions, The *Muses*, The * *Pandects*, * *Enchiridion*, * *Αναμνηστικόν*. Goodly names all, and such, as who would not make default of appearance in court, and forfeit a recognisance or obligation, to vnclasp such bookes and turne ouer the leafe? But let a man enter into them and reade forward, Lord! how little or no substance at all shall he find within the verie mids, answerable to that braue shew in the front or outside thereof? As for our countrey men (Latines I meane, and Romans) they be nothing so fine and curious as the Greekes, grosse are they in comparison of them in giuing titles to their books: they come with their Antiquities, Examples and Arts, and those also be such authors as are of the most pleasant and finest inuention amongst them all. *Valerius* who (as I take it) was named *Antias*, both for that hee was a Citizen of Antium, and also because the ancestors of his house were so called, was the first that gaue to a booke of his owne making, the title of *Lucubrator*, as a man would say, Candleworke or Night-studie. *Varro*, he tearmeth some of his Satyres *Seculuxes* and *Flexibula*. *Diodorus* among the Greekes was the first that laied aside roysish titles, and because he would giue some braue name to his Chronicles, intituled it *Bibliotheca*, i. a Librarie. *Apion* the famous Grammarian, euen hee whom *Tiberius Cæsar* called the Cymball of the world (whereas indeed hee deserued to be named a Timbrill or Drum rather, for ringing and sounding publique fame) was so vain-glorious, that he supposed all those immortalized, vnto whom hee wrote or composed any pamphlet whatsoever. For mine owne part, although I nothing repent mee that I haue deuised no pretier Title for my Booke than plaine *Naturalis Historia*, i. The reports of Nature, without more ceremonie; yet because I would not be thought altogether to course and rate the Greekes, I can be content, nay I am willing to bee thought in this behaile like vnto those excellent grand-masters in Greece, for Painting and Imagerie, whom you shall finde in these Reports of mine, to haue intituled those rare and absolute peeces of worke (vvhich the more wee view and looke vpon, the more wee admire and

wonder

Plinies Epistle to T. Vespasian.

wonder at for their perfection) with halfe titles and vnperfect inscriptions, in this manner, *Apelles* * *went in hand with this Picture*: or, *Polyeetus* was a making * *Apelles facit* *this Image*: as if they were but begun, neuer finished and laid out of their hands: which was done (no doubt) to this end, that for all the varietie and diuersitie of mens iudgements scanning of their workmanship, yet the Artificer thereby had recourse to make excuse; had meanes (I say) to craue and haue pardon for any faults and imperfections that could be found, as if hee meant to haue amended any thing therein amisse or wanting, in case hee had not bene cut off and preuented by death. These noble workemen therefore herein shewed right great modestie, that they set superscriptions vpon all their painted tables, pourtraitures and personages, as if they had bene the last peeces of their workmanship, and themselves disabled by vnexpected death that they could not make a finall end of any one of them: for there were not knowne (as I take it) about three in all, which had their absolute titles written vpon them in this forme, *Ille fecit. i. This Apelles wrought*: and those pictures will I write of in place conuenient: By which it appeared evidently, that the said three tables were fully finished, and that the workeman was so highly contented with their perfection, that he feared the censure of no man: No maruaile then, if all three were so much enuied and admired throughout the world, no maruaile if euery man desired to be maker of them.

Now For my selfe, I know full well and confesse freely, that many more things may be added, not to this story alone, but to all my bookes that I haue put forth alreadie: which I speake by the way, because I would preuent and auoid those fault-finders abroad those correctors and * scourgers of *Homer*, (for surely that is their very name, because I hear say there be certaine Stoike Philosophers, professed Logicians, yea, and Epicurians also (for at Grammarians hands and Criticks I neuer looked for other) who are with child still and trauaile vntill they be deliuered of somewhat against my bookes which I haue set forth as touching Grammar: and for this ten yeares space, nothing is come to light, but euermore the fruit miscarrieth belike before the full time, as the slip of an vnperfect birth; whereas in lesse space than so, the verie Elephant bringeth forth her calfe, be it neuer so big. But this troubleth me neuer a whit, for I am not ignorant that a silly woman, euen an harlot, and no better, durst encounter *Theophrastus*, and write a booke against him, notwithstanding hee was a man of such incomparable eloquence that thereupon hee came by his diuine name *Theophrastus*: from whence arose this proverbe and by-word, *Marie then go chuse a tree to hang thy selfe*. And surely I cannot containe and hold my tongue, but I must needs set downe the verie words of *Caro Censorius*, so pertinent to this purpose; whereby it may appeare, that euen *Caro* himselfe a most worthy personage, who wrote of military Discipline, who had bene brought vp and trained to feats of warre vnder Great *Scipio Africanus*, or rather indeed vnder *Annibal*, who in the end could not endure *Africanus* himselfe, but was able to controll him in martiall affaires: and who besides hauing the conduct as L. Generall of the Romane armie, achieved the better hand ouer his enemies in the field, and returned with victorie: this *Caro* (I say) could not auoid such backbiters and slanderers, but knowing that there would be many of them readie to purchase themselves some name and reputation by reprouing the knowledge and skill of others, brake out into

a cer

* *Apelles facit*

* *Homerum*

* If women may be allowed to controll mens writings we may be ware of our lues and goe hang our selues well enough

* Containing a Catalogue of the Tables
* A manual to be carried at waies in hand.
* Midow
* A Table or Index

Plinies Epistle to T. Vespasian:

a certaine speech against them : And what was it ? I know right well (quoth hee, in that booke aforesaid) that if these writings of mine come abroad once and be published to the view of the world, there will be many step forth to quarrell and caull therewith ; such fellows soonest and most of all who are quite void of vertue and honestie, and know not what belongeth to true honour. But surely say what they will, I let their words runne by, like raine water. It was a prettie speech also and a pleasant apothegme, that *Plancus* vttered in the semblable case : for being informed that *Asinius Pollio* was deuising and framing certaine inuective Orations against him, which should be set forth either by himselfe or his children, after the decease of *Plancus* and not before, to the end that they might not bee answered by him ; hee said readily by way of a scoffe, That none but vaine bugs and hobgoblins vse to fight with the dead: with which word hee gaue those orations such a counterbuffe, that (by the iudgement of the learned) none were accounted afterward more impudent and shamelesse than they. For mine owne part, being sure that these busie bodies shall neuer be able to bite me (and verily *Cato* hath giuen such fellows a proper name, and called them *Vitiligatores*, by a tearme elegantly compounded of vices and quarrels: for to say and go one still in my intended purpose.

Now to conclude and knit vp mine Epistle: knowing as I doe, that for the good of the Commonweale, you should be spared and not impeached by any priuat businesse of your owne, and namely in perusing these long volumes of mine; to preuent this trouble therefore, I haue adioyned immediatly to this Epistle, and prefixed before these books, the Summarie or Contents of euery one: and very carefully haue I endeauoured, that you should not need to read them throughout, whereby all others also after your example, may ease themselves of the like labour: and as any man is desirous to know this or that, he may seeke and readily find in what place to meet with the same. This learned I of *Valerius Soranus* one of our owne Latine writers, who hath done the

like before me and set an Index to these Bookes which
he intituled *Index*.



THE INVENTORIE OR INDEX
CONTAINING THE CONTENTS OF XXXVII
BOOKS, TOUCHING THE HISTORIE OF NA-
TURE, WRITTEN BY C. PLINIVS SECVNDVS, WHICH IS RECEL-
VED FOR THE FIRST BOOKE OF THEM.

¶ The Summarie of euery Booke.



He first Booke containeth the Dedicatorie Epistle or Preface of the whole worke, addressed to *Titus Vespasian* the Emperour. Also the names of the Authors out of which hee gathered the Historie, which he persecuteth in 36 Bookes: together with the Summarie of euery Chapter: and beginneth, *The Books, &c.*

The second, treateth of the World, Elements, and Starres: and beginneth thus, *The World, &c.*

The third, describeth the first and second gulse, which the Mediterranean sea maketh in Europe: and beginneth in this manner, *Hiberto, &c.*

The fourth, compriseth the third gulse of Europe, beginning, *The third, &c.*

The fifth, containeth the description of Affricke, and beginneth thus, *Affricke, &c.*

The sixth, handleth the Cosmographie of Asia, beginning thus, *The sea called, &c.*

The seventh treateth of man, and his inuentions, beginning, *Thus as you see, &c.*

The eighth sheweth vnto vs, land creatures and their kindes, and beginneth after this manner, *Passé we now, &c.*

The ninth, laieth before vs all fishes, and creatures of the water, beginning in this wise, *I haue thus shewed, &c.*

The tenth speakes of flying foules and birds, and beginneth thus, *It followeth, &c.*

The eleventh telleth vs of Insects, and beginneth thus, *It remaineth now, &c.*

The twelfth treateth of drugs and odoriferous plants, beginning, *Thus you &c.*

The thirteenth describeth strange and forreine trees: beginning with these words, *Thus farre forth, &c.*

The fourteenth sheweth of vine-plants, &c. beginning thus, *Thus far forth, &c.*

The fifteenth comprehendeth all fruitfull trees, thus beginning, *There were, &c.*

The sixteenth describeth vnto vs all wild trees, beginning with, *Hiberto, &c.*

The seuenteenth containeth tame trees within hortyards, and beginneth with these words, *As touching the nature, &c.*

The eighteenth booke treateth of the nature of corne, and all sorts thereof, together with the profession of husbandmen, and agriculture, beginning after this manner, *Now followeth, &c.*

The

The first Booke of

The nineteenth discouerseth of Flax, Sparr, and Gardenage, beginning after this manner, *In the former booke, &c.*
 The twentieth sheweth of garden herbes, good to serue both the kitchin for meat, and the Apothecaries shop for medicine, & beginneth thus, *Now will we, &c.*
 The one and twentieth treateth of flours and garlands, & beginneth, *In Cato, &c.*
 The two and twenty containeth the chaplets and medicines made of herbes, with this beginning, *Such is the perfection, &c.*
 The three and twentie sheweth the medicinable vertues of wine, and tame trees growing in hortyards, beginning thus, *Thus haue we, &c.*
 The foure and twentie declareth the properties of wild trees seruing in Physicke, beginneth thus, *Nature, &c.*
 The fve and twentie treateth of the herbes in the field comming vp of their own accord, and thus beginneth, *The excellencie, &c.*
 The six and twentie sheweth of many new and strange maladies, the medicinable vertues also of certaine herbes, according to sundry diseases, beginning thus, *The very face, &c.*
 The seuen and twenty goeth forward to certaine other herbes and their medicines, and thus beginneth, *Certes, &c.*
 The eight and twentie setteth downe certaine receits of remedies in Physicke, drawne from out of man and other bigger creatures, and it beginneth in this manner, *Heretofore, &c.*
 The nine and twentie treateth of the first authours and iuuentors of Physicke, also of medicines taken from other creatures, and beginneth, *The nature, &c.*
 The thirtieth booke speaketh of Magicke, and certaine medicines appropriat to the parts and members of mans bodie, beginning thus, *The vanitie, &c.*
 The one and thirtie containeth the medicinable vertues of fishes and water creatures, with this beginning, *Now follow, &c.*
 The two and thirtie sheweth other properties of fishes, &c. and beginneth in this manner, *Now are we come, &c.*
 The three and thirtie treateth of gold and siluer mines, and hath this beginning, *Time it is, &c.*
 The foure and thirtie speaketh of copper and brasse mines, also of lead, also of excellent brasse-founders and workemen in copper, beginning after this manner, *In the next place, &c.*
 The fve and thirtie discouerseth of painting, colour, and painters, beginning in this sort, *The discourse, &c.*
 The six and thirtie treateth of marble and stone for building, and hath this beginning, *It remaineth, &c.*
 The seuen and thirtie concludeth with pretious stones, and beginneth at these words, *To the end that, &c.*

¶ IN

Plinies Naturall History.

¶ IN THE SECOND BOOKE IS CONTAINED

the discoure of the World, of coelestiall impressions and meteors, as also of them that appeare in the Air, and upon Earth.

Chap.

1. Whether the World be finite and limited within certaine dimensions or no? whether there be many, or but one?
2. The forme and figure of Heauen and the world.
3. The motion of Heauen.
4. Why the world is called Mundus?
5. Of the Elements.
6. Of the seuen Planets.
7. Concerning God.
8. The nature of the fixed starres and Planets: their course and reuolution.
9. The nature of the Moone.
10. The eclipse of Sun and Moone: also of the night.
11. The bignesse of starres.
12. Diuerse inuentions of men, and their obseruations touching the coelestiall bodies.
13. Of Eclipses.
14. The motion of the Moone.
15. Generall rules or canons touching planets or lights.
16. The reason why the same planets seeme higher or lower at sundry times.
17. Generall rules concerning the planets or wandering stars.
18. What is the cause that planets change their colours?
19. The course of the Sunne: his motion: and from whence proceedeth the inequalitye of daies.
20. Why lightnings be assigned to Iupiter.
21. The distances betweene the planets.
22. The harmonie of stars and planets.
23. The geometric and dimensions of the world.
24. Of stars appearing sodainly.
25. Of comets or blasing stars, and other prodigious appearances in the skie: their nature, situation, and sundry kinds.
26. The opinion of Hipparchus the Philosopher as touching the stars, fire-lights, lamps, pillars or beames of fire, burning darts, gapings

Chap.

- of the skie, and other such impressions, by way of example.
27. Strange colours appearing in the firmament.
28. Flames and leams scene in the skie.
29. Circles of guirlands (shewing aboue).
30. Of coelestiall circles and guirlands that continue not, but soone passe.
31. Of many Suns.
32. Of many Moones.
33. Of nights as light as day.
34. Of meteors resembling fierie targuets.
35. A strange and wonderfull apparition in the skie.
36. The extraordinarie shooting and motion of stars.
37. Of the stars named Castor and Pollux.
38. Of the Aire.
39. Of certaine set times and seasons.
40. The power of the Dog-star.
41. The sundrie influences of stars according to the seasons and degrees of the signes.
42. The causes of raine, wind, and clouds.
43. Of thunder and lightning.
44. Whereupon commeth the redoubling of the voice, called Echo.
45. Of winds againe.
46. Diuerse considerations obserued in the nature of winds.
47. Many sorts of winds.
48. Of fodayne blasts and whirle-puffs.
49. Other strange kinds of tempests & storms.
50. In what regions there fall thunderbolts.
51. Diuers sorts of lightnings, and wonderous accidents by them occasioned.
52. The obseruations [of the Tuscanes in old time] as touching lightning.
53. Coniuring for to raise lightning.
54. Generall rules concerning leames and flames of lightning.
55. What things be exempt and secured from lightning and thunderbolts.
56. Of moantrous and prodigious showers of raine,

The first Booke of

Chap.

1. raine, namely of milke, bloud, flesh, yron, wool, bricke, and tyle.
2. The rattling of harness and armour: the found also of trumpets heard from heaven.
3. Of stones falling from heaven.
4. Of the Rain-bow.
5. Of Haile, Snow, frost, Mists, and Dew.
6. Of diuers formes and shapes represented in clouds.
7. The particular propertie of the skie in certaine places.
8. The nature of the Earth.
9. The forme and figure of the earth.
10. Of the Antipodes: and whether there bee any such. Also, as touching the roundnesse of the water.
11. How the water refecth vpon the Earth.
12. Of Seas and riuers navigable.
13. What parts of the earth be habitable.
14. That the earth is in the mids of the world.
15. From whence proceedeth the inequality obserued in the rising and elevation of the stars. Of the eclipses where it is, & wherefore.
16. The reason of the day-light vpon earth.
17. A discourse thereof according to the Gnomon: also of the first Sun-diall.
18. In what places and at what times there are no shadows cast.
19. Where the shadows fall opposite and contrary twice in the year.
20. Where the dayes bee longest, and where shortest.
21. Likewise of Dyals and Quadrants.
22. The diuers obseruations and acceptations of the day.
23. The diuersities of regions, and the reason thereof.
24. Of Earthquakes.
25. Of the chinks and openists of the earth.
26. Signes of earthquake toward.
27. Remedies and helps againg earthquakes comming.
28. Strange and prodigious wonders seen one time in the earth.
29. Miraculous accidents as touching earthquake.

In sum, there are in this booke of histories, notable matters, and worthy obseruations, foure hundred and eigheteen in number.

Latine Authours cited,

M. Varro, Sulpitius Gallus, Tiberius Caesar Emperour, Q. Tubero, Tullius Tiro, & Pifo, T. Livius, Cornelius Nepos, Statius Sebofus, Cassius Antipater, Fabianus, Antias, Mutianus, Cicerus, (who wrote of the Tuscan learning) Tarquinius, L. Aquila, and Sergius Paulus.

Forreine

Chap.

1. In what parts the seas went backe.
2. Islands appearing new out of the sea.
3. What Islands haue thus shewed, and at what times.
4. Into what lands the seas haue broken perforce.
5. What Islands haue bin ioyned to the continent.
6. What lands haue perished by water and become all sea.
7. Of lands that haue fettled and bene swallowed vp of themselves.
8. What cities haue bene ouerflowed and drowned by the sea.
9. Wonderfull strange things as touching some lands.
10. Of certaine lands that alwaies suffer earthquake.
11. Of Islands that flote continually.
12. In what countries of the world it neuer raineth: also of many miracles as well of the earth as other elements hudled vp pell mell together.
13. The reason of the Sea-tides, as well ebbing as flowing, and where the sea floweth extraordinarily.
14. Wonderfull things obserued in the sea.
15. The power of the Moone ouer Sea and land.
16. The power of the Sun and the reason why the sea is salt.
17. Moreover, as touching the nature of the Moone.
18. Where the sea is deepest.
19. Admirable obseruations in fresh waters, as well of fountaines as riuers.
20. Admirable things as touching fire and water ioyned together: also of Malcha.
21. Of Naphtha.
22. Of certaine places that burne continually.
23. Wonders of fire alone.
24. The dimension of the earth as well in length as in breadth.
25. The harmonickall circuit and circumference of the world.

Plinius Natrall Historie

Forreine Authours cited,

Plato, Hipparchus, Timæus, Sostigenes, Patafrus, Necepus, the Pythagoreans, Posidonius, Anaximander, Epigenes, Gnomonius, Euclides, Ceramus the Philosopher, Eudoxus, Democritus, Crisodemus, Thraxillus, Serapion, Dicaearchus, Archimedes, Onofricius, Erasosthenes, Pytheas, Herodotus, Aristotle, Ctesius, Artimidorus the Ephesian, Isidorus Characemus, and Theopompus.

IN THE THIRD BOOKE ARE COMPREHENDED the Regions, Nations, Seas, Townes, Hauens, Mountains, Riuers, with their measures, and people, either at this day known, or in times past, as followeth:

Chap.

1. Of Europe.
2. The length and breadth of Boetia, a part of Spaine, containing Andalusia, and the realm of Grenado.
3. That hither part of Spaine called of the Romans Hispania Citerior.
4. The Prouince Nerbonensis, wherein is Dauphine, Languedoc, and Provançe.
5. Italie, Tiberis, Rome, and Campaine.
6. The Island Corfica.
7. Sardinia.
8. Sicilia.
9. Lipara.
10. Of Locri and the frontiers of Italie.
11. The second gulf of Europe.
12. The fourth region of Italie.

Chap.

13. The fifth region.
14. The sixth region.
15. The eighth region.
16. Of the riuier Po.
17. Of Italie beyond the Po, counted the eleuenth region.
18. Venice, the tenth region.
19. Of Iliria.
20. Of the Alps, and the nations there inhabiting.
21. Illyricum.
22. Liburnia.
23. Macedonie.
24. Noricum.
25. Pannonie, and Dalmatia.
26. Maesia.

In this booke are described 26 Islands within the Adriatick and Ionian seas: their principall cities, townes and nations. Also the chiefe and famous riuers: the highest hills: speciall Islands besides: townes and countries that be perished. In summe, here are comprised notable things, histories, matters memorable, and obseruations to the number of 326.

Latine Writers brought in for testimonye

Turannius Graculus, Cor. Nepos, T. Livius, Cato Censorius, M. Agrippa, M. Varro, Divus Augustus the Emperour, Varro Atacinus, Antias, Hyginus, L. Venus, Mela Pomponius, Curio the father, Celsus Aruntius, Sebofus, Licinius Mutianus, Fabricius Tuficus, L. Atteius Capito, Verrius Flaccus, L. Pifo, C. Alianus, and Paterianus.

Forreine Authours.

Artimidorus, Alexander Polyhistor, Thucydides, Theophrastus, Isidorus, Theopompus, Metrodorus, Scepsius, Callistratus, Xenophon, Lampiscus, Diadorus Syracusanus, Nymphodorus, Calliphanes, and Timagenus.

IN THE FOVRTH BOOKE ARE COMPRISED Regions, Nations, Seas, Townes, Hills, Hauens, Riuers, with their dimensions and people, either now or in times past known: viz.

Chap.

1. Epirus.
2. Aetolia.
3. Locri.

Chap.

4. Peloponnesus.
5. Achaia.
6. Arcadia.

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7. Greece;

The first Booke of

Chap.

7. Greece and Attica.
8. Thessalie.
9. Macedonia.
10. Macedonia.
11. Thracia.
12. The Islands lying between those countries among which, Creta, Euboea, the Cyclads, Sporades; also the Isles within Hellespont near the sea Pontus, within Mæotis, Dacia, Sarmatia, and Scythia.
13. The Islands of Pontus, called Mer Major.

Herein are contained many principall townes and countries, famous rivers; Islands also, besides cities or nations that be perished: in sum, diuerse things, histories, and obseruations.

Latine Authors cited.

M. P. Varro, Cato Censorius, M. Agrippa, Diuus Augustus, Varro Atacinus, Cor. Nepos, Hyginus, L. Vetus, Pomponius Mela, Licinius Mutianus, Fabricius Thufcus, Atticus Capito, and Atticus Philologus.

Of forreine Writers.

Polybius, Hecataeus, Hellanicus, Damastes, Eudoxus, Dicaearchus, Timosthenes, Ephorus, Crater, Grammaticus, Strabon, Antiochus, Callimachus, Arctemidorus, Apollodorus, Agathocles, Eumachius, Siculus the Mæstian, Alexander Polyhistor, Theophrastus, Diodorus, Anaximander, Philistides, Mellech, Dionysius, Aristides, Callidemus, Menachmus, Adasthenes, Anticles, Heracles, Philomen, Menophon, Pythias, Idorus, Philomides, Xenagoras, Apollonius, Strabon, Arctemidorus, Metrodorus, Cleobulus, and Posidonius.

IN THE FIFTH BOOKE ARE CONTAINED

Regions, Nations, Seas, Townes, Hills, Riuer, with their measures, and people, either at this day being, or in times past: that is to say,

Chap.

1. Mauritania.
2. The Province Tingitana.
3. Numidia.
4. Affricke.
5. Cyrene.
6. Lybia Maritima.
7. Islands lying about Affricke, & ouer-against Affricke.
8. The Æthiopians.
9. Asia.
10. Alexandria.
11. Arabia.
12. Syria, Palestina, Phoenice.
13. Idumæa, Syria, Palestina, Samaria.
14. Iudæa, Galilea.
15. Iordan the river.
16. The lake Asphaltites.
17. The Eflenes.
18. The country Decapolis.

Chap.

19. Tyrus and Sidon.
20. The mount Libanus.
21. Syria Antiochena.
22. The mountaine Casus.
23. Coele-Syria.
24. The river Euphrates.
25. The region Palmyra.
26. Hierapolis the country.
27. Cilicia and the nations adioyning: Pamphilia, Iauria, Homonades, Pisidia, Lycania, the mountaine Taurus and Lycia.
28. The river Indus.
29. Laodicea, Apamia, Ionia, and Ephesus.
30. Æolis, Troas Pergamus.
31. Islands affront Asia, the Pamphilian Sea, Rhodus, Samus, and Chius.
32. Hellespont, Myia, Phrygia, Galatia, Nicæa, Bithynia, Bosphorus.

Herein

Plinius Natural History.

Herein you find townes and nations, Principall Riuer, Famous Hills, Islands, and Townes. Also that are lost and perished. In summe, many things, histories, and obseruations memorabell.

Latine Authors alledged.

Agrippa, Suetonius Paulinus, Varro Atacinus, Cornelius Nepos, Hyginus, L. Vetus, Mela, Domitius Corbulo, Licinius Mutianus, Claudius Caesar, Aruntius, Livius the son, Sestius, the Acts and Records of the Triumphs.

Forreine Writers.

King Iuba, Hecataeus, Hellanicus, Damastes, Dicaearchus, Dion, Timosthenes, Philonides, Xenagoras, Arctemidorus, Strabon, Aristotele, Dionysius Arystocritus, Ephorus, Eratosthenes, Hipparchus, Panatius, Serapion Antiochennus, Callimachus, Agathocles, Polybius, Timeus the Mathematician, Herodotus, Mylus, Alexander Polyhistor, Metrodorus, Posidonius who wrote Periplos or Periagesis, Strabon, Perierander, Arctemidorus Sicyonius, Eudoxus, Antigenis, Callistratus, Xenophon Lampiscenus, Diodorus Syracusanus, Hanno, Himilco, Nymphodorus, Calliphon, Arctemidorus, Megasthenes, Idorus, Cleobulus, Aristocriton.

IN THE SIXTH BOOKE ARE CONTAINED

Regions, Nations, Seas, Cities, Hauens, Riuer, with their dimensions, People also that be or haue been, to wit:

Chap.

1. The sea called Pontus Euxinus, beforetime Axenus.
2. The nations of the Paphlagonies and Cappadocias.
3. Cappadocia.
4. The nations of the countrey Themiscyra.
5. The Region Colchica. The Achæi, and the rest in that tract.
6. Bosphorus Cimmerius, and Mæotis.
7. The people about Mæotis.
8. The Armenia both.
9. Armenia the greater.
10. Albania, Iberia.
11. The Scythians and gates Caucasie.
12. Islands in Pontus.
13. Nations about the Scythian Ocean.
14. Media and the gates or streights Caspia.
15. Nations about the Hircane sea.
16. Also other nations confining vpon that Countrey.
17. People of Scythia.
18. The river Ganges.
19. The nations of India.

Townes of name. 195. Nations of account. 566. Famous riuer. 180. Notable hills. 39. Principall Islands. 108. Cities and Nations perished. 195. In summe, there are rehearsed in this booke of other things, histories, and obseruations. 2214.

Latine Authors alledged.

M. Agrippa, Varro Atacinus, Cornelius Nepos, Hyginus, L. Vetus, Mela, Pomponius, Domitius Corbulo, Licinius Mutianus, Claudius Caesar, Aruntius Sestius, Fabricius Thufcus, T. Livius, Seneca, Nigidius.

Forreine

The first Booke of

Forreine writers.

King Iuba, Polybius, Hecataeus, Hellanicus, Damastes, Eudoxus, Dicaearchus, Beto, Timosthenes, Patrocles, Demodamas, Clitarchus, Eratosthenes, Alexander Magnus, Ephorus, Hipparchus, Phanias, Callimachus, Artemidorus, Apollodorus, Agathocles, Polybius, Eumachus Siculus, Alexander Polyhistor, Ammetus, Metrodorus, Pofidonius, Onesicritus, Nearchus, Megasthenes, Diogenes, Aristocreon, Bion, Diodorus, Simondes the younger, Bafles, and Xenophon Lampfacenus.

¶ IN THE SEVENTH BOOKE ARE CONTAINED the wonderfull shapcs of men in diuerſe countries.

Chap.

1. The strange formes of many nations.
2. Of the Scythians, and other people of diuerſe countries.
3. Of monstrous and prodigious births.
4. The transmutation of one ſex into another. Also of twins.
5. Of the generation of man. The time of a womans child-bearing, from ſeuē moneths to eleuen, proued by notable examples out of histories.
6. Of conceptions, and children within the wombe. The ſignes how to know whether a woman goe with a ſonne or a daughter, before ſhe is deliuered.
7. Of the conception and generation of man.
8. Of Agrippa, of thoſe who are borne with the feet forward.
9. Of ſtrange births, namely, by meanes of incision, when children are cut out of their mothers wombe.
10. Of Vopſici, ſuch as being twins were borne aliue, notwithstanding the one of them was dead before.
11. Histories of many children borne at one buſden.
12. Examples of thoſe that were like one to another.
13. The cauſe and manner of generation.
14. More of the ſame matter and argument.
15. Of womens monethly tearmes.
16. The manner of ſundry births.
17. The proportion of the parts of mans body and notable things therein obſerued.
18. Examples of extraordinary ſhapcs.
19. Strange natures of men.
20. Of bodily ſtrength and ſwiftheſſe.
21. Of excellent ſight.
22. Who excelled in hearing.
23. Examples of patience.
24. Who were ſingular for good memorie.
25. The praife of C. Iulius Caſar.

Chap.

26. The commendation of Pompey the Great.
27. The praife of Cato, the firſt of that name.
28. Of valour and fortitude.
29. Of notable wits, or the praifes of ſome for their ſingular wit.
30. Of Plato, Ennius, Virgill, M. Varro, and M. Cicero.
31. Of ſuch as carried a maiſtie in their behauiour.
32. Of men of great authority and reputation.
33. Of certaine diuine and heauenly perſons.
34. Of Scipio Naſica.
35. Of Chaſtitie.
36. Of Pietie, and natural kindeſſe.
37. Of excellent men in diuerſe ſciences, and namely, in Aſtologie, Grammer, and Geometric, &c.
38. Item, Rare peeces of worke made by ſundry artificers.
39. Of ſeruants and ſlaues.
40. The excellencie of diuerſe nations.
41. Of perfect contentment and felicitie.
42. Examples of the varietie and mutabilitie of fortune.
43. Of thoſe that were twice outlawed and baniſhed: of L. Sylla and Q. Metellus.
44. Of another Metellus.
45. Of the Emperour Auguſtus.
46. Of men deemed moſt happy about all others by the Oracles of the gods.
47. Who was canonized a god whiles hee liued vpon the earth.
48. Of thoſe that liued longer than others.
49. Of diuerſe natiuities of men.
50. Many examples of ſtrange accidents in maladies.
51. Of the ſignes of death.
52. Of thoſe that reuiued when they were carried forth to be buried.
53. Of Iudaic death.
54. Of ſepulchres and burials.

55. Of

Plinies Naturall Historie.

Chap.

55. Of the ſoule: of ghoſts and ſpirits.
56. The firſt inuētors of many things.
57. Wherein all nations firſt agreed.

Chap.

58. Of antique letters.
59. The beginning of Barbers firſt at Rome.
60. The firſt deuifers of Dials and Clockes.

In ſumme, there be in this booke of ſtorie ſtrange accidents and matters memorable 747.

Latine Authors alſe adged.

Varrus, Flaccus, Cn. Gellius, Licinius Mutianus, Mutius, Maſſurius, Agrippina wife of Claudius, M. Cicero, Aſinius Pollio, Meſſala, Rufus, Cornelius Nepos, Virgil, Luuie, Cordus, Meſſius, Seboſus, Cornelius Celſus, Maximus Valerius, Troguſ, M. Iulius Figulus, Pomponius Atticus, Peditanus, Aſconius, Sabinius, Cato Cenſorius, Fabius Veſtali.

Forreine Writers.

Herodotus, Ariſteus, Beto, Iſigonus, Crates, Agatharides, Calliphanes, Ariſtotele, Nymphodorus, Apollonides, Philarchus, Damon, Megasthenes, Cleſias, Tauron, Eudoxus, Oneſicritus, Clitarchus, Duris, Artemidorus, Hippocrates the Phyſitian, Aſclepiades the Phyſitian, Hecataeus, Anacreon, Theopompus, Hellanicus, Damasthes, Ephorus, Epigenes, Berofus, Peſſirus, Nceſſus, Alexander Polyhistor, Xenophon, Callimachus, Democritus, Duillius, Polyhistor the Hiſtorian, Strato, who wrote againſt the Propoſitions, and Theoremes of Ephorus, Heraclides Ponticus, Aſclepiades who wrote Tragedies, Philoſophus, Hegelſus, Archimachus, Thucydides, Mneſigiton, Xenagoras, Metrodorus Scepius, Anticidus, and Critodemus.

¶ IN THE EIGHT BOOKE ARE CONTAINED the natures of land beaſts that goe on foot.

Chap.

1. Of land creatures: The good and commendable parts in Elephants: their capacitie and vnderſtanding.
2. When Elephants were firſt yoked and put to draw.
3. The docilitie of Elephants, and their aptneſſe to learne.
4. The clemencie of Elephants: that they know their owne dangers. Also of the ſelneſſe of the Tigre.
5. The perceiuance and memory of Elephants.
6. When Elephants were firſt ſcene in Italie.
7. The combats performed by Elephants.
8. The manner of taking Elephants.
9. The manner how Elephants be tamed.
10. How long an Elephant goeth with young: and of their nature.
11. The countries where Elephants breed: the diſcord and warre betwene Elephants and Dragons.
12. The induſtrie and ſubtil wit of Dragons and Elephants.
13. Of Dragons.
14. Serpents of prodigious bigneſſe: of Serpents named Box.
15. Of beaſts engendred in Scythia, and the

Chap.

- North countries.
16. Of Lions.
17. Of Panthers.
18. The nature of the Tygre: of Camels and the Pard-Cammell: when it was firſt ſcene at Rome.
19. Of the Stag-Wolfe named Chaus: and the Cephus.
20. Of Rhinoceros.
21. Of Onces, Marmolets called Sphinges, of the Crocutes, of common Marmolets, of Indian Bœufes, of Leucrocutes, of Bale, of the Æthiopian Bulls, of the beſt Mantichora, of the Sicorne or Vnicorne, of the Catoblepa, and the Baſiliske.
22. Of Wolves.
23. Of Serpents.
24. Of the rat of India called Ichneumon.
25. Of the Crocodiles and Skinke, and the Ruer-horſe.
26. Who ſhewed firſt at Rome the Water-horſe and the Crocodiles. Diuerſe reaſons in Phyſicke found out by dumb creatures.
27. Of beaſts and other ſuch creatures which haue taught vs certaine hearbes, to wit, the red Deere, Lizards, Swallowes, Tortoiſes, the

The first Booke of

Chap.

- the Weasell, the Stork, the Bore, the Snake, the Panther, the Elephant, Beares, Stockedoues, Houfe-Doues, Cranes, and Ravens.
28. Prognostications of things to come, taken from beasts.
29. What cities and nations haue bin destroyed by small creatures.
30. Of the Hiæna, the Crocuta and Mantichora: of Bieuers and Otters.
31. Of Frogs, sea or sea-Calues, and Stellions.
32. Of Deere both red and Fallow.
33. Of the Tragelaphis: of the Chamæleon, and other beasts that change colour.
34. Of the Tarand, the Lyacon, and the Wolfe called Thoes.
35. Of the Porc-espines.
36. Of Beares, and how they bring forth their whelpes.
37. The rats and mice of Pontus, and the Alps: also of Hedgehogs.
38. Of the Leontophones, the Onces, Graies,

In summe, there be in this Booke principall matters, stories, and obseruations worth the remembrance 788.

Latine Authors alledged.

Motianus, Precilius, Verrius Flaccus, L. Piso, Cornelius Valerianus, Cato Censorius, Fensitella, Tragus, Albius, Columella, Virgil, Varro, Lu. Metellus Scipio, Cornelius Celsus, Nigidius, Trebius Niger, Pomponius Mela, Manlius Sura.

Forreine writers.

King Iuba, Polybius, Onesicritus, Isidorus, Antipater, Aristotle, Demetrius the naturall Philosopher, Democritus, Theophrastus, Euanthes, Agrippa who wrote of the *Olympionica*, Hiero, King Atlas, King Philometor, Ctesias, Durius, Philistus, Archibius, Philarchus, Amphilocus the Athenian, Anaxipolis the Thasian, Apollodorus of Lemnos, Aristophanes the Milesian, Antigonus the Cymæan, Agathocles of Chyos, Apollonius of Pergamus, Aristander of Athens, Bacchus the Milesian, Bion of Soli, Chæreas the Athenian, Diadorus of Pyreum, Dio the Colophonian, Epigenes of Rhodes, Evagoras of Thaffus, Euphranitus the Athenian, Hægeſias of Maronea, Menander of Pyreum, Menander also of Heraclea, Menecrates the Poet, Androctian who wrote of Agriculture or Husbandry, Aschion who likewise wrote of that argument, Dionysius who translated *Maga*, Diophanes who collected an Epitome or Breuiarie out of *Dionysius*, King *Archelaus*, and *Nicanor*.

IN THE NINTH BOOKE ARE CONTAINED

ned the Stories and Natures of Fishes and water-creatures.

Chap.

1. The nature of water-creatures.
2. The reason why the creatures of the sea are of all other biggest.
3. The monstrous beasts of the Indian sea.

Chap.

4. The greatest fishes and beasts in querie part of the Ocean.
5. Of Tritones, Nereides, and sea Elephants: their shapes and formes.

6. Of

Plinies Naturall Historie.

Chap.

6. Of great Whales, called Balæne and Orca.
7. Whether fishes doe take and deliuer their breath: whether they sleepe or no?
8. Of Dolphins and their wonderfull properties.
9. Of the Turfones.
10. Of the sea Tortoises, and how they bee taken.
11. Who first deuised to liue the Tortoise-shells into leaues.
12. The skins and shells of the sea creatures: the diuision of them into their seuerall kinds.
13. Of the Seale or sea-Calf.
14. Of fishes smooth and without haire: how they spawn and breed: and how many sorts there be of them.
15. The names and natures of many fishes.
16. The prelagies by fishes, and their variety.
17. Of the Muller and other fishes. That the same fishes are not in request in all places.
18. Of the Barble, the sea Raven Coracinus: of Stockfish and Salmon.
19. Of the Exocetus, Calamaries, Lampreies, &c.
20. The diuision of fishes by the shapes of their bodies.
21. Of Eeles.
22. The manner of taking them in the lake Benacus.
23. The nature of the Lamprey.
24. Of flat and broad fishes.
25. Of the stay-ship Echeneis, and his wonderfull nature.
26. The changeable nature of fishes.
27. Of the fish called the Lanterne, and the sea Dragon.
28. Of fishes wanting blood.
29. Of the Pourcuttle, the Cuttle fish, the Calamarie, and the fish called the Sayler or Mariner.
30. The fish Ozæna, and Nauplius: also of Lobsters.
31. Of Crabs, Sea Porckespines, and of the greater sort named Echinometra.
32. Of Wilkes, Cockles, and shell fishes.
33. Of Scallops, Porcellanes, of the shell fish Murex, and other fish.
34. The riches and treasures of the sea.

Chap.

35. Of Pearles, how they be engendred, and where: also how they be found.
36. The nature of the Purple fish and the Burrets or Murices.
37. How many kinds there be of purple fishes.
38. How the purple fishes be taken.
39. When purple was first worne in the city of Rome.
40. The price of purple clothes at Rome.
41. The dying of the Amethyst colour, of the Skarlet in grain, and the light Skarlet Hyginus.
42. Of the fish called the Nacre, and his guide or keeper Pinnoteris: also the intelligence of fishes and water creatures.
43. Of Scolopendres, sea Foxes, and the fishes Giani.
44. Of the fish called the sea Ram.
45. Of those things which haue a third nature, being neither liuing creatures, ne yet plants, to wit, of sea Nettles and Spunges.
46. Of Houndfishes or sea dogs.
47. Of sea fishes that haue stony shells: of those that haue no fence at all: of other nastie and filthy creatures.
48. Of sea fishes venomous.
49. The diseases incident to fishes.
50. The admirall generation of Fishes.
51. *Item*, Another discourse of their generation: and what fishes they bee which doe lay egges.
52. The matrices or wombes of fishes.
53. What fishes liue longest.
54. Of Oyster pits, and who did first deuise them.
55. Who first inuented stewes and ponds to feed Lampreies in.
56. The stewes and ponds for other shell Fishes, and who brought them vp first to be vied.
57. Of fishes that haunt the land.
58. The rats of Nilus.
59. Of the fish called Anthias, and how hee is taken.
60. Of the sea flares.
61. Of the fishes Daðyli, and their admirable properties.
62. What fishes doe entertain amitie one with another, and which be euert warre.

In summe, this Booke containeth stories, notable things, and obseruations, to the number of 690, collected

One of

The first Booke of

Out of Latine Authors.

Turanus Gracula, Trognus, Mecenas, Alfius Flouus, Cornelius Nepos, Laberius, the writer of merry Epigrams, Fabianus, Feneftella, Mutianus, Alium Stilo, Statius Sebofus, Meliffus, Seneca, Cicero, Maer Amylius, Mellana Corvinnus, Trebins Niger, and Nigidius.

Out of Forreine Writers.

Aristotle, king Archelanus, Callimachus, Democritus, Theophrastus, Thraffylus, Hefesidemus, of Cythnos, and Alexander Polybiftor.

¶ IN THE TENTH BOOKE ARE CONTAINED the natures and ftories of Foules and flying creatures.

Chap.

1. The nature of Foules.
2. Of the Phoenix.
3. Of Eagles.
4. When the Romane legions vfed the Eagle ftandard, and other enfignes. Also with what creatures Eagles maintaine fight.
5. A ftange and wonderfull cafe as touching an Eagle.
6. Of the Vultures or Geires.
7. Of the foule Sangualis.
8. Of Faulcons and Hawkes.
9. Of the Cuckow, which is killed by birds of her owne kind.
10. Of Kites or Puttockes.
11. A diuifion of birds into generall kinds.
12. Of vnluckie and ominous birds, the Crow, the Raven, and the Like-owle.
13. Of the foule that carieth fire in her mouth.
14. Of the bird Clivina.
15. Of many birds vnknowne.
16. Of foules that flie by night.
17. Of Howlets.
18. Of the Wood-pecker.
19. Of birds which haue clawes and crooked talions.
20. Of Peacockes: and who killed them firft for to be ferued at the table.
21. Of Cockes: how they be cut: of a dunghill cocke that fpike.
22. Of Geefe: who firft deuifed to make a dainty difh of the Goose liuer: the graue or fat of Geefe, called Comagenum.
23. Of Cranes, Storkes, Swans, ftange foules of outlandifh countries, of Quails, and the bird Gloris.
24. Of Swallows and Martins, of Blackbirds, Thrufhes and Merles, of Sterlings, Turtle-doues, and Quoits or Ring-doues.
25. Of birds that tariew with vs all the yere long

Chap.

- of birds that be for halfe a yere onely, and others that remaine but three monthes.
26. Maruellous ftories of birds.
27. Of birds called Seleucides.
28. Of the foule Ibis.
29. What birds will not abide in all places: which they be that change both hew and voice: alfo of Nightingales.
30. Of Merles or Oufels.
31. The time wherein birds breed, lay, and fit.
32. Of the birds Halciones, the nauigable daies that they doe fiew: of the Sea-gulls and Cormorants.
33. The indultury and subtilty of birds in building their neatts: of the ordinary Swallow, the ruer Swallow Argatilis: the bird Cinnamonologie that ftale Cinnamon, and of Partridges.
34. Of Houfe-doues.
35. Of Stock-doues.
36. Of Sparrowes.
37. Of the Kestrell or Stannell.
38. Of the flight and gate of birds:
39. Of certaine footleffe Martinets, called Apodes.
40. Of certain Guls that milk and fuck Goats vdders, and be named Caprimulgi: alfo of Pelicanes named Platex.
41. The perceiuaunce and naturall wit of birds.
42. Of the Linnet, Popinjay, or Parret, and fuch birds that will learne to fpeake.
43. The intelligence and vnderftanding that Rauens haue.
44. Of Diomedes his birds.
45. Of dull witted birds that will be taught nothing.
46. The manner how birds drinke.
47. Of foules called Himantipodes, and Onacrotali, and of other fuch ftange birds.
48. The

Plinies Natural History.

Chap.

48. The names of many birds, & their natures.
49. Of ftange and new birds, fuch alfo as be holden for fabulous.
50. Who deuifed firft to cram hens & capons: of bartons, mewes, and coupes to keepe and feed foules: and the firft inuenter thereof.
51. Of Asperes platter.
52. The generation of birds, and what fourfooted beatts do lay eggs as well as birds.
53. The knitting of eggs within the body, the laying, couuing and fitting of them, the manner and time of birds engendering.
54. The accidents that befall to broodie birds whyles they fit, and the remedies thereof.
55. Auguries and prelages by egges.
56. What Hens be of the beft kind.
57. The difeafes incident to Hens & the cure.
58. The manner how birds conceiue: what number of eggs they lay, & how many they hatch.
59. Of Peacockes and Geefe.
60. Of Herons and Bitters. The way to preferue and keepe egges.
61. The only bird that bringeth forth her yong aliuie, & feeds the fame at the pap with milk

62. The conception of the Viper, and how the is deliuered of her yong, alfo, what land creatures lay egges.
63. The ordinary generation of land creatures.
64. The diuerfity of liuing creatures in the manner of their engendering.
65. The yong ones that mice and rats do breed.
66. Whether of the manow of a mans backe bone a ferpent will engender.
67. Of the Salamander.
68. What things bee engendered of thofe that were neuer engendered, and contrariwife, what creatures they be, which being engendered themfelues, breed not.
69. The fences of liuing creatures.
70. That fifhes doe both heare and fmell.
71. That the fence of feeling is common to all liuing creatures.
72. What creatures liue of poyfons, and eat earth.
73. Of the meat and drink of diuers creatures.
74. What creatures euermore difagree: and which they be that agree well together.
75. Of the fleepe of liuing creatures.

This booke hath in it of notable matters, hiftories and obferuations 904, gathered out of

Latine Authors and records.

Manilius, Cornelius Valerianus, the publike records and registers, Vmbritius furnamed Melior, Maffurius Sabinus, Antiftius Labio, Trognus Cremutius, M. Varro, Maer Amylius, Meliffes, Mutianus, Nepos, Fabius Piftor, T. Lucretius, Cornelius Celfus, Horatius, Defalo, Hygeius, Sarfenne, both father and fonne, Nigidius and Manlius Sura.

Forreine Writers.

Homer, Phamones, Philemon, Boethius who wrote a treatife called Ornithogonia, Hylas who made a difcourfe of Auguries, Aristotle, Theophrastus, Callimachus, Aescylus, Hiero, Philometor, Archytas, Ampilichus the Athenian, Anaxipolis the Thafian, Apollodorus of Lemnos, Ariftophanes the Milefian, Antigonus the Cymean, Agathoteles of Chios, Apollonius of Pergamus, Ariftander the Athenian, Bacchius the Milefian, Bion of Soli, Chareas the Athenian, Diodorus of Pryæne, Dion the Colophonian, Democritus, Diophanes of Nicæa, Epigenes of Rhodes, Eucorpus of Thafos, Euphronius of Athens, king Iuba, Androcion who wrote of Husbandrie, and Aefcrion likewife who wrote thereof, Dionysius who translated Mago, and Diophanes, who reduced his worke into an Epitome, Nicander, Onofcritus, Philarchus, and Hefiodus.

¶ IN THE ELEVENTH BOOKE ARE CONTAINED the ftories and natures of fmall creatures and fuch as crepe on the ground.

Chap.

1. Of Insects in generall.
2. The naturall indutrie of thofe Insects.
3. Whether Insects doe breathe, and whether they haue bloud or no.

Chap.

4. The matter & fubftance of the Insects body.
5. Of Bees.
6. The government and order which Bees keep by inftinct of Nature.

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7. Diuers

The first Booke of

Chap.

7. Diuers operations of the Bees, & the teares thereof belonging.
8. Of what floures Bees do make their cellars, combs, and other workes.
9. What persons tooke a great loue to Bees, and delighted to nourish them.
10. The manner of Bees when they beat their businesse.
11. Of Drones.
12. The nature of Honey.
13. Which is the best Honey.
14. The severall and particular kinds of Honey in diuerse places.
15. The markes and tokens of good Honey.
16. Of a third kind of Honey, and how a man should know good Bees.
17. The regiment and policie that Bees obserue.
18. Diuerse sorts of Bees, and what things be hurtfull to Bees.
19. The diseases incident to Bees.
20. How to keepe the cast of Bees when they swarme, that they flye not away, also how to recover Bees, in case their breed and race be lost.
21. Of Wespes and Hornets.
22. Of silke flies, their wormes and Iackes called Bombylls, and Necdylus, and who first deuised silke-cloth.
23. Of the silke-worme in the Island Choos.
24. Of the Spiders and their generation.
25. Of Scorpions.
26. Of Stellions and Grasshoppers.
27. In what countries there be no Grasshoppers, and where they sing not.
28. The wings of Insects, of Beetles and their kinds.
29. Of Locusts.
30. Of Ants or Pismires in Italie.
31. Of Indian Ants or Emmets.
32. The diuerse sorts of Insects.
33. Of certaine creatures breeding of wood, and liuing of wood.

In summe, this Booke containeth notable things, stories, and obseruations, 2270.

Latine Authours cited.

M. Varro, Hyginus, Scropha, Sarcena, Celsus Cornelius, Amilius Macer, Virgil, Columella, Iulius Aquila, who wrote of the Tuscan discipline, Targilius, who likewise wrote of the same, and Varro, who travelled in that argument, Cato Censorius, Domitius Caluinus, Trogius, Melissus, Fabianus, Mutianus, Nigidius, Manilius, and Opus.

Forreine Writers.

Aristotle, Democritus, Neoptolemus, who wrote of Militurgia, Arifomachus, who likewise made a Treatise

*7. As touching the work of Bees.

Plinies Naturall Historie

Treatise of the same, and *Philistus* also that did the like, *Nicanor, Menetres, Dionysius*, that translated *Mago, Empedocles, Callimachus, K. Attalus, Apollodorus*, who wrote of venomous beasts, *Hippocrater, Eriphilus, Erasistratus, Asclepius, Themiso, Pofidonius* the Stoicke, the two *Menander*, one of Priene, and the other of Heraclea, *Euphronius* of Athens, *Theophrastus, Hesiodus*, and *K. Philometor*.

IN THE TWELFTH BOOKE ARE CONTAINED discourses of Trees

Chap.

1. The honor done to trees, of the Plane-trees: when they were first brought into Italy, and of their nature.
2. Of the dwarfed Planes growing low, and who was the first that cut and thred trees into arbours.
3. Of strange trees, and principally of the Citron tree in Assyria.
4. Of India trees, and when Ebene was first seen at Rome.
5. Of a certaine Thorn and Fig-tree of India.
6. Of a tree named Pala: also of other Indian trees that are namelesse, and of those that beare wooll and cotton.
7. Of Pepper trees and Clove trees, and many others.
8. Of Macir or Sugar, and the trees growing in the region Ariana.
9. Of Bdellium, and of trees along the Persian gulfe.
10. Of trees growing in the Island within the Persian gulfe, and those that beare Cotton.
11. Of Gossampine trees, and those which serue to make cloth, and wherein consisteth the fruit of certaine trees.
12. Of Costus, Spiknard, & diuers sorts of Nard.
13. Of Asarabacca, Amomum, Amonius, and Cardamomum.

In summe, this booke containeth in it of notable matters, histories, and obseruations, 974.

Latine Authours alledged.

M. Varro, Mutianus, Virgil, Fabian, Scaevola, Pomponius Melas, Flavius Proculus, Trogius, Hyginus, Claudius Caesar, Cornelius Nepos, Sextius Niger, who wrote in Greeke of Physicke, *Cassius Hemina, L. Piso, Tullianus, and Antias.*

Forreine Writers.

Theophrastus, Herodotus, Callisthenes, Isidorus, Clitarchus, Anaximenes, Diocles, Nearchus, Onesicritus, Polystratus, Olympiodorus, Diogenes, Nicobulus, Aristides, Charax of Mitylene, Menecemus, Dorotheus, Xenius the Athenian, Lycus, Antaeus, Ehippius, Chares, Democles, Ptolemaeus, Lagus, Marcellus the Macedonian, Zoilus likewise of Macedonic, Democritus, Amphilocus, Arifomachus, Alexander Polyhistor, king Iuba, Apollodorus the authour of the treatise concerning sweet odours, Heracleides the Physitian, Archidemus likewise the Physitian, Dionysius, Democides, Euphron, Olfenides, Diagoras, Iola (all six Physitians) Heracleides of Tarentum, Xenocritus of Ephelus, and Erasisthenes.

¶ IN THE THIRTEENTH BOOKE ARE CONTAINED Treatises of Ointments and of Trees by the sea side.

Chap.

1. Of sweet ointments & perfumes: when they came to be first knowne at Rome, and of their composition.
2. What ointment was that which they called Roiall: which bee Diapalmate or drie perfumes, and how they be kept.
3. The riotous and superfluous expences that the Romanes were at for such ointments: and when they were first taken vp and vsed in Rome.
4. Of Palmes or Date trees, their nature and sundry sorts.
5. The trees of Syria.
6. Of the Terebinth tree.
7. Of the Egyptian Figtree or Sycomore, and that of Cypresse.
8. Of the fruit which is called Ceraunia Siliqua.
9. Of the Peach-tree or Persica of Egypt: and the Egyptian Thorn, whereof commeth Acacia.
10. Of the Plum tree and others about Memphis.
11. Sundry sorts of gums, and of the Papyr reed.
12. Diuers kinds of Paper, how Paper is made,

Chap.

- the triall of good Paper, the faults of Paper, and the paste that goeth to the making of Paper.
13. The bookes of king Numa.
14. The tree of Ethiopia.
15. The trees of Atlas, Citron trees, what points are commendable or otherwise faultie therein.
16. Of the tree Thya.
17. Of the tree Lotus.
18. Of the body and roots of Lotus.
19. Of Patyrus, of the Pomgranat, and the floure of the Pomgranat.
20. Of plants and shrubs in Asia and Greece.
21. Of Thymelaea, Chamelaea, Tragacanth, Tragium or Scorpio, of Tamariske, Brya, and Galla.
22. Of Euonymus or Spynle tree, of Adrachne Congyria, and Thapsia.
23. Of Capparis or Cynosbato, or Opheostaphyle, and of Sari.
24. Of the royall thorne of Babylon, and Cytisus or tree Trifolie.
25. Of shrubs and trees growing vpon our Mediterranean seas, the red sea and the Indian sea.

In summe, there be comprised in this booke of notable things, stories, and obseruations, foure hundred fiftie and eight.

Latine Authors cited.

Marcus Varro, Mutianus, Virgil, Fabianus, Sebosus, Pomponius Mela, Flaccus Proculus, Troguus, Hyginus, Clandius Caesar, Cornelius Nepos, Sextius Niger, who wrote in Greeke of Physicke, Cassius Helmina, L. Piso, Tullianus, and Antias.

Forreine Writers.

Theophrastus, Herodotus, Callisthenes, Isidorus, Clearchus, Anaximenes, Duris, Nearchus, Onesicritus, Polieritus, Olympiodorus, Diogenes, Cleobulus, Anticlidus, Charax the Mitylenæan, Menæchmus, Doroticus, Xenias the Athenian, Lycus, Antias, Ephippus, Dio, Adimantus, Ptolomæus Lagus, Marcellus and Zoilus, both Macedonians, Democritus, Amphilocheus, Alexander Polyhistor, Aristomachus, king Iuba, Apollodorus who wrote of Odours, Heraclides the Physician, Batrys, Archidemius, Dionysius, Democritus, Euphron, Mnesicles, Diogenes and Iolla Physicians all, Heraclides of Tarentum, and Xenocritus the Ephesian.

¶ IN

¶ IN THE FOURTEENTH BOOKE ARE CONTAINED Treatises of Vine-trees and Vine-yards.

Chap.

1. Of Vines and their nature, the manner how they beare grapes.
2. Sundry kinds of Vines in generall.
3. More kinds of Vines according to the proportion of countries where they grow.
4. Notable considerations as touching the planting and ordering of Vines.
5. The nature of wine.
6. The best and most kindly wines.
7. Vines outlandish and beyond sea.
8. Of the wine called Bixion, seu kinds thereof.
9. Of sweet wines fourteen sorts.
10. Of second wines or household wines.
11. What good wines began of late to be in request at Rome.
12. Obseruations of wine, set downe by king Romulus.

Chap.

13. The ancient vsage of wine, and the wines of old time.
14. Of cellars for wine, and the wine Optimianum.
15. Casars liberalitie in wine, and when first there were foure sorts of wine set downe.
16. Of artificiall or set wines.
17. Of Hydromell and Oxymell.
18. Prodigious and strange kinds of wine.
19. What wines might not be vsed in sacrifices, and with what sorts new wines are sophisticated.
20. Sundry sorts of Pitch and Rosin: of the manner of sophisticated new wines: of vinegre and winelees.
21. Of wine cellars.
22. Of auoiding drunkenesse.

In summe, it containeth notable matters, histories and obseruations 110, gathered out of

Latine Authors.

Cornelius Valerius, Virgil, Celsus, Cato Senforius, Salsennus both father and sonne, Scropha, Varro, Decimus Syllanus, Fabius Pictor, Troguus Hyginus, Flaccus Verrius, Gracianus Iulius, Accius, Columella, Massarius Sabinus, Fenestella, Terzilia, M. Atilius Plautus, Fabius, Dorstenus, Scavola, Atilius, Ateius Capito, Cotta Messalinus, L. Piso, Pompeius Lenaxus, Fabianus, Sextius Niger, and Fabius Rufus.

Forreine Authors.

Hesiodus, Theophrastus, Aristotle, Democritus, king Attalus, K. Philometer, Architas, Xenophon, Amphilocheus the Athenian, Anaxipolis the Thasian, Apollodorus the Lemnian, Aristophanes the Milesian, Antigonus the Cymæan, Agatocles the Chian, Apollonius of Pergamus, Aristander of Athens and likewise Batrys the Athenian, Bacchius the Milesian, Bion of Soli, Chereas the Athenian, and Cherisus likewise of Athens, Diodorus of Priene, Dio the Colophonian, Epigenes the Rhodian, Eucoratus the Thasian, Euphron of Athens, Andronicus, Aescrion and Lysimachus, who wrote at three of Agriculture, Dionysius who translated Mago, Diophanes who brought Dionysius into an Epitome, Asclepiades the Physician, Onesicritus and king Iuba.

¶ THE FIFTEENTH BOOKE TREATETH OF the nature of Trees fruitfull, and planted in Hort-yards.

Chap.

1. The nature of fruitfull trees.
2. Of the oyle of Olives.
3. The nature of the Olive & yong Olive trees.
4. The nature of the oyle Olive.
5. The manner of husbanding Olive rowes.
6. How to keepe Olives and make oyle thereof.

Chap.

7. Of artificiall oyle.
8. Of the dregs or Oliue cake, being pressed.
9. Of fruits of trees good to eat, their severall kinds and natures.
10. Of Pine nuts foure kinds.
11. Of the Quince.

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12. Of

Chap.

12. Of Peaches foure sorts.
13. Of Plums eleuen kindes.
14. Sundry kindes of Apples, and namely, nine and twentie sorts.
15. Of Peares and Wardens: of sundrie strange deuities to graffe trees.
16. Of preferring and keeping Apples & such like fruits.
17. The manner how to keepe Quinces, Pomgranats, Peares, Wardens, Soruifes, and Grapes.
18. Of Figs nine and twentie sorts.
19. Of the wild Figtree: of caprification or the manner how to bring Figs to maturitie by the meanes of certaine flies.
20. Of Medlars, and three sorts of them.

Chap.

21. Foure kinds of Soruouifes.
22. Of the Walnut.
23. Of Chestnuts eight kindes.
24. Of Charobs called Siliqua, of Apples, of Mulberries, of Graines, Pippins and Kernils within the fruits, also of berries.
25. Of Cherries eight sorts:
26. Of the Corneill fruit, and Lentisk.
27. Sundry sorts of iuices, and odours.
28. Of the iuices in fruits and trees: of colors, smells, and the natures of diuerse fruits, also the singularities and commendations of them.
29. Of the Myrtle eleuen kindes thereof.
30. Of the Lawrell or Bay-tree, thirteene sorts of it.

In summe, there be comprised in this booke of notable matters, stories, and obseruations 520, collected out of

Latine Authors.

Fenestella, Fabianus, Virgill, Cornelius, Valerianus, Celsus, Cato Censorius, Sarsenna (both father and sonne) *Serapha, Mar. Varro, D. Syllanus, Fabius Pictor, Trogius, Hyginus, Flaccus Verrinus, Gracianus, Atticus, Iulius Sabinius, Tergilla, Cotta Messalinus, Columella, L. Piso, Pompeius Lenaxa, M. Accius Plantius, Fabius Dorstenus, Scandola, Atilius, Atticus Capito, Sextus Niger, and Vibius Rufus.*

Forreine writers.

*Hesiodus, Aristotle, Democritus, king Hiero, Archias, king Philometor, king Attalus, Xenophon, Amphilochnus the Athenian, Anaxipolis the Thasian, Apollodorus of Lemnos, Aristophanes the Milesian, Antigonus the Cymæan, Agatoboles of Chios, Apollodorus of Pergamus, Aristander the Athenian, Bacchus the Milesian, Bion of Soli, Charæus of Athens, and Charistius likewise the Athenian, Diodorus of Priene, Dion the Colophonian, Epigenes the Rhodian, Evagoras the Thasian, Euphromius the Athenian, Androcion and Aschriion (who writ both of Husbandry) Dionysius, that translated the books of *Mage*, and *Dionysius* the Epitomist, who brought them all into a Breuiarie. *Aleclepiades* and *Erasistratus*, both Physitians, *Comiades*, who wrote as touching the confections of wine, *Aristomachus, Hicetus*, who both treated of the same matter, *Themison* the Physition, *Oncorius*, and king *Tuba*.*

¶ IN THE SIXTEENTH BOOKE ARE CONTAINED THE NATURES OF WILD TREES.

Chap.

1. Countries wherein no trees doe grow: miraculous wonders of trees in the North countries.
2. Of the great Forrest Hircynia.
3. Trees that beare mast.
4. Of the Ciuitie giurland, and who in old time were adorned and honoured with chaplets of tree leaues.
5. Of Mast thirteene kinds.
6. Of Beech Mast, and other sorts of Mast: of

Chap.

- Coale, and the feeding of Hogs.
7. Of Gals, and how many things besides Mast and Acornes Mast trees doe beare.
8. Of Cachrys, and of the Skarlet graine: also of Agaricke and Corke.
9. Of what trees the bark is in vfrage.
10. Of shindles to couer houses, of the Pine-tree and the wild Pine, of the Fir & Pitch-tree, of the Larch-tree, of the Torch-tree Tœda, and the Eugh-tree.

11. The

Chap.

11. The manner of making sundrie sorts of Pitch and Tar: how the virgin pitch called Cedrium is made: of the thicke stone pitch how it is made: and the waies to boile rosin.
12. Of the ship pitch called Zopissa: of Sapium: and those trees that yield timber good for building.
13. Of the Ash tree, foure kinds.
14. Of the Teill or Linden tree, two severall sorts thereof.
15. Ten diuerse sorts of Maples.
16. Of the knot in Maple called Brufcus and Molluscum: of a kind of Fifticke tree called Staphylodendron: of Box tree three sorts.
17. Of the Elm, foure kinds.
18. The nature of trees according to their situation and places where they grow.
19. A general diuision of trees.
20. What trees neuer shed their leaues quite: of the Oleander tree called Rhododendron.
21. Again what trees lose not their leaues, but fewe alwaies greene, which be they that shed their leaues in part. In what countries no trees at all doe lose their leaues.
22. The nature of those trees which let fall their leaues, and which haue leaues of sundry colours.
23. Three sorts of Asps or Poplers: & of what trees the leaues do alter their forme and fashion.
24. What leaues vse to turne euery yeere: the manner how to order the leaues of Date trees and to vse them. Also strange and admirable things as touching leaues.
25. The order and course that Nature holdeth in plants: the blossomes of trees: their manner of conception, blouming, budding, and bearing fruit: and in what order they put out flowers.
26. Of the Corneill tree: the right season wherein euery tree beareth fruit: what trees be fruitlesse, and therefore are supposed vnhappy: which they be that soone lose their fruit: and last of all what trees shew fruit before they be put forth.

In summe, this booke comprehendeth of notable things, histories, and obseruations, an hundred and foue and thirtie.

Latine Authors alledged.

M. Varro, Facilius, Nigidius, Cornelius Nepos, Hyginus, Massurius, Cato, Mutinus, Lucius Piso, Trogius, Calpurnius, Bassus, Crematius, Sextius Niger, Cornelius Balbus, Vitruuius, and Gracianus.

Forreigne

The first Booke of

Forreine Writers,

Alexander Polyhistor, Hesiodus, Theophrastus, Democritus, Homer, Timaeus the Mathematician.

¶ THE SEVENTEENTH BOOKE CONTAINETH the nature of trees planted, set, and well kept in Hori-yards.

Chap.

1. Trees of wonderfull price.
2. Of the nature of heauen and the skie respectiue vnto trees: and what part of the skie they ought to regard.
3. The societie and accord of the clymat and the soile requisit for trees.
4. The qualities of the grounds in diuers regions.
5. Sundry kinds of ground and earth.
6. Of a kind of earth or marle that they in Brittain and France set much store by.
7. What the Greekes haue taught, and what rules they haue giuen as touching this point.
8. Of more kinds of earth.
9. The vse of ashes, and of dung: what plants will enrich the ground and make it more battell: contrariwise, which they bee that burne out the heart thereof.
10. The planting or setting of trees: how to make a son or slip to take and grow againe that is plucked from the root of the stocke.
11. Of transplanting out of Seminaries, yong trees that came of pepins and seeds.
12. The spaces betwene, and distance to bee regarded in planting trees: the shadow and droppings, either from house eaves or other trees.
13. What trees grow apace, and which thrive but slowly: also of the Savine.
14. The setting and grafting imps and sions of trees in the stocke or cliffe.
15. Of the manner how to graffe a vine.
16. Of inoculation or grafting in the leafe or scutcheon with a plaster.

In summe, here bee contained notable matters, stories, and obseruations, to the number of fise hundred eightie and one.

Latine Authors alledged.

Cornelius Nepos, Cato Censarius, M. Varro, Celsus, Virgil, Hyginus, Salsenna both father and sonne, Scrophas, Calphurnius Bassus, Treagus, Amilius Macer, Graecinus, Columella, Atticus, Iulius, Fabianus, Sura Manlius, Dorjenus Manlius, Caius Epidicus, and L. Piso.

Forreine Writers.

Isidorus, Theophrastus, Aristotle, Democritus, Theopompus, king Hiero, K. Attalus, K. Philometor, Archytas,

Plinies Naturall History.

Archytas, Xenophon, Amphilochus the Arbenian, Anaxipolis the Thasian, Apollodorus of Lemnos, Aristophanes the Milefian, Antigonus the Cymæan, Agathocles the Chian, Apollonius of Pergamus, Bacchius the Milefian, Bion, Chærea the Athenian, also Cherisus of Athens, Diodorus of Priene, Dion the Colophonian, Epigenes the Rhodian, Evagor the Thasian, Euphoron the Athenian, Androcion, Eschirion, Lyfimachus, who all three wrote of Agriculture: Dionysius who translated the bookes of Mago, and Diophanes, who out of Dionysius collected a Breviarie, and Aristander who made a treatise of Wonders and portentous tokens.

¶ THE EIGHTEENTH BOORE IS A TREATISE of Agriculture or Husbandrie.

Chap.

1. That our ancestors in old time were exceeding much giuen to husbandrie. Also, the singular care that men had to looke vnto horti-yards and gardens.
2. Of the first chaplets and gairlands vsed at Rome.
3. Of the acre of ground and halfe acre, called at Rome *Ingeria* & *Aëus*. The antient ordinances concerning cartell: in what time the market for victuals was exceeding cheap at Rome: and who were famous & renowned for husbandrie and tilling the ground.
4. The antient manner of tilling the earth.
5. Where a ferme house is to bee leated and built conueniently: certain rules in old time concerning tillage.
6. A discourse as touching the praise of husbandmen: what rules are to be obserued to come by a good peece of land.
7. Diuers kinds of corne, and their nature.
8. That all sorts of graine will not grow euery where. Of other kindes of corne in the Levant or East countries.
9. Of baking and pastrie: of grinding and of meale.
10. Of the fine cocked flour: of the white flour of wheat, and of other sorts of flour: the manner of moulding and making dough, and baking.
11. The manner of making and laying leaven: also of making past & bread: and when Bakers were first knowne at Rome. Of sieves, serces, and bulsters; and of sodden wheat or frumentie.
12. Of pulfe.
13. Of Rapes and Navewes in the Amiternine traç.
14. Of Lupines.
15. Of Verches and Ervile.
16. Of Fenigreeke: of Messelline or dredge-corne: of Mung corne or Bollimong for provander: of Clauer or three-leaved grasse

Chap.

- called Medica, and of another Trefoile named Cytisus.
17. The faults and diseases in corne, graine, and pulfe, and their remedies: what corne or pulfe ought to be sowne with respect to the ground.
18. Of prodigious tokens obserued in corne. The skill of ploughing the ground: the diuers sorts of culters & shares in the plough.
19. The seasons of the yere fit to till & plough the ground. The manner of putting oxen in the yoke for the plough.
20. Of breaking clods or harrowing: of another kinde of tilling: the earing or second tilth or stirring the ground. And cutting the corne.
21. The manner of tilling and husbanding land.
22. Examples of diuers grounds: of such as are wondrous fertile: of a vine that beareth grapes twice in the yere. The difference of waters.
23. The qualitie of the ground or soile: of compost or dunging lands.
24. The goodnesse of choise seeds: the manner of good sowing: how much seed of any corn an acre will take to be well sowne. The seasons of seednesse.
25. The obseruation of the stars for their apparition or occultation, their rising and setting, as well for day as night.
26. A recapitulation and briefe summurie of all things belonging to husbandrie. What is to bee done in the field euery month of the yere.
27. That husbandmen should not so much regard the signe or the stars, as the fit season of the time for seednes. The rising or fall, the apparition or occultation of planets obserued in some herbes. Of the rising and setting of stars.
28. Of meadows: how they are to be repaired and

The first Booke of

Chap.

- and brought into hart: of sith-stones, hooks, sickles, and sithes: the time of sowing corne, and what fixed starrs are of power about that time.
29. Of the seasons and times to be marked as well in summer as winter: what remedy for barraine and leane ground.
30. Of the harvest: of wheat, of chaffe: how to keepe corne.

In summe, there be contained in this booke of notable matters, stories, and obseruations, two thousand and six hundred.

Latine Authors alledged in this booke.

Maffius Sabinus, Cassius Hemina, Verrius Flaccus, L. Piso, Cornelius Celsus, Turannius Graccula, D. Syllanus, M. Varro, Cato Censorius, Scrofa, Sarfenna both father and sonne, *Demitius Calvinius, Hyginus, Virgil, Trogus, Ouid, Gracius, Columella, Tubero, L. Aruntius* who wrote in Greeke of Altronome, and *Caesar Dictator* who likewise wrote of the same argument, *Sergius Paulus, Sabinius Fabianus, M. Cicero, Calpurnius Bassus, Atticus Capito, Manlius Sura, and Aelius* who compiled a booke called *Praxidica*.

Forreine Authors.

Hesiodus, Theophrastus, Aristotle, Democritus, K. Hiero, K. Philometor, K. Attalus, K. Archelaus, Arebytas, Xenophon, Amphilocheus of Athens, *Anaxipolis* of Thafus, *Aristophanes* the Milesian, *Apollonius* the Lemnian, *Antigenus* the Cymean, *Agatholes* of Chios, *Apollonius* of Pergamus, *Aristander* the Athenian, *Bacchius* the Milesian, *Bion* of Soli, *Cherea* of Athens, *Cherifus* likewise the Athenian, *Dionodorus* of Priene, *Dion* of Colophon, *Epigenes* of Rhodes, *Evagoras* the Thasian, *Euphronius* the Athenian, *Andraision, Alsebrio, and Lysimachus*, who wrote all three of Husbandrie, *Dionysius* that translated the works of *Mago*, and *Diophanes* who drew the same into an Epitome, *Thales, Eudoxus, Philippus, Callippus, Dositheus, Permeniscus, Meliton, Criton, Oenopides, Zeno, Euclitemon, Harpalus, Hecataeus, Anaximander, Sostigenes, Hipparchus, Aratus, Zoroastres, and Archibius*.

THE NINETEENTH BOOKE CONTAINETH a discourse of the nature of Flax, and other wonderfull matters.

Chap.

1. The sowing of Line seed: diuers kinds of flax: how it is dressed: of naperie & napkins: of linnen that will not burne nor consume with fire: and when curtains were deuised at Rome about the theatres.
2. The nature of a kind of broom called Spart, when it came to be used first, how it is to be ordered & dressed, what plants both spring and also lue without roots.
3. Of Myfy, and of Mushrooms, of Tadfoles or Mushromes that bee broad and without a taile called Pezice, of Lacerpitium, and Magydaris, of Maddir, and the Fullers root Radicula, & Sopeweed.
4. The manner of dressing and trimming gardens: also the ordering and due placing of other plants good for to be eaten; outer and

Chap.

- besides corn, and the fruit of trees & shrubs.
5. The nature, the sundry sorts, and the stories of many plants that grow in gardens.
6. Of the roots, leaues, floures, and colours of garden hearbes.
7. How many daies it will be after the seeds of herbes be sowne, or their slips set, ere they come vp: the nature of seeds: how herbes are to be sown or set, and in what course and ranke: which herbes are but one of a kinde, and which they be that haue many kinds.
8. The nature of such garden herbes as are good for the pot, or to make sallads, and to season meat withal; their kinds to the number of 46, with their stories & descriptions.
9. Of Fennell, and Hempe.
10. The diseases and maladies that annoy gardens:

Plinies Naturall Historie.

Chap.

- dens, the remedies against the same: as also how to kill ants, caterpillars, and gnats.
21. What seeds be more or lesse able to endure any hardnesse or injurie, and which they be that salt waters are good for.

In summe, here are comprised memorablen things, stories, and obseruations, a thousand one hundred fortie and three.

Latine Authors cited.

M. Ailius Plantus, M. Varro, D. Syllanus, Cato Censorius, Hyginus, Virgil, Mutianus, Celsus, Columella, Calpurnius Bassus, Manlius Sura, Sabinus Tyro, Licinius Macer, Q. Hirtius, Vibius Rufus, Celsinius who wrote *Seperica*, [i.e. a treatise of Gardening] *Cafrutius* likewise, and *Firminus*, (who both twaine made a worke of the same matter) and last of all *Petreus*.

Forreine Writers.

Hierodotus, Theophrastus, Democritus, Aristomachus, Menander, (who wrote a booke intituled *Brocheista*, i.e. of things profitable for our life and diet) and *Anaxilans*.

THE TWENTIETH BOOKE COMRISETH medicines out of those Simples which are set and sowed in Gardens.

Chap.

1. Of the wild Cucumber, and the juice thereof Elaterium.
2. Of the Cucumber as well that which wanders, & groweth abroad called Anguimum, as that of the garden: also of the Pompon.
3. Of the wild gourds, and the Rape or Naves.
4. Diuers sorts of Naves: of the wild Radish, of the garden Radish, and the Parsnep or Carot.
5. Of Staphylinum or the tame Parsnip. The herbe Gingidium or Chervill: of Sefelis or Siler-mountaine: of Elecampane, and of Onyons.
6. Of Porret or Leekes used to be cut, and of cabbage Leeks or headed, also of Gartlicke.
7. Of wild Lettuce or Hawke-weed, called also Laeuca Caprina, of another kinde named Etopus, of Voad, & tame garden Lettuce.
8. Diuers kinde of Beets, of Endive, and Cichorie, of garden Endive.
9. Of Cawle or Coleworts, of the wild Coleworts Lapfana, of Soldanella, of Squilla or the Sea-onion, of Scallions or Chibbols, and of Dog-leeks.
10. Of Sparage both tame and wild, of Libycum and Clarie.
11. Of Parsley, of Baulme, Smallage, & mountaine Parsley.
12. Of Alifanders, and garden Basil.

Chap.

13. Of wild Basil, of Rocket, of Cresses, and Rue.
14. Of wild Mints, of garden Mints, of Penroyall, of Nep, and Cumin.
15. Of Ethiopian Cumin, which staeth vrine; of Capers, of Lovach, of Panace, of wild Origan or Majoram savage.
16. More of wild Origan and Heracleotica, called also Gallinacea Cunila, i.e. Small majoram, Savorie or Orgament, Rosemarie, sweet Majoram of the garden and of the mountaine.
17. Of Cockweed, Pepperwort, or Dittander, of garden Origan, of a kinde of Orgament called Onitis of Prason, of Tragoriganum or wild Penroyall, the water Lillie or Nenupher, of Lepidium, of Gith or Nigella Romana, and of Anife.
18. Of Dill, of Sacopenium, of Sagapen, of Poppies both white and blacke: the manner how to draw the juice of herbes: and of Opium.
19. Of the wild Poppie, of horned Poppie, of Glaucium or Paralum, of Heraclium or Aphrum, of the confection Diacodium made of Poppie heads, of Tythimall.
20. Of Purcellane or Peplum, of Coriander and Orach.
21. Of Mallowes, and Malope, of Althaea or Marsh-

The first Booke of

Chap.

1. Marshmallow, of Dockes, foure Docke or Sorell, the water Docke, the herbe Patience or Bulapathum.
2. Three kinds of Senvie, of Horehound, of running Thyme, of water Mints or Savorie, of Linedeed and Bleets.

In summe, there be comprised in this booke of medicines, stories, and obseruations, one hundred sixtie and seven.

Out of Latine Authors.

Cato Censorius, Mar. Varro, Pompeius Lenax, Gallo, Hyginus, Sextius Niger who wrote in Greeke, and *Iulius Bassus* likewise, who wrote in the same language, *Celsus*, and *Antonius Cassar*.

Forreine Authours

Democritus, Theophrastus, Orpheus, Menander who made the booke *Biochrestia*, *Pythagoras*, and *Nicander*.

Out of Physicians.

*Nicander, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hicestus, Dionysius, Apollodorus of Tarentum, Apollodorus the Citien, Praxagoras, Philistonicus, Medius, Dieneches, Clephantus, Philistio, Asclepiades, Cratevas, Petronius, Diodorus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Dalion, Sofimenes, Theopolemus, Metrodorus, Solon, Lycus, * Olympiades of Thebes, Phillinus, Petreius, Milition, Glaucias and Xenocrates.*

* A woman who was a Midwife.

¶ IN THE XXI. BOOKE ARE CONTAINED the natures of Floures and Hearbs to make Guirlands of.

Chap.

1. The nature of floures and herbes that serve for Chaplets, the wonderfull varietie of floures.
2. Of Chaplets and nosegays of floures. Who first deuised to set floures in order one with another. When Coronets or Guirlands of floures were inuented and took their name, and vpon what occasion.
3. Who first gaue a present of a Chaplet garnished with silver and gold foile. In what honor and estimation such Guirlands were in old time. The honour done of old to *Scipio*. Of Coronets or Chaplets platted, wrythed, and braided. Also of a notable act of queen *Cleopatra* in making of Chaplets.
4. Of Roses set in guirlands. Diuerse sorts of Roses, and where they be set and doe grow.
5. Three kinds of Lillies. The strange manner of setting them.
6. Of Violets, Marigolds, of Baccharis, Combretum, Alfarabacca or Folefoot, and Saffron.
7. Of the floures vsed in antient time in Guir-

Chap.

- lands & Chaplets. The great diuersity that is in aromaticall and odoriferous simples: of Lavender, Spike, and Polium.
8. The colours of cloth resembling floures. Of floure-Gentle or Passie-velours: of Chrysome or Chrystis.
9. The honor done by Guirlands, and their excellencie: of Cyclaminum, of Melilot, of Claver or Trefoile, whereof there be three sorts.
10. Of Origan, Thyme, Honey of Athens, of Doniza or Fleabane, of Iupiters floure, of Helenium or Elecampane, of Sothernwood, and Camomile.
11. Of Majoran, of Nyctigretum and Melilote, the white Violet or stocke Gilloffe, of Codiaminum, also of wild bulbs or Rampions, of Heliochrysum, & Lychnis or Rose-Campion, and many other herbes growing on this side the sea.
12. The manner how to nourish and keepe Bees: of their maladies and remedies thereto.

Plinies Naturall History.

Chap.

13. Of Honey that is venomous, remedies against such venomous Honey, as also against another kind thereof, which maketh folke to be mad that taste thereof.
14. Of a certain Hony that flies will not touch nor come neare to, Of Bee-hiues. The way how to keepe the Bees when they are at a fault for meat: and how their Wax is made.
15. Of herbes good to eat which come vp of their owne accord, and namely, those that are prickie.
16. Of Thyttles, of Parietarie of the wall, of Brambles and Orchanet.
17. The difference of many sorts of herbes in their leafe. Which they be that doe floure all the yeere long, of the Daffodill, of Mustana, and of the Gladen or Sword-grasse.
18. Of diuers sorts of Reeds, and of Cyperus, of the medicinale vertues which they haue, of Cyprus, and Squinanth.
19. The medicinale vertues of Roses, of the Lillie, of Narcissus, of the Violet, and of Baccharis or Ladies gloves, of Combretum and Alfarabacca.
20. Of Nard Celticke and Saffron, the vertues thereof and vse in Physicke, of the sweet ointment Crocomagma made of Saffron,

Chap.

- of Spike or Lauender, of Polium, and Flout de lis, of Heliochrysum, Chrysosome, and Melilot.
21. Of sweet Trifolie, of Thyme, the wild yellow Lillie Hemerocallis or the day-floure, of Elecampane and Sothernwood.
22. The medicinale vertues of Camomile and Marjoram.
23. The vertues of Corne Rose or Passie-flours Anemone.
24. The properties medicinable of Filipendula.
25. The vertues of Heliochrysum.
26. The medicines of Crowtoes.
27. The vertues of the Perywinckle, Butchers broome, of Sampier, and wild Bassill.
28. The medicinale vertues of Colocasia, or the Egyptian Beane.
29. The properties of Anthallium.
30. The vertues of Fewerfe.
31. The vertues of Night-shade or Petie Morrell, and Alkakenig.
32. Of Corchorus, i. Chickeweed, and of Cnicus, i. Carthamus or bastard Saffron.
33. Of the herbe Perfoluta.
34. Of the weights and measures vsed in old time.

In summe, there be in this booke to be found medicines, stories, and worthy obseruations, seuen hundred and thirtie.

Latine Authours alledged,

Cato Censorius, M. Varro, Maffius, Antias, C. Helius, P. Vilius, Vibius, Rufinus, Hyginus, Pomponius Mela, Pompeius Lenax, Cornelius Celsus, Calpurnius Bassus, P. Largius, Eicinius Macer, Sextius, and Iulius Bassus, who both wrote in Greeke, and *Antonius Cassar*.

Forreine Writers.

Theophrastus, Democritus, Orpheus, Pythagoras, Mago, Menander who wrote the Treatise *Biochrestia*, *Nicander, Homer, Hesiodus, Musaeus, Sophocles, and Amaxilaxus*.

Physicians.

Messtheus and Callimachus, who wrote both of Guirlands made of floures, *Phanias* the naturall Philosopher or Physician, *Simus, Timaristus, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hicestus, Dionysius, Apollodorus of Citia, Apollodorus of Tarentum, Praxagoras, Plistonius* the Physician, *Dieneches, Clephantus, Philistio, Asclepiades, Cratevas, Petronius, Diodorus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Dalion, Sofimenes, Theopolemus, Metrodorus, Solon, Lycus, Olympias* the midwife of Thebes, *Phillinus, Petreius, Milition, Glaucias, and Xenocrates*.

A

¶ IN

IN THE XXII. BOOKE ARE CONTAINED

discourses as touching the estimation of Herbes.

Chap.

1. Of certain nations that use herbes to beautifie their bodies.
2. Of clothes dyed with the juice of herbes.
3. Of the Chaplet made of the common meadow graffe.
4. How rare these Guirlands of graffe were.
5. Which were the only men that had the honour to be crowned with the said Chaplets.
6. The onely Centurion allowed to weare the said Guirlands.
7. Medicinable vertues obserued in the rest of herbes and floures that serue for Guirlands, and first of Eringe or sea Holly.
8. Of the Thistle or hearbe which they call Centum-capita.
9. Of Acanus and Liqueurice.
10. Of Brambles or Thistles called Tribuli, their kinds and vertues.
11. The vertues and properties of the hearbe Stoebe.
12. Of Hippophyes, and of Hippope, i. the Tazill, and their properties.
13. Of the Nettle and the medicinable vertues of it.
14. Of the white dead Nettle or Archangel Lamium, and the vertues of it.
15. Of the hearbe Scorpis or Caterpillers, the kinds and vertues thereof.
16. Of Leucacantha or our ladies Thistle, and the vertues of it.
17. Of Parietarie of the wall called Helxine or Perdicum, of Feuerfew or Motherwort, Par-

Chap.

- thenium, of Sideritis, i. wall Sauge or stone Sauge, and the vertues thereof good for Physicke.
18. Of Chamæleon, the sundry sorts and properties that it hath.
19. Of Coronopus, i. Crow-foot Plantaine or Buckhorn Plantain, and the vertues thereof.
20. Of Orchanet, as well the right as the bastard, and the vertues of them both.
21. Another kind of Orchanet called Onoche-lis, of Camomile, of the hearbe Lotus or common Mellilot, of Lorometra, which is a kind of garden Lotus or fallade Clauer, of Heliotropia, i. Turnfoll or Solcium, and Tricocum, a kind thereof, of Maiden haire called Adiantum and Callitricum.
22. Of bitter Lettuce or wild Cichorie, of Thefum, of Daffodill, of Halimus, of Brankurline, of Buprestis, of Elaphobolcum or Gracia Dei, of Scandix, i. wild Chermill or shepheards needle, of the wild wort latione, of bastard Persly, Caucalis, of Lauer, or Sillybium, of Scolimus, i. the Artichoke or Limonia, of Sowthistle, of Chondrilla, and of Muscromes.
23. Of Toad stools, of Silphium, & of Laferiurice.
24. The nature of Hony, of Mead or Hydro-mel: how it commeth that the fashions are changed in certaine kinds of meat, of Honied wine, of wax. A discourse against the composition of many simples.
25. The medicinable vertues of corne.

In summe, here you shall find of medicines, stories, and obseruations, 906, gathered out of

The same Authours which were named in this booke before, and besides out of *Chrysermus*, *Erastobenes*, and *Alcaeus*.

IN THE XXIII. BOOKE IS CONTAINED

a Treatise of Hort-yard trees.

Chap.

1. The medicinable qualities of grapes fresh and new gathered, of Vine cuttings and of grape kernils, of the grape Theriace, or Treacle Grape, of dried Grapes or Raisins, of Astataphus, of Staefacre, cal-

Chap.

- led also Pituitaria, of the wild Vine, of the white Vine which is called Bryonie, of the blacke Vine, of new wines, of diuerse and sundry sorts of wines, and also of vinegre.

2. Of

Chap.

2. Of the medicinable vertues of vinegre Sclitricke, of Oxymell or honied vinegre, of cuit, of the dregs or lees of wine, vinegre, and cuit.
3. The vertue of Oliues, of the leaues of the Oliue, of the floure and ashes of the Oliue, of the white and blacke fruit of the Oliue, also of the dregs or grounds of oile.
4. Medicinable properties obserued in the leaues of the wild Oliue, of the oile made of the wild vine floures, of the oile Cicinum, the oile of Almonds, Baies, and Myrtles, the oile of Chamamyrrine or grand Myrtle, also of Cypresse, of Cytrons, & walnuts, &c.
5. The Egyptian Palmertree that beareth Ben,

Chap.

- also of the Date tree called Elate, and the vertues of them.
6. The medicinable vertues of sundry plants, namely, in their floure, leafe, fruit, boughs, barke, wood, juice, root, and ather.
7. Of peares, and the obseruations to them belonging, of Figgess both wild and saue: of Erineum, and other sorts of plants, with their vertues.
8. Of Pine-nuts, and Almonds, of the Filbard and Walnut, of Fiftickes and Chestnuts, of Charobs, Corneilles, Strawberry trees, and Baies.
9. Of the Myrtle gentle, of Myrtidanum, and the wild Myrtle.

In summe, there be noted in this booke medicines, stories, and obseruations, a thousand foure hundred and nineteene.

Latine Authours cited.

C. Volgius, *Pompeius Lenax*, *Sextius Niger*, and *Iulius Bassus*, who wrote both in Greeke, *Antonius Castor*, *M. Varro*, *Cornelius Celsus*, and *Fabianus*.

Forreine Writers.

Theophrastus, *Democritus*, *Orpheus*, *Pythagoras*, *Mago*, *Menander* the author of the booke *Biochrestia*, *Nicander*, *Homer*, *Hesiodus*, *Musæus*, and *Anaxilaus*.

Physicians.

Mnesibius, *Callimachus*, *Phanias* the naturall Philosopher, *Simus*, *Tamarißus*, *Hippocrates*, *Chryseippus*, *Diocles*, *Ophion*, *Heraclides*, *Hicellus*, *Dioscorius*, *Apollodorus* of Citta, *Apollodorus* the Tarentine, *Praxagoras*, *Pistonius*, *Medius*, *Dieuchus*, *Cleophantus*, *Philistio*, *Arsilepiades*, *Cratæus*, *Petronius*, *Diodorus*, *Iolla*, *Erasistratus*, *Diagoras*, *Andreas*, *Mnesicles*, *Epicharmus*, *Damon*, *Dalion*, *Sofimenes*, *Theopolemus*, *Metrodorus*, *Solen*, *Lycus*, *Olympias* the midwife of Thebes, *Phyllinus*, *Petræus*, *Miltion*, *Glaukia*, and *Xenocrates*.

THE XXIII. BOOKE TREATETH OF
Trees growing wilde.

Chap.

1. Medicinable vertues obserued in wild trees.
2. The Egyptian Beane tree, Lotus.
3. Mast and Acornes.
4. The grain or berrie of the tree Ilex, of Gals, of Miffelto, of little bals and mast of trees, the root of Cirrus, and of Corke.
5. Of the Beech, the Cypresse tree, the tall Cedar, the fruit or berry thereof, and of Galbanum.
6. Of Ammoniacum, Storax, Spondylium, Spagnum, the Terebinth tree, of Chamæpitrys or Iva Muscata, of Efula or Pityusa, of Rosins, of the Pitch-tree and the Lentiske.

Chap.

7. Of stiffe Pitch, of Tarre, of Pitch twice boyled, of Pissaspfalt, of Sopissa, of the Torch tree and Lentiske.
8. The vertues of the Plane tree, the Ash, the Maple, the Aspe, the Elme, the Linden tree or Teil, the Elder, and Juniper.
9. Of the Willow, the Sallow Amerina, and such like, good for windings and bands, also of Heath or Ling.
10. Of Virga Sanguinea, of the Oifier, of the Priuett, the Aller, of Yvie, of Cistus or Cifus, of Erythranum, of ground Yvie or Alehouse, of Withwind, of Perwinke or Lefseron.

A 2

11. Of

Chap.

11. Of Reeds, of Paper cane, of Ebene, of Oleander, of Rhus or Sumach, of Madder, of Alyssum, of Sopeweed, of Apaynum, of Rosenarie and the seed thereof, of Selago, of Samulus, of Gums, and the medicinable vertues of them all.
12. Of the Arabian thorne or thistle, of Bedegnar, of Acanthium and Acacia.
13. Of the common and wild thistle, of Eryfsceptum, of the thorne or thistle Appendix, of Pyxarthum or the Barbaric tree: of Palurus, of the Holly, of the Eugh tree and other bushes, with their vertues in Physicke.
14. Of the sweet Brier or Eglantine, of the Respice bush, of the white bramble Rhamnus, of Lycium, of Sarcocolla, of the composition named Oporice, and all their medicines.
15. Of Germander, of Perwinke or Lowrie, of Cham-lea or Oliuell, of Chamaysce, of ground vie, of Lauander Cotton, of Ampeloprasos or Vine Porret, of Stachys or wild Sauge, of Clinopodium or Horle.

In summe, herein are comprised medicines, stories, and obseruations, a thousand foure hundred and eightene: collected out of

Latine Authors.

C. Volgius, Pompeius Lenaus, Sextius Niger, and Iulius Bassus, who wrate both in Greeke; Antonius Castor, M. Varro, Cornelius Celsus, and Fabius.

Forreine Writers.

Theophrastus, Apollodorus, Democritus, Orpheus, Pythagoras, Mago, Menander the author of the booke Biochrestia, Nicander, Homer, Hesiodus, Muscus, Sophocles, and Anaxilans.

Physicians.

Mnesibius, Callimachus, Phanias the naturall Philosopher, Simo, Timaristius, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hicetus, Dionysius, Apollodorus of Citta, Apollodorus the Tarentine, Praxagoras, Philonicus, Medius, Diencubus, Cleophantus, Philistio, Asclepiades, Crateus, Petronius Diodorus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Sofimenes, Theopolemus, Selon, Lycus, Metrodorus, Olympias the Midwife of Thebes, Phyllinus, Petreus, Metellion, Glaucia, and Xenocrates.

¶ IN THE XXV. BOOKE ARE CONTAINED

the naturcs of hearbes and weeds that come vp of themselues.

The reputation that hearbes haue been of. When they began first to be used.

Chap.

1. The properties and naturcs of wild herbes growing of their owne accord.
2. What Authours haue written in Latine of

Chap.

- time, of Cudweed, of Perwinke of Ægypt, and their properties.
16. Of Wake-Robin, of Dragonwort or Serpentine of the garden, the greater Dragonwort, of Arifaron, of yarrow, and Millefoile: of baitard Nautew, of Myrrhis, and Onobrychis, with their vertues.
17. Of Coriacea, Callicia, and Menais, with three and twentie other hearbes, and their properties, which are held by some to serue in Magick, Of Confidia and Aproxis: with others that reduce and reuiue loue againe.
18. Of Eriphia, Lanaria, and water Yarrow, with their vertues.
19. Of the herbes that growe vpon the head of statues and Images, of the hearbes that come out of riuers, of the herbe called Lingua simply, i. the tongue: of herbes growing within sieues, and vpon dung hills, of Rhodora, of the herbe Impia, i. the child before the parents, of the herbe Pecten veneris, of Nodia, of Cleiurus, of Goose Erith, of Burs, of Tordile, of Dent de chien or Quiches, of Daetylus and Fenigrek, with their vertues.

Chap.

- the nature and vse of hearbes. When the knowledge of simples began first to be practised at Rome. What Greeke Authours first

Chap.

- first wrote of herbes, the inuention and finding out of sundry hearbes, the Physicke of old time. What is the cause that Simples are not so much in request and vse for Physicke as in old time. The medicinable vertues of the Eglantine and Serpentry or Dragon.
3. Of a certaine venomous fountaine in Almaine, the vertues and properties of the herbe Britannica, what diseases cause the greatest paines.
4. Of Moly, of Dodecatheos, of Pæonium, named otherwise Pentorobus, and Glycy-side, of Panace or Asclepius, of Heraclium, of Panace Chironium, of Panace Centaureum or Pharnaceum, of Heraclium Siderium, of Henbane.
5. Of the herbe Mercurie female, of Parthenium, of Hermu-Pæa, or rather Mercurie: of Yarrow, of Panace Heraclium, of Sideritis, of Millefoile, of Scopa regio, of Hemionium, Teucrium, Splenium, Melampodium or blacke Ellebore, and how many kinds there be of them. The medicinable vertues of blacke and white Ellebore: when Ellebore is to be giuen, how it is to be taken, to whom it is not to be giuen, also that it killeth Mice and Rats.
6. Of Mithridatium, of Scordotis or Scordium, of Polemonia, otherwise called Philetaria or Chilioodyna, of Eupatorie or Agrimonie, of great Centaurie otherwise called Chironium, of the lesse Centaurie or Libadium, called Fel Terræ, i. the gall of the Earth. Of Triorches, and their vertues.
7. Of Clymenus, Gentian, Lysimachia and Parthenus or Motherwort, Mugwort, Ambrose, Nenuphar, Heraclium, and Euphor-

Chap.

- bia, with all their vertues medicinable.
8. Of Plantaine, Buglosse, Hounds tongue, Oxe-eye or May weed, of Scythica, Hippice and Ischammon, of Beronic, Cantabrica, Setaarwort, of Dittander or Hiberis, of Celendine the greater, Celendine the lesse or Pilewort, of Canaria, of Elaphoboscus, of Didamnum, of Aristolochia or Hartwort, how fishes will come to it for loue of bait, and so are foonc caught. The counterpoysons against stinging of serpents, by these herbes abouenamed.
9. Of Argemonia, of Agaricke, Echium, Henbane, Vervaine, Blattaria, Lemonia, Cinquefoile, Carot, Persalata, the Clot Burre, Swines bread or Cyclaminus, Harstrang: all very good for the stinging of serpents.
10. Of Danewort or Walwort, of Mullin, of Thelyphonon. Remedies against the sting of Scorpions, the biting of Toades and mad Dogs, and generally against all poysons.
11. Receipts and remedies against head-ach and diseases of the head.
12. Of Centaurie, Celendine, Panace, and Henbane, and Euphorbium, all souveraigne medicines for the eyes.
13. Of Pimpernell or Corchorus, of Mandragoras or Circeium, of Henbane, of Crethmoagron, of Molybdæna, of Fumiterre, of Galengale, of Floure de lis, of Coryledon, or Vmbilicus Veneris, of Houillecke or Sengrene, of Pourcellane, of Groundswell, of Ephemerum, of great Tazill, of Crow-foot: which affoord medicines against the infirmities and diseases of the eyes, cares, nostrils, teeth, and mouth.

In summe, this Booke doth yeeld of medicines, stories, and obseruations, a thousand two hundred ninetie and two.

Latine Authours cited.

M. Varro, C. Volgius, Pompeius Lenaus, Sextius Niger, and Iulius Bassus, who both wrote in Greeke; Antonius Castor, and Cornelius Celsus.

Forreine Writers.

Theophrastus, Apollodorus, Democritus, king Iuba, Orpheus, Pythagoras, Mago, Menander who wrote Biochrestia, Nicander, Homer, Hesiodus, Muscus, Sophocles, Xanthus, and Anaxilans.

Physicians.

Mnesibius, Callimachus, Phanias the naturall Philosopher, Timaristius, Simo, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Hicetus, Dionysius, Apollodorus the Tarentine, Praxagoras, Philistio.

The first Booke of

Plisitanicus, Medius, Dieneches, Cleophrantus, Philistio, Asclepiades, Craterus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Theopolemus, Metrodorus, Solon, Lycus, Olympias the midwife of Thebes, *Phyllinus, Petreus, Miltion, Glaucias* and *Xenocrates*.

¶ IN THE XXVI. BOOKE ARE CONTAINED the medicines for the parts of mans bodie.

Chap.

1. Of new maladies, and namely of Lichenes, what they be, and when they began to raige initalic first. Of the Carbuncle, of the white Morpew or Leprosie called Elephantiasis, and of the Collicke.
2. The praise of *Hippocrates*.
3. Of the new practise in Physicke, of the Physician *Asclepiades*, and by what meanes hee abolished the old manner of practise, and set vpa a new.
4. The superstitious follie of Magicke iserided. Also a discourse touching the foule tetra called Lichenes, the remedie thereof: and also the infirmities of the throat and chawes.
5. Recetts and remedies against the kings euill: also for the diseases of the fingers and the breast, and against the Cough.
6. Of Mullin, of Calacia, Tussilage or Foot-foot, of Bechium, and Sauge, all herbes for to cure the cough.
7. For the paines of the sides and chist, for the difficultie of breath, and those that cannot take wind but sitting or standing vpright, for the paines of the liuer and the heart-ach, medicines appropriat to the lungs, difficultie of vrine, and the cough, for the breath, for inward vlcers, for the kidneys and imbecillitie of the liuer, to stay vomit and yexing, also for the pleuritic and disease of the sides and flankes.
8. Of all diseases of the bellie and the parts either within it or neare vnto it. How to stay the flux thereof, or to make it loofe and soluble.
9. Of Penitriall and Argemone.
10. Of water Lillie or Nenuphar, of abstinence

In summe, this booke leadeth you to medicines, stories and obseruations, a thousand two hundred ninetie and two: collected out of

Latine Authours,

M. Varro, C. Volgius, Pompeius Lenæus, Sextius Niger, and Iulius Bassus, who writ both in Greeke, *Antonius Cassor*, and *Cornelius Celsus*.

Forreine

Plinies Naturall History.

Forreine Writers,

Theophrastus, Apollodorus, Democritus, Iuba, Orpheus, Pythagoras, Mago, Menander the author of *Biochresta*, *Nicander, Homer, Hesiodus, Musæus, Sophocles, Xanthus* and *Anaxilaus*.

Physicians.

Mnesithens, Callimachus the professour of Physicke, *Timaristius, Simus, Hippocrates, Chrysippus, Diocles, Ophion, Heraclides, Acepsus, Dionysius, Apollodorus* the Tarentine, *Praxagoras, Plisitanicus, Medius, Dioschus, Cleophrantus, Philistio, Asclepiades, Craterus, Iolla, Erasistratus, Diagoras, Andreas, Mnesicles, Epicharmus, Damion, Theopolemus, Metrodorus, Solon, Lycus, Olympias* the Midwife of Thebes, *Phyllinus, Petreus, Miltion, Glaucias* and *Xenocrates*.

¶ THE XXVII. BOOKE COMPREHENDETH all other sorts of herbes.

Chap.

1. The rest of Herbes.
2. Of Aconitum, and how this herbe killeth Leopards or Panthers.
3. That God is the Creator of all things.
4. Of the hearbe *Æthiopis, Ageratum, Aloe, Alcea, Alypum, Alfine, Androsacum, Androcæmon, Ambrosia, Restharrow, Anagryon*, and *Anonymon*.
5. Of the great Burre, Of Cliuers or Goose graffe, Asplenium, Asclepias, or Swallow-wort, Alter or Bubonium, Alcyrum or Afcyrotides, Aphace, Alciubium, and Cockes combe.
6. Of Alus.
7. Of sea Weeds or Reits, of Elder, wild Vine, and Wormewood.
8. Of Ballote or stinking Horehound, of Botrys or Oke of Ierusalem, of Brabyla, of Bryon or Corallina, of Bupleuron, and Cattanance, of Calla, Cerceia, Cirsium and Crategonum, Thelygonum, Crocodilium, Dogs stone, Chrysolachanium, Cucubulum, and Conferua or the riuier Sponge.
9. Of the graine called Coccus, Gnidia, of Tazill, of Oke fearene, of Dryophonum, of Ela-

Chap.

1. Of Empetrum or Perce-Pierre, of Epipactus or Elleborus, of Epimedium, Enneaphyllon, i. the nine leaved herbe, of Ofmund or feame, of Fennur Bubulum, i. Ox thigh, of Galeopsis or Galeobdolon, of Glaux or Eugalaetum.
10. Of Glaucium, of Præonic, Cudweed or Chamæzelum, of Galedragum, Holcos, Hyofiris, Holosteum and Hypophæsum.
11. Of Hypoglossa, and Hypocoon, Idæa, Ilopyron, Spurge, Pat-delion, Lycopsis, Greimile, &c.
12. Of Medium, Moufe-eare, Myagros, an herb called Natrix, Orhone, Onosma, Onopordos, Toads flax, Woodfoure or Alleluiah, Crowfoot, Knotgrasse, Camomile, Phytrea, Phyllon, Rhellandron, Phalaris, Polyrhizon, Proserpinaca or Knotgrasse, Rhacomia, Refeda, and Storchas.
13. Of Nighthade and Dwale, of Smyrnum, Orpinum, Trichomanes, Thaliætrum, Thlaspi, Tragionias, Tragonis and Tragopogos, the serpent Spondylis. To conclude, that some diseases and venomous things be not in all countries.

In summe, herein are comprehended medicines, stories, and notable obseruations, 702.

Latine Authours cited,

Pompeius Lenæus, Sextius Niger, and Iulius Bassus, who wrate both in Greeke, *Antonius Cassor*, and *Cornelius Celsus*.

Greeke Writers,

Theophrastus, Apollodorus, Cissiensis, Democritus, Aristogiton, Orpheus, Pythagoras, Mago, Menander that wrote the Treatise *Biochresta*, and *Nicander*.

Physicians.

Mnesithens and his fellowes, as they went in the former booke.

¶ IN THE XXVIII. BOOKE ARE COMPRE-
hended the medicinable vertues from
living creature.

Chap.

1. The medicines and vertues obserued in li-
uing creatures.
2. Whether charmes and bare words or cha-
racters auail ought in Physicke. The pro-
digious tokens and prelagas may take effect
in some, and may be auerted and made fru-
strate by others.
3. Remedies euen in the bodies of men against
enchantments and Magicke.
4. Of certaine forceries, also the vertue of a
mans spittle.
5. The regard of diet for a mans health.
6. Of ineeing, the moderation to be vsed in
the act of *Venus* or companie with a woman,
of other preferuatiues of health.
7. What remedies and medicines a womans
mans bodie doth affourd.
8. The medicinable properties in certaine
strange beasts, namely, the Elephant, Lion,
Cammell, Hyena, Crocodile, Chamæleo-
n, Skinke, Riuer-horse, and Once.
9. The medicines which we haue from the bod-
ies of wild beasts and tame of the same
kind. The vertue of milk, butter, and cheefe,
the obseruations thereto belonging: also of
fat or grease.
10. Remedies receiued from Bores and Swine,
from Goats and wild Horses: also from o-
ther beasts, seruing to cure all manner of
diseases.
11. Other remedies for many kinds of mala.

Chap.

- dies, taken from living creatures.
12. For the spots and wems in the visage: for
the infirmities of the necke and of the
breast.
13. Against the diseases of the stomacke,
loines, and reines.
14. To stay a laske, against the loosenesse of
the stomacke, to cure the bloudie flux: the
inflations of the bellie, ruptures, the prouo-
cation to the scege without effect, the broad
flat long wormes in the bellie, and the col-
licke.
15. Against the torments and paines in the
bladder, against the stone, the infirmities in
the priue parts of man or woman: as also
in the fundament, and the twist or groine,
and the cure thereof.
16. For the gout, the falling euill, for those
that bee blasted or stricken with a planet,
and bones broken.
17. Against Melancholie, and those whose
braines bee troubled with fancies, the le-
thargie, drop sic, wild fire or tetter, and the
paines or ach of the sinewes, apt reme-
dies.
18. To staunch bloud, to cure vlcers or old
sores, cankers and scabs.
19. Medicines appropriat to womens disca-
ses.
20. Strange and wondrous things obserued in
sundry beasts.

In summe, here be reported medicines, stories, and obseruations, to the number of a hundred
eightie and five.

Latine Authours alledged,

*M. Varro, L. Piso, Fabianus Verres, Antias, Verrius Flaccus, Cato Censorius, Seruilius Sulpitius, Lici-
nius Macer, Celsus, Maffius, Sextus Niger* who wrote in Greeke, *Bythus* the Dynrhachian, *Ophilius*
the Physician, and *Granius* the Physitian.

Forreine Writers

Democritus, Apollodorus who wrote a booke entituled *Myrsis, Miletus, Artemon, Sextilius, Antias,
Homer, Theophrastus, Lyfimachus, Aitalus, Xenocrates* who wrote a booke called *Diophros*, and *Ar-
chelous* likewise that wrote such another, *Demetrius, Satira, Elephantis, Salpe*, and *Olympias* of
Thebes, five women and midwives, *Diotimus, Iolla, Metion* of Smyrna, *Æschines* the Physician,
Hippocrates, Aristotele, Metrodorus, Iacidas the Physitian, *Hesiodus, Dialcon, Cæcilus, Bion* the authour
of the booke *Peri Dynamæon*, *Anaxilæus*, and king *Inba*.

¶ IN

¶ IN THE XXIX BOOKE ARE CONTAINED
medicines from other liuing creatures.

Chap.

1. The first beginning and original of the Art
of Physicke: when Physicians began first to
visit Patients lying sicke in their beds: the
first Physitians that practised the cure of
sick persons, by frictions, ointments, baths,
hot-houses, &c. Of *Chryssippus* and *Erasistratus*
their courle and manner of practise: of
Empiricke Physicke: of *Herophilus* and o-
ther famous Physitians: how often the Art
and state of Physicke hath altered: the first
professed Physician at Rome; when it was
that hee practised: what opinion the ancient
Romans had of Physicians: finally the
imperfection and faults in that Art.
2. The medicinable vertues and properties
obserued in wooll.
3. The nature of eggs, and the vertues thereof

Chap.

- good in Physicke.
4. Remedies in Physicke receiued from dogges
and other creatures that are not tame but
wild: also from foules: and namely against
the stings of the venomous spiders *Phalan-
gia*.
5. Of the Ostrich greace, and the vertues ther-
of: of a mad dog: also remedies had from
him, a lizard, geefe, dones, and weasils.
6. Medicines against the falling of the haire,
and to make it grow againe: to kill nits: to
recover the haire of the eye-lids: to cure the
dimnesse and rednesse, and generally all dis-
eases and accidents of the eyes, as also the
swellings and inflammations in the kernils
vnder the cares.

In sum, there be medicines and other things worth obseruation in this booke, to the num-
ber of five hundred twentie and one.

Latine Authours alledged.

*M. Varro, L. Piso, Verrius Flaccus, Antias, Nigidius, Cassius Hemina, Cicero, Plautus, Celsus, Sextius
Niger* who wrote in Greeke, *Cæcilus* the Physician, *Metellus Scipio*, *Ouid* the Poet, and *Licini-
us Macer*.

Forreine Authours.

Philopater, Homerus, Aristotele, Orpheus, Democritus, Anaxilæus.

Physicians.

Botrys, Apollodorus, Archidemus, Anaxilæus, Arifon, Xenocrates, Diodorus, Chryssippus the Philo-
sopher, *Horus, Nicander, Apollonius* of Pytane.

¶ IN THE XXX. BOOKE ARE CONTAINED
medicines for liuing creatures, such as were not obserued
in the former Booke.

Chap.

1. The beginning of the black Science & Art
magicke, when it began, who practised it
first, and who were they that brought it in-
to request and reputation. Also the rest of
the medicines taken from beasts.
2. Sundrie kinds of Magicke: the execrable
and cursed parts plaid by *Ære*, and of Ma-
gicians.
3. Of Warts or Mouldwarps: of liuing crea-
tures as well tame as sauage which affourd

Chap.

- remedies, and those are digested in order
according to the diseases.
4. How to make the breath sweet against mols
and spots disfiguring the face: remedies
for to cure the diseases of the throat and
chaws.
5. Against the Kings euill, and namely when
the swelling is broken and doth run: to ease
the pain of the shouldres, the heart and the
parts about it.

6. For

The first Booke of

Chap.

6. For the diseases of the lungs and liver: also to cure the casting and rejection of blood upward.
7. Remedies for the bloudie flux, and generally for all diseases of the bellie and the guts.
8. For the gravell and stone, for paines of the bladder, for swelling of the stones and the groine, of apoplems or swellings in the kidneys and emunctories.
9. Against the gout of the feet and paines of other ioynts.
10. Remedies against many diseases that hold the whole bodie.
11. Against the jaundie, the phrensic, fevers,

Chap.

- and dropfic.
12. Against the wild fire, carbuncles, fellons or vncoms, burnes, scaldings, and shrinking of the sinews.
13. To staunch blood, to allay swellings in wounds: also to cure vlcers, greene wounds, and other maladies, diuerse remedies, all taken from liuing creatures.
14. To cure womens secret maladies, and to helpe conception.
15. Many receipts and remedies huddled together one with another.
16. Certaine miraculous things obserued in beasts.

In summe, this booke sheweth vnto vs medicines and memorable obseruations 54.

Latine Authors cited.

M. Varro, Nigidius, M. Cicero, Sextius Niger who wrate in Greeke, and *Licinius Macer*.

Forreine Writers.

Eudoxus, Aristotle, Hermippus, Homer, Apian, Orphens, Democritus, and Anaxilans.

Physicians.

Botrys, Horus, Apollidorus, Memander, Archimedes, Ariston, Xenocrates, Diodorus, Chrysippus, Nicander, Apollonius, Pitaneus.

¶ THE XXXI. BOOKE SHEWETH MEDICINES gathered from fishes and water creatures: also it deliuereth vnto vs strange and wonderfull things as touching the Waters.

Chap.

1. Admirable matter obserued in the waters.
2. The difference of waters.
3. The nature and qualitie of waters: how to know good and wholesome waters from them that be naught.
4. The reason of some waters, that spring on a suddain, & so likewise cease and giue ouer.
5. Many historickall obseruations of waters.
6. The manner of water conduits, and how to draw them from their heads: when and how waters are to be vsed which naturally are medicinable: how farre forth navigation or sailing vpon the salt water is good for the

Chap.

- health: medicines made of sea water.
7. Diuers kinds of salt: the preparing and making thereof, together with the vertues medicinable of salt, and other considerations thereto belonging.
8. Of the fish Scamber or the Mackrell: of fish pickle: of Alex, a kind of brine or fish sauce.
9. The nature of Salt, and the medicines made of it.
10. Sundrie sorts of Nitre, the handling and preparation thereof, the medicines and obseruation to it pertaining.
11. The nature of Spunges.

This booke comprehendeth medicines and notable obseruations 266.

Latine Authors alledged.

M. Varro, Cassius of Parma, Cicero, Mutius, Cor. Celsus, Troguus, Ouid, Polybins, and Sornatinus.

Forreine Writers.

Callimachus, Ctesias, Eudicus, Theophrastus, Eudoxus, Theopompus, Polyclinus, Inba, Lycus, Apian, Epigenes,

Plinies Naturall Historie

Epigenes, Pelops, Apelles, Democritus, Thrasillus, Nicander, Memander the Comickall Poet, *Attalus, Sallustius, Dionysius, Andreas, Nigricatus, Hippocrates, Anaxilans.*

¶ IN THE XXXII. BOOKE ARE CONTAINED other medicines behind, from fishes and water creatures.

Chap.

1. Of the fish Echeneis, his wonderfull property: of the Torpedo, and the Sea-hare: marvellous things reported of the red fea.
2. The naturall industrie, docilitie, and gentleness of some fish: where they will come to hand and take meat at a mans hand: in what countries fishes serue in stead of oracles.
3. Of those fishes that liue both on land and water: the medicines and obseruations as touching Castoreum.
4. Of the sea Tortoise: many vertues medicinable obserued in sundry fishes.
5. Receipts of medicines taken from water creatures, digested and set in order according to sundry diseases, & first against poyson and

Chap.

- venomous beasts.
6. Of Oisters, Purple shell-fishes, & sea-weeds called Reits: their vertues medicinable.
7. Medicines against the shedding of the haire: how to fetch haire againe: also against the infirmities of eies, ears, teeth, and to amend the vicemely spots in the face. (ly.)
8. Many medicines set down together vnder.
9. Remedies for the diseases of the luer and sides, stomacke and bellie: others also disorderly put downe.
10. Against feuers and agues of all sorts, and many other infirmities.
11. A rehearsal of all creatures liuing in the sea, to the number of 122.

In summe, ye haue here medicines, stories, and obseruations, 928.

Latine Authors.

Licinius Macer, Trebins Niger, Sextimus Niger who wrote in Greeke, *Ouid* the Poet, *Cassius Helminia, Mecanias, and L. Ateius.*

Forreine Writers.

*K. Iuba, Andreas, * Salpe, Pelops, Apelles* of Thafos, *Thrasillus, and Nicander.*

¶ THE XXXIII. BOOKE DECLARETH the natures of Mettals.

Chap.

1. In what estimation were the mines of gold at the first in the old world: the beginning of gold rings: the proportion of gold that our ancestors had in their treasure: the degree of knights or gentlemen at Rome: the priuiledge to weare gold rings, and who only might fo do.
2. The courts and chambers of judges or iustices at Rome: how often the gentlemen of Rome and men of armes changed their titles: the presents giuen to valiant souldiours for their braue seruice in the wars: the first crowns of gold that were seene.
3. The ancient vse of gold beides, both in men & women: of the golden coine: when copper and brasse money was first stamped: when gold and siluer was put into coine: before money was coined, how they vsed brasse

Chap.

- for exchange in old time. At the first taxation and leuie made of Tribute, what was thought to be the greatest wealth: and at what rate were the best men fessed. How often and at what time gold grew into credit and estimation.
4. The mines of gold, and how naturally it is found: when the statue or image of gold was first seene: medicinable vertues in gold.
5. Of Borras, and fix properties of Borras in matters of Physicke: the wonderfull nature that it hath to foder all mettals, and giue them their perfection.
6. Of Siluer, Quick-siluer, Antimonic, or Alabastr: the droffe or refuse of siluer: also the seum or some of siluer called Litharge.
7. Of Vermilion: in what account it was in old time among the Romans: the inuention thereof:

The first Booke of

Chap.

- thereof: of Cinnabaris or Sangdragon vsed in painting and Physick: diuers sorts of vermillion, and how painters vse it.
8. Of Quick siluer artificiall: the maner of gilding tables: of touchstones: diuers experiments to trie siluer: the sundry kinds thereof.
9. Of mitroirs or looking-glasse: of the siluer in Egypt.
10. Of the excessiue wealth of some men: in money: who were reputed for the richest men when it was that at Rome they began to make largeesse and scatter money abroad

Chap.

- to the commons.
11. Of the superfluitie of coine, and the frugallitie of others as touching siluer plate, beds and tables of siluer: when began first the making of excessiue great and massiue platters and chargers of siluer.
12. Of siluer statues: the grauing and chasing in siluer, & other workmanship in that metall
13. Of Sil, of Azur, of superfiue Azur named Nestorianum: also of the Azur called Caelum: that euery yere these kinds be not sold at one price.

This booke hath in it of medicines, stories, and obseruations, 1215.

Latine Authors alledged.

L. Piso Antius, Verrinus, M. Varro, Cor. Nepos, Messala, Rufus, Marcus the Poet, Brutus, Julius Bassus, and Sextius Niger, (who wrote both of Physicke in Greeke) and *Fabius Vellatilis*.

Forreine Writers.

Democritus, Metrodorus Scepius, Menacimus, Xenocrates, and Antigonus, who wrote all three of the feat and skill of grauing, chasing and embossing in metall: *Heliadornus*, who wrote a booke of the rich ornaments and oblations of the Athenians: *Pasiteles*, who wrote of wonderfull pieces of worke: *Nymphodorus, Timaeus* who wrote of Alchymie or minerall Physicke: *Solla, Apollodorus, Andreas, Heraclydes, Diagoras Botryonius, Archimedes, Dionysius, Aristogenes, Democritus, Mnesicles, Attalus* the Physician, *Xenocrates* the sonne of Zeno, and *Theomnestes*.

¶ THE XXXIIII. BOOKE TREATETH of other Mettalls.

Chap.

1. Mines of Brasse, Copper, Iron, Lead, & Tin.
2. Sundry kinds of Brasse, namely Corinthian, Deliacke, and Aeginetike.
3. Of goodly candlesticks, & other ornaments of temples.
4. The first images made at Rome: the original of statues: the honour done to men by statues: sundry sorts and diuers forms of them.
5. Of statues pourtraied in long Robes; and of many others who first erected images vpon columnes and pillars at Rome: when they were allowed first at the cities charges: also what maner of statues the first were at Rome.
6. Of statues without gowne or casocke, and some other: the first statue pourtraied on horsebacke at Rome: when the time was that all Images as well in publike places as priuate houses were abolished at Rome and put downe: what women at Rome were allowed to haue their statues; and which were the first erected in publike place by forreine nations.

Chap.

7. The famous workemen in making & casting Images: the excessiue price of Images: of the most famous and notable colosses or gyant-like images in the citie of Rome.
8. Three hundred sixtie and six peeces of work wrought in brasse by most curious and excellent artificers.
9. What difference there is in Brasse: the diuers mixtures with other mettals: how to keepe brasse.
10. Of Brasse ore called Cadmia, and for what it is good in Physicke.
11. The refuse or scum of Brasse, Verdegri: the skales of brasse and copper, Steele, copper rust, or Spanish greene: of the collyrie ore ye-faluc called Hieracium.
12. Of a kinde of Verdegri named Scolecia: of Chalcitis, i. red Vitrioll, Myse, Sory, and Copporese or Vitrioll, i. blacke Nil.
13. Of the soile of Brasse named white Nil or Tutia: of Spodium, Antipodium, of Diaphryges, and the Trient of Seruilus.

14. Of

Plinies Naturall History.

Chap.

14. Of Iron and mines of Iron: the difference also of Iron.
15. Of the temperature of Iron: the medicinale vertues of Iron, and the rust of Brasse and Iron: the skales of Iron, and the liquid plaister named of the Greekes Hygemplastrum.

In summe, here are contained natable matters, stories, and obseruations, 815.

Latine Authours cited.

L. Piso, Antius, Verrinus, M. Varro, Messala, Rufus, Marcus the Poet, Brutus, Julius Bassus, and Sextius Niger, who wrote both in Greeke of Physicke, and *Fabius Vellatilis*.

Forreine Writers.

Democritus, Metrodorus Scepius, Menacimus, Xenocrates, Antigonus, and Duris, (who all foure wrote of grauing, chasing, and embossing mettals, a worke entituled *Toreutice*): *Heliadornus*, who described the ornaments and oblations hanged vp at Athens: *Nymphodorus, Andreas, Heraclydes, Diagoras, Botryonius, Solla, Apollodorus, Archimedes, Dionysius, Aristogenes, Diomedes, Mnesicles, Xenocrates* the sonne of Zeno, and *Theomnestus*.

¶ IN THE XXXV. BOOKE IS SHEWED IN what account Painting was in old time.

Chap.

1. The honour and regard of Pictures in times past.
2. In what price Images were of old.
3. When Images were first erected and set vp in publike place, as also in priuate houses, with their scutcheons and armes: the beginning of pictures: the first draught of Pictures in one simple colour: the first Painters, and how ancient they were in Italie.
4. Of Roman Painters: the first time that Painting and Pictures grew into credit: who they were that drew their victories in colours vpon tables, and set them forth to be seene and when forreine Pictures began to be of some good reckoning at Rome.
5. The art and cunning of drawing pictures: the colours that painters vse.
6. Of colours naturall and artificiall.
7. What colour will not abide to be laid wet: what colours they painted withall in old time: at what time first the combats of sword-fencers at vtterance, were set forth in painted tables to be seene.
8. How ancient the art of Painting is, when it began: a catalogue of the excellent workemen in that kind, and how their workmanship was prized and esteemed.
9. The first that contended & strove who could

Chap.

- paint best: also who first vsed the pencill.
10. Of Pictures so liuely drawne that birds were deceived therewith: what is the hardest point in Painting.
11. The way to still birds that they sing and chatter not: who was the first that deuised to enamell, or to set colours with fire, and with the pencill painted arched roofs and vaults; and among, the wonderful prizes that Pictures were set at in old time.
12. The first inuencors of potterie: of Images made of clay and cast in moulds: also of vessels made of earth, and their price.
13. Sundry sorts of earth for potters: of the dust or sand of Puteoli: of other kinds of earth which turne to be hard stone.
14. Of walls made by casting in moulds: also of bricke walls, and the manner of making them.
15. Of Brimstone & Alum, their diuers kinds and vse in Physicke.
16. Of sundry sorts of earth, & namely Samia, Eretria, Chia, Selenusia, Pingitis and Ampelitis, and these they haue in Physicke.
17. Sundry sorts of chalker for fillers to seure clothes, to wit, Cimolia, Sarda, Vmbria, of a kind of earth called Saxum, as also that giueth a siluer color & is called Argentaria.

18. VVho

The first Booke of

Chap.

18. Who were they that enriched their flauces after they were enfranchised, and who they were of flauces came vp and grew to great wealth and power.

In sum, the medicins, histories, and obseruations in this booke, amount to 956.

Latine Authors alledged.

Metellus the Oratour, *Metellus* the Elder, *Fenestella*, *Atticus*, *Verrinus*, *M. Varro*, *Cor. Nepos*, *Decimus Euclo*, *Mutianus*, *Metellus*, *Vitruvius*, *Cassius Suerus Longulanus*, *Fabius Vastulus*, who also wrote of Painting.

Forreine Writers.

Pasicles, *Apelles*, *Melambius*, *Asclepiodorus*, *Euphranor*, *Parasius*, *Heliodorus*, who wrote of the Pictures and other ornaments set vp at Athens, *Meirotodorus* (who likewise wrote of Architecture, to wit, Masonrie and Carpentrie :) *Democritus*, *Theophrastus*, *Apion* the Grammarian who also made a booke of Minerall or Chymicke Physicke, *Nymphodorus*, *Andreas*, *Heraclides*, *Iolla*, *Apolodorus*, *Digoras*, *Botryensis*, *Archidemus*, *Dionysius*, *Aristogenes*, *Demanes*, *Menesicles*, *Xenocrates*, the scholler of *Zeno*, and *Theomestus*.

¶ THE XXXVI. BOOKE TREATETH of Stones.

Chap.

1. The nature and propertie of stones: the superfluities and expence about buildings, of marble
2. Who first shewed at Rome columnes of marble in publike place.
3. The first that brought columnes of marble to Rome out of forreine countries.
4. The first workemen that were commended for cutting in marble, and at what time that invention began.
5. Excellent peeces of worke in marble to the number of 126. The cunning and curious workmen themselves: of the white marble of the Island Paros. The stately and admirable sepulchre Mausoleum.
6. When they began at Rome to build with marble: who was the first that ouercast the outside of walls with marble: at what times this or that kind of marble was taken vp in building at Rome: who cut marble first and brought it into leaues or thin plates by cutting: the manner thereof: also of sand.
7. Of the hard stone of Naxos, and Armenia: sundry kinds of marble.
8. Of the Alabastre marble of Lygdinum and Alabandicum.
9. Of the great obeliske at Thebes in Ægypt, and at Alexandria: of that also which is in the great cirque or shew-place at Rome,

Chap.

19. Of the earth that comes out of the Island Galeta: of the earth Clupea: also, of that which commeth from the Balear Islands, and the Isle Ebuda.

Chap.

19. Of Curatilis, or a kind of Marquesite called Pyrites, and the vertues thereof: of the stone Ostracites, and Amiantus & the properties of it: of the stone Melitites, and the power thereof: of the Gear and his medicinal properties: of Spunge stones: of the stone Phrygius and his nature.
20. Of the Bloud-stone, and five sorts of it; and of Schistus.
21. Four kinds of the Ægle stone, of the stone within the bellie of them called Callimus: of the stones Samius and Atabus: also of Pumish stones.
22. Of stones meet for to make Apothecaries mortars, of soft stones, of the stone Specularis, & of flints, of the shining stone Phenigites, of whetstones, and other stones meet for building: of stones that will resist the fire and abide all weather and tempest.

Chap.

23. Of Cesterns, of Limestone, sundry sorts of sand, the tempering of sand and lime for mortar: the ill building of some walls: of parget and roughcast: also columnes and buttresses in building.
24. The medicinal vertues of Quicklime, of Malta, and Plaster.
25. Of paucements: when they were first used at Rome: of terraces and paved floores lying open to the aire above: of certaine paucements called Græcanica: and when arched and embowed worke first began.
26. The first inuention of glasse: the manner of making it: of a kind of glasse called Obsidianum: sundry sorts of glasse in great variety.
27. Wonderfull operations of fire: the vertues thereof medicinal, and the prodigious significations and presages by fire.

In summe, here you may find medicines, stories, and obseruations, in all 523.

Latine Authors.

M. Varro, *Calpus*, *Galba*, *C. Iulius*, *Mutianus*, *Cor. Nepos*, *L. Piso*, *Tubero*, *Seneca*, *Fabius Vastulus*, *Annius*, *Facilius*, *Fabius*, *Cato* Conscriptus, and *Vitruvius*.

Forreine Writers.

Theophrastus, *Praxiteles*, *K. Iubus*, *Nicander*, *Sotacus*, *Sudanes*, *Alexander*, *Polyhistor*, *Apion*, *Plistonius*, *Duris*, *Herodotus*, *Eumerus*, *Aristagoras*, *Dionysius*, *Aricmidorus*, *Eutolidas*, *Amisilthenes*, *Democritus*, *Demoteles*, and *Lyceus*.

¶ IN THE XXXVII. BOOKE IS DECLARED the originall of pretious stones.

Chap.

1. The pretious stone of *Polycrates* the tyrant, also of *K. Pyrrhus*: who were the best lapidaries, & could cut excellently wel in stone: the first man that at Rome wear a pretious stone vpon his finger.
2. The rich stones that were shewed in the triumph of *Pompey* the Great: the nature and vertues of the Crystall stone: the costly vessels made thereof, and the superfluous expence that way: when the vessels of Cassidone called *Myrrhina*, were first inuented: the wastfull expence in them: the nature and properties of them: what lies the Greeces haue told as touching Amber.
3. The true original and beginning of Amber: the medicinal vertues thereof: the sundry kinds, and the excessive cost that folke were at to get them: of *Lincurium* and the pre-

Chap.

- erties of it.
4. Of Diamonds, and their kinds: their vertues: also of Pearls.
5. Of the Hemeraud and diuers sorts of it: of other Greene pretious stones cleare and transparent.
6. Of the true Opall stones, their diuers kinds, and which be counterfeit: it means how to try them: also of diuers other rich stones.
7. Of Rubies and carbuncles: which be counterfeit: the waies to proue whether they be good or no. Also of other ardent stones like fire.
8. Of the Topaze, and all the kinds: of the Turquois: of other Greene stones that be not cleare through.
9. Sundry sorts of the Iasper stone.
10. Of certaine pretious stones set downe in order

The first Booke of

Chap.

order according to the Alphabet.
11. Of some pretious stones which take their denomination of the parts of mans bodie: also from other liuing creatures, &c. of those which haue the names from other things.

Chap.

12. Of other new stones growing naturally: of counterfeit and artificiall stones: of their sundry formes and fashions.
13. The manner and way how to proue fine stones from other.

In summe, here are to be read of notable matters, worthy histories, and speciall obseruations, to the number of 1300. gathered out of

Latine Authours.

M. Varro, the Records of Romane triumphs, *Mecenas*, *Iacchus*, and *Cornelius Bocchus*.

Forreine Writers.

K. Inba, *Xenocrates* the disciple of *Zeno*, *Sudines*, *Aeschylus*, *Philoxenus*, *Euripides*, *Nicander*, *Satyrus*, *Theophrastus*, *Chares*, *Philomenes*, *Democrates*, *Xenotimus*, *Metrodorus*, *Sotacus*, *Pylheas*, *Timanus* the Sicilian, *Niceas*, *Theocrestus*, *Asaruba*, *Mnasea*, *Theomenes*, *Crestias*, *Mithridates*, *Sophocles*, *K. Archelaus*, *Callistratus*, *Democritus*, *Ismenias*, *Olympicus*, *Alexander Polyhistor*, *Apion*, *Horus*, *Zoroastres*, and *Zalzalas*.



THE SECOND BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS
SECVNDVS.

CHAP. I.

¶ Whether the World be finite, and but one.

- C** HAT World, and this, which by another name men haue thought good to call heauen (vnder the pourprife and bending cope whereof, all things are emmantled and couered) beleue we ought in all reason to be a God, eternally, vnmeasurable, without beginning, and likewise endlesse. What is without the compasse hercof, neither is it fit for men to search, nor within mans wit to reach and conceiue. Sacred it is, euermlasting, infinit, all in all, or rather it selfe all and absolute: finite and limited, yet seeming infinite: in all motions orderly and certaine: howbeit in thew and iudgement of man, vnertaine: comprehending and containing all whatsoeuer, both without and within: Natures worke, and yet very Nature it selfe, producing all things. Great folly it is then, and meere madnesse, that
- D** some haue deuised and thought in their minde to measure it; yea, and durst in writing set down the dimensions thereof: that others againe, by occasion hereupon taken or giuen, haue deliuered and taught, That worlds there were innumerable: as if we were to beleue so many natures as there were Heauens: or if all were reduced to one, yet there should be so many Sunnes and Moones neuer thelesse, with the rest also of those vnmeasurable and innumerable starres in that one: as though in this pluralitie of worlds we should not alwaies meet with the same question still at euery turne of our cogitation, for want of the vmoost and some end to rest vpon: or if this infinitenesse could possibly be assigned to Nature, the worke-mistresse and mother of all, the same might not be vnderstood more easily in that one Heauen which wee see, so great a worke especially and frame as it is. Now surely a fantastick folly it is of all other follies, to go
- E** forth of it, and so to keepe a seeking without, as if all things within were well and clearly knowne already: as who would say, a man could take the measure iust of any third thing, who knoweth not his owne: or the minde of man see those things, which the very World it selfe may not receiue.

CHAP. II.

¶ Of the forme and figure of the World.

- F** HAT the forme of heauen is round, in fashion of an absolute and perfect globe, the name thereof principally, and the consent of all men agreeing to call it in Latine *Orbus*, (i.e.) a rounde; as also many naturall reasons, do euidently thew: to wit, not onely for that such a figure euery way falleth and bendeth vpon it selfe, is able to beare and vphold it selfe, includeth and compriseth it selfe, hauing need thereto of no ioints, as finding in any part thereof no end nor beginning: or because this forme agreeth best to that motion, whereby euery and anon it must turne about:

B

(as

(as hereafter it shall appeare) but also because the eyesight doth approue the same: in that look which way soeuer you will thereupon, it seemeth to bend downward, round, and euen on all sides, shewing a iust Hemisphere, a thing not incident possibly to any other figure.

CHAP. III.

¶ Of the motion of Heauen.

That the world thus framed, in a continuall and vncessant circuit, with vnspcakable swiftnesse turneth round about in the space of foure and twenty houres, the rising and setting ordinarily of the Sunne hath left cleare and doubtlesse. Now, whether it be-
ing in height infinite, and therefore the sound of so huge a frame, while it is whir-
led about, and neuer resteth in that resolution, cannot be heard with our eares, I cannot so easi-
ly resolve and pronounce: no more I assure you, than I may auouch the ringing of the starres
that are driuen about therewith, and toll with all their owne spheres: or determine, that as the
Heauen moueth, it doth represent indeed a pleasant and incredible sweet harmonie both day
and night: although to vs within, it seemeth to passe in silence. That there be imprinted there-
in the pourtraits of liuing creatures, and of all things besides without number, as also that the
body thereof is not all ouer smooth and sleek (as we see in birds eggs) which excellent Authors
haue termed *Tenerum* is shewed by good arguments: for that by the fall of naturall seeds from
thence of all things, and those for the most part blended and mixed one with another, there are
ingendered in the world, and the sea especially, an infinite number of strange and monstrous
shapes.ouer and besides, our eyesight to witness the same; whiles in one place there appeareth
the resemblance of a waime or chariot, in another of a beare, the figure of a bull in this part, of a
* letter in that, and principally the middle circle ouer our head, more white than the rest, to-
ward the North pole.

CHAP. IIIII.

¶ Why the World or Heauen is called *Mundus*.

Erily for mine owne part, moued I am and ruled by the generall consent of all
nations. For, the World, which the Greekes by the name of ornament, called
Mundus, we for the perfect nearnesse and absolute elegancie thereof, haue termed
Mundus. And without all question, Heauen we haue named *Celum*, as it were
Engrauen in a garofield, according as *M. Varro* interpreteth it. And hereto
maketh much the order vnto the rankes of things therein, and namely the circle called
Signifer, or the Zodiacke fit for, and diuided by the formes of twelue liuing creatures therein
portraied: together with the manner of the Sunnes race throughout them, keeping euer the
same course still, for so many ages past.

CHAP. V.

¶ Of the foure Elements.

Neither see any doubt made as touching the Elements, That they be foure in
number. The highest, Fire: from whence are those bright eyes of so many shi-
ning starres. The next, Spirit which the Greekes and our country men by one
name called Aire: Vital! this element is, and as it giueth life to all things, so
it soone passeth through all, and is intermeddled in the whole: by the power
whereof, the earth hangeth poised and ballanced iust in the midst, together with
the fourth element of the Waters. Thus by a naturall entertainment one of another, diuers na-
tures are linked and knit together: so as the light elements are kept in & restrained by certain
weights of the heauier, that they flie not out: and contrariwise the massier be held vp, that they M
fall not downe, by means of the lighter, which couer to be aloft. So, through an equal! endeour
to the contray, each of them hold their owne bound as it were by the restlesse circuit of the ve-
ry world: which, by reason that it moueth eternally vpon it selfe, the earth fallst to be lowest,
and the middle of the whole: and the same hanging steadily by the poles of the heauen, peisseth
thoſe

A those elements by which it hangeth in a counterballance. Thus it alone resteth vnmooueable,
whiles the whole frame of the world turneth about it: and as it is knit and vnited by all, so all
rest and beare vpon the same.

CHAP. VI.

¶ Of the seuen Planets.

Betweene the earth and heauen there hang in the same spirit or element of aire
about named, seuen stars, secured one from another, and distant afunder certaine
spaces, which of their variable motion wee call wandering planets, whereas in-
deed none stray and wander lesse than they. In the midst of them the Sun ta-
keth his course, as being the greatest and most puissant of all the rest: the very
ruler, not of times and seasons onely, and of the earth, but also of the starres and
heauen it selfe. Beleue we ought, this Sun to be the very life, and (to speake more plainly)
the Soule of the whole world, yea, and the principall gouernance of nature: and no lesse than a
god or diuine power, considering his workes and operations. He it is that giueth light to all
things, and reddeth them from darknesse: he hideth the other starres, and sheweth them againe:
he ordereth the seasons in their eternall course: he tempereth the yeare, arising euer fresh
and new againe, for the benefit and good of the world. The lowering dimnesse of the skie he di-
spatcheth, yea, and cleareth the darke mists and clowdiness of mans minde: to other stars like-
wise he lendeth out his owne light. Most excellent, right singular he is, as seeing all, & hearing
all. For this, I see, is the opinion of *Homer* (the prince of learning) as touching him alone.

CHAP. VII.

¶ Of God.

I Suppose therefore that to seeke after any shape of God, and to assigne a forme
and image to him, bewraith mans weaknesse. For God, whosoever hee be [if
haply there be any other, but the very world] and in what part soeuer resiant, all
sense he is, all sight, all hearing: he is all life, all soule, all of himselfe. And verily
to beleuee that there be gods innumerable, and those according to mens ver-
tues and vices, to wit, Chastitie, Concord, Vnderstanding, Hope, Honour, Cle-
mencie, Faith; or (as *Democritus* was of opinion) that there are two gods onely, and no more;
namely, Punishment, and Benefic: These conceits, I say, make mens idleness and negligence
the greater. But all commeth of this, That fraille and crasse mortall men, remembering well their
owne infirmirie, haue digested these things apart, to the end that each one might from thence
chuse to worship and honour that whereof he stood in need most. And hereupon it is, that in
sundry nations we finde the same gods named diuersly, according to mens deuotion: and in
one region ye shall haue innumerable gods. The infernall powers beneath likewise, yea,
and many plagues haue beene raunged by themselves, and reckoned for gods in their kinde, whileſt
E with trembling feare wee desire that they were pacified. Which superstition hath caused a
chappell to be dedicated to the Feuer, in the mount Palatium, euen by publicke order from the
State. Likewise an altar to *Orbona*, neere the temple of *Lares*: because another erected to Bad
Fortune in *Esquilis*. And thereby we may conceiue that there are a greater number of gods in
heauen above, than of men vpon earth: since that euery one of their owne accord make so ma-
ny gods as they list, fitting themselves with *Images* and *Genis* for their patrons. Now certain Na-
tions there be that account beasts, yea, and some fistic things for gods, yea and many other
matters more shamefull to be spoken: swearing by stinking meats, by garlick, and such like.
But surely, to beleuee that gods haue contracted mariage, and that in so long continuance of
time no children should be borne between them: also that some are aged, and euer hoarie and
F gray: others againe young and alwaies children: that they be blacke of colour and complexi-
on, winged, lame, hatched of eggs, liuing and dying each other day, are mere fooleries, little bet-
ter than childish toies. But it passeth and exceedeth all shamelesse impudencie, to imagine
adulteries amongst them: eftsoues also chiding, scolding, barred, and malice: and more than
that, how there be gods, patrons of theft and wickednesse. Whereas in very deed, a god vn-

to a man is he, that helpeth a man: and this is the true and direct path-way to everlasting glory. In this way went the noble Romans in old time: and in this tract at this day goeth, with heavenly pace, *Vespasian Augustus*, both he and his children: *Vespasian*, I say, the most mightie ruler of the whole world: whiles he relieueth the afflicted State of the Romane Empire and Common-weale. And this is the most ancient manner of requital to such benefactors. That they should be canonized gods. And hereof came the names as well of all other gods, as of the stars and planets (which I haue mentioned before) in recogniſſance of mens good deſerts. As for *Iupiter* verily and *Mercure*, and other princes raunged among the gods, who doubteth that they were called otherwise among themselves: and who conſeſſeth not how these be celeſtiall denominations, to expresse and interpret their nature.

*Here let
Christians
heed, and
be thankfull
to God for the
light revealed
vnto them out
of the holy
ſcriptures;

Now, That the ſoueraigne power and deity, whatſoever it is, ſhould haue regard of mankind * is a toy and vanity worthy to be laughed at. For can we chuse but beleuee, can we make any doubt, but needs that Diuinity and Godhead muſt be polluted with ſo baſe & manifold a miniſtery? And hardly in manner may it be iudged, whether of the twain be better and more expedient for mankind to beleuee, that the gods haue regard of vs; or to be perſuaded that they haue none at all: conſidering, That ſome men haue no reſpect and reuerence at all of the gods; others againe ſo much, as it is a very ſhame to fee their ſuperſtition. Addideth these are and deuoted to ſerue them by foreign magicke ceremonies: they wear their gods vpon their fingers in rings, yea, they worſhip and adore monſters: they condemne and forbid ſome meats, yet they deſire others for them. Impoſe they do vpon them hard and vengible charges to exerce, not ſuffering them to reſt and ſleep in quiet. They chuse neither marriages nor children, ne yet any one thing els, but by the approbation & allowance of ſacred rites and myſteries. Contrariwise, others there are ſo godleſſe, that in the very capitoll they vſe deceipt, and forſwear themſelves euen by *Iupiter*, for all that he is ready to ſhoot his thunderbolts: and as ſome feigned wel enough with their wicked deeds and irreligion, ſo others againe feele the ſmart and are puniſhed by the ſaints whom they adore, and the holy ceremonies which they obſerue.

Howbeit, betweene both these opinions, men haue found out to themſelves a middle God-head and diuine power, to the end that we ſhould giue ſtil a more vncertaine coniecture as touching God indeed. For throughout the whole world, in every place, at all times, and in all mens mouths, Fortune alone is fought vnto and called vpon: the only is named and in requeſt; ſhe alone is blamed, accuſed, and ended. None but ſhe is thought vpon; ſhe only is praiſed, ſhe only is reprobated and rebuked: yea, and worſhipped is ſhe with railing and reprochfull rearmes; and namely when ſhe is taken to be wauering & mutable: and of the moſt ſort ſuppoſed alſo blind, rousing at random, vnconſtant, vncertaine, variable, and fauoring the vnworthy: whatſoever is laid forth, ſpent, and loſt, whatſoever is received, won and gotten: all that comes in, all that goes out is impuſed to Fortune: and in all mens reckonings and accounts ſhe makes vp the booke, and ſets all ſtreight. So abiect we are, ſo ſeruiſe alſo and enthralled to Lots, that euen the very chance of Lots is taken for a god, than which nothing maketh vs more doubtfull and ignorant of God.

Now there are another ſort, that reſiect Fortune & Chance both, and wil not abide them, but attribute the euent and iſſues of things, to their owne ſeueral ſtars, and go by the ſatall horoſcope or aſcendent of their natiuitie: affirming that the ſame ſhall euer befall, which once hath bin ſet downe and decreed by God: ſo as he for euer after may ſit ſtill and reſt himſelfe. And this opinion beginneth now to ſettle and take deep root, in ſomuch as both the learned, and alſo the rude and ignorant multitude, run that way on end. From hence (behold) proceed the warnings & admonitions of lightnings, the fore-knowledge by Oracles, the predictions of Soothſayers, yea, and other contemptible things not worthy to be once ſpoken of; as ſneeling, and ſtumbling with the foot, are counted matters of preſage. *Augustus Caesar* of famous memorie hath made report and left in writing, that his left foot ſtoode was vntowardly put on before the right, on that very day, when he had like to haue miſcarried in a mutiny among his ſouldiers.

Thus theſe things euenry one doe enwrap and entangle ſilly mortall men, void of all forſcalt and true vnderſtanding: ſo as this only point among the reſt remains ſure and certain, namely, That nothing is certaine: neither is there ought more wretched and more proud withall; than man. For all liuely creatures elſe take care onely for their food, wherein Nature goodnes and bountie of it ſelfe is ſufficient: which one point verily is to be preferred before all good things

A things whatſoever, for that they neuer thinke of glory, of riches, of ſeeking for dignities and promotions, nor ouer and aboue, of death. Howbeit, the beleefe that in theſe matters the gods haue care of mens eſtate, is good, expedient, and profitable in the courſe of this life: as alſo that the vengeance and puniſhment of malefactors may well come late (whiles God is buſily occupied otherwiſe in ſo huge a frame of the world) but neuer miſſeth in the end: and that man was not made next in deegree vnto God, for this, That he ſhould be wel-neare as vile and baſe as the brut beaſts. Moreover, the chiefe comfort that man hath, for his imperfections in Nature, is this, That euen God himſelfe is not omnipotent, and cannot do all things: for neither he is able to worke his owne death, would he neuer ſo ſaine, as man can do when he is wearie of his life; the beſt gift which he hath beſtowed vpon him, amid ſo great miſeries of his life (nor indow B mortal men with euerlaſting life: ne yet recall, raiſe, and reuiue thoſe that once are departed and dead) nor bring to paſſe, that one who liued, did not liue, or he that bare honorable offices, was not in place of rule and dignity. Nay, he hath no power ouer things done and paſt, ſaue onely obliuion: no more than he is able to effect (to come with pleaſant reaſons and arguments to proue our fellowſhip therin with God) that twiſe ten ſhould not make twenty: and many ſuch things of like ſort. Whereby (no doubt) is evidently proued, the power of Nature, and how it is ſhe, and nothing elſe, which we call God. I thought it not impertinent thus to diuert and digreſſe to theſe points, ſo commonly diſguſed by reaſon of the vſual and ordinarie queſtions as touching the Eſſence of God. *Beery that ſay, ſhould be god, but what he is, and what he doeth, is not ſo ſimplely ſayable.*

C *Cont. in Book on 1.2. But much that is ſaid there, is not ſo ſimplely ſayable, as theſe are.*

CHAP. VIII.

Of the Nature of Planets, and their circuit.



Et vs returne now to the reſt of Natures workes. The ſtars which we ſaid were fixed in heauen, are not (as the common ſort thinke) aſſigned to euenry one of vs; and appointed to men reſpectively; namely, the bright & faire for the rich; the leſſe for the poore: the dim for the weak, the aged and feeble: neither ſhine they out more or leſſe according to the lot and fortune of euenry one, nor ariſe they each one together with that perſon vnto whom they are appropriate; and die likewiſe with the ſame: ne yet as they ſet and fall, do they ſignifie that any bodie is dead. D There is not, ywis, ſo great ſocietie betweene heauen and vs, as that together with the fatal neceſſitie of our death, the ſhining light of the ſtars ſhould in token of ſorrow go out and become mortall. As for them, the truth is this; when they are thought to fall, they doe but ſhoot from them a deale of fire, euen of that abundance and ouermuch nutriment which they haue gotten by the attraction of humiditie and moiſture vnto them, like as we alſo obſerue daily in the wikes and matches of lampes or candles burning, with the liqour of oil. Moreover, the celeſtiall bodies, which make and frame the world, and in that frame are compaſt and knit together, haue an immortall nature; and their power and influence extendeth much to the earth; which by their effects and operations, by their light and greatneſſe might be knowne, notwithstanding they are ſo high and ſubtil withall, as we ſhall in due place make demonstration. The E manner likewiſe of the heavenly Circles and Zones ſhall be ſhewed more fully in our Geographical treatiſe of the earth, for ſomuch as the conſideration thereof appertaineth wholly therunto: onely we will not put off, but preſently declare the deuiſers of the Zodiacke, wherein the figures are.

The oblique and crookedneſſe thereof, *Anaximander* the Mileſian is reported to haue ſerued firſt, and thereby opened the gate and paſſage to Aſtronomie, and the knowledge of all things: and this happened in the 58 Olympiads. Afterwards *Clostratus* marked the ſignes therein, and namely thoſe firſt of *Aries* and *Sagittarius*. As for the ſphere it ſelfe, *Aetius* deſcribed long before. Now for this time we will leaue the very bodie of the ſtarry heauen, and treat of all the reſt betweene it and the earth.

F Certaine it is, that the Planet which they call *Saturne*, is the higheſt; and therefore ſeemeth leaſt: ſo that he keepeth his courſe, and performeth his reuolution in the greateſt circle of all: and in thirtie yeares ſpace at the ſonneſt, returneth againe to the point of his firſt place. Moreover, that the moving of all the Planets, and withall of Sun and Moone, go a contrarie courſe vnto the ſtarry heauen, namely, to the left hand (i. Eaſtward:) whereas the ſaid heauen alwaies

hasteneth to the right [i. Westward.] And albeit in that continuall turning with exceeding celerity, whole planets be lifted vp aloft, and carried by it force into the West, and there yet by a contrarie motion of their owne, they passe every one through their severall waies Eastward, and all for this, that the aire rolling ever one way, and to the same part, by the continuall turning of the heaven, should not stand still, grow dull, & as it were congealed, whiles the globe thereof resteth idle, but dissolue and cleave, parted thus, & diuided by the reuerberation of the contrarie beams, and violent crosse influence of the said planets. Now, the Planet *Saturne* is of a cold and frozen nature, but the circle of *Jupiter* is much lower than it, and therefore his revolution is performed with a more speedy motion, namely, in twelue yerres. The third of *Mars*, which some call the Sphere of *Hercules*, is fry and ardent, by reason of the Suns vicinity, and well-neere in two years runneth his race. And hereupon it is, that by the exceeding heate of *Mars*, and the vehement cold of *Saturne*, *Jupiter*, who is placed betwixt, is well tempered of them both, and so becommeth good and comfortable. Next to them is the race of the Sun, consisting verily of 360 parts [or degrees:] but to the end that the obseruation of the shadowes which he casteth, may returne againe iust to the former marks, fixe daies be added to every year, with the fourth part of a day ouer and above. Whereupon every fifth yeere leapeth, and one odde day is set to the rest: to the end that the reckoning of the times and seasons might agree vnto the course of the Sun. Beneath the Sun a goodly faire star there is, called *Venus*, which goeth her compasse, wandering this way and that, by turnes: and by the very names that it hath, testifieth her emulation of Sun and Moone. For all the while that she presenteth the morning, and riseth Oriental before, she taketh the name of *Lucifer* (or Day-star) as a second Sun hastning the Day. Contrariwise, when she shineth from the West Occidental, drawing out the day light at length, and supplying the place of the Moone, she is named *Vesper*. This nature of hers, *Pythagoras* of Samos first found out, about the 42 olympiads, which sel out to be the 142 yeere after the foundation of Rome. Now this planet in greatnesse goeth beyond all the other fixe, and so cleare and shining withall, that the beames of this one star cast shadowes vpon the earth. And hereupon cometh so great diuersitie and ambiguitie of the names thereof: whiles some haue called it *Iuno*, other *Istis*, and other some the Mother of the gods. By the natural efficacy of this star, all things are engendered on earth: for whether she rise East or West, she sprinkleth all the earth with dew of generation, and not onely filleth the same with seed, causing it to conceiue, but stirreth vp also the nature of all living creatures to engender. This planet goeth through the circle of the Zodiacke in 348 daies, departing from the Sun neuer about 46 degrees, as *Timaeus* was of opinion. Next vnto it, but nothing of that bignesse and powerful efficacy, is the star *Mercurie*, of some cleped *Apollon*: in an inferior circle he goeth, after the like manner, a swifter course by nine daies: shining sometimes before the Sun rising, otherwhiles after his setting, neuer farther distant from him than 23 degrees, as both the same *Timaeus* and *Salsigenes* doe shew. And therefore these two planets haue a peculiar consideration from others, and not common with the rest alone named. For those are seene from the Sun a fourth, yea, and third part of the heaven: oftentimes also in opposition full against the Sun. And all of them haue other greater circuits of full revolution, which are to be spoken of in the discourse of the great yeare.

How much was their greake misrelation.

CHAP. IX.

¶ Of the Moones nature.



VT the Planet of the Moone, being the last of all, most familiar with the earth, and deniued by Nature for the remedie of darknesse, out-goeth the admiration of all the rest. She with her winding and turning in many and sundry shapes, hath troubled much the wits of the beholders, fretting and fuming, that of this starre, being the nearest of all, they should be most ignorant, growing as it doth, or else waiting euermore. One while bended pointwise into tips of hornes: another whiles diuided iust in the halfe, and anon againe in compasse round: spotted sometime and darke, and soone after on a sudden exceeding bright: one while big and full, and another while all at once nothing to be seene. Sometime shining all night long, and otherwhiles late it is ere she riseth: shee also helpeth the Sunnes light some part of the day: eclipsed, and yet in that eclipse to be seene. The same at the monthes end lieth hidden, at what time (it is supposed) shee labour-

reth

reth and traueleth not. At one time yee shall see her below, and anon aloft: and that not after one manner, but one while reaching vp close to the highest heaven, and another while ready to touch the mountains: sometimes mounted on high into the North, and sometime cast down below into the South. Which severall constitutions and motions in her, the first man that observed, was *Endymion*: and thereupon the voice went, That he was enamoured vpon the Moone. Certes, thankfull we are not, as we ought to be, vnto those who by their traueill and careful endeavour haue giuen vs light in this light. But delighted rather we are wonderously (such is the pestilent wit and wicked disposition of man) to record in Chronicles, bloudshed and murders: that lewd acts and mischievous deeds should be knowne of them, who otherwise are ignorant of the world it selfe. Well, to proceed, the Moon being next to the Centre, and therefore of least compasse, performs the same course and circuit in fouen and twentie daies, and one third part of a day, which *Saturne* the highest planet runnes (as we said before) in thirty yerres. After this, making stay in conjunction with the Sun two daies, forth he goes, and by the thirtieth day at the most, returneth to the same point and ministry againe: the mistress, if I may so say, and the teacher of all things Astronomically, that may be known in heaven. Now by her meanes are we taught that the yeere ought to be diuided into twelue moneths: for as much as, the Moone meeteth or ouertaketh the Sun, so many times before he returneth to the same point where he began his course. Likewise that shee loseth her light (as the rest of the planets) by the brightness of the Sun, when she approacheth neere. For borrowing wholly of him her light, shee doth shine much like to that which we see glittering and flying too and fro in the reflection and reuerberation of the Sun-beames from the water. And hereupon it is, that she, by her more mild and vnperfect power dissolueth, yea and increaseth, so great moisture as shee doth, which the sun beames may consume. Hence it comes also, that her light is not euen and equal in sight, because then only when it is opposite vnto the Sunne, shee appeareth full: but all other daies she sheweth no more to vs here on earth, than the conceiued light of the Sunne. In time verily of conjunction or change, she is not seene at all: for that whiles she is turned away, all the draught of light, she casteth thither backe againe, from whence shee receiued it. Now, that these planets are fed double with earthly moisture, it is euident by the Moone, which so long as she appeareth by the halfe in sight, neuer sheweth any spots, because as yet shee hath not her full power of light sufficient, to draw humour vnto her. For these spots be nothing else but the drops of the earth, caught vp with other moisture among the vapors.

CHAP. X.

¶ Of the Sunne and Moones eclipse: and of the Night.

Moreouer, the eclipse of the Moone and Sunne (a thing throughout the vniuersall contemplation of Nature most marvellous, and like a strange and prodigious wonder) doth shew the bignesse and shadow of these two planets. For euident it is, that the Sunne is hidden by the coming betwene of the Moone: and the Moone againe by the opposition of the Earth: also that the one doth quite the other, in that the Moone by her interposition bereaueth the Earth of the Sunnes rays, and the earth againe doth the semblable by the Moone. Neither is the Night any thing else but the shade of the Earth. Now the figure of this shadow resembleth a pyramis, pointed forward, or a top turned vp side downe: namely, when as it falleth vpon it with the sharpe end thereof, nor goeth beyond the heights of the Moone: for that no other starre is in that manner darkened: and such a figure as it, alwayes endeth point-wise. And verily, that shadowes grow to nothing in great space of distance, appeareth by the exceeding high flight of some fowles. So as the confines of these shadowes, is the vtmost bound of the aire, and the beginning of the fire. Above the Moone all is pure and light some continually. And we in the night doe see the starres, as candles or any other lights from out of darknesse. For these causes also the Moone in the night season is eclipsed onely. But the reason why the Sun and Moone, are not both in the eclipse at set times and monethly, is the winding obliquitie of the Zodiacke, and the wandering turnings of the Moone one while farre South, and another while as much North (as hath been said:) and for that these planets do not alwayes in their motion meet iust in the points of the eclipticke line, to wit, in the head or taile of the Dragon.

CHAP.

CHAP. XI.

¶ Of the magnitude of Starres.

The reason of this lifesth vpon mens mindes into heauen: and as if they beheld and looked downe from thence, discouer vnto them the magnitude of the three greatest parts of the whole world. For the Sunnes light could not wholly be taken away from the earth, by the Moone coming betwene, in case the earth were bigger than the Moone. But the huge greatnesse of the Sunne is more certainly knowne, both by the shadow of the Earth, and the bodie of the Moone: so as it is needlesse to search and inquire into the largenesse thereof, either by prooffe of eie-sight, or by coniecture of the minde. How vnmessurable it is, appeareth euidently by this. That trees which are planted in limits from East to West, casteth shadowes equal in proportion; albeit they be neuer so many miles assunder in length: as if the Sunne were in the midst of them all. This appeareth also about the time of the equinoctiall in all regions meridional, when the Sunne shineth directly plumb over mens heads, and causeth no shadow. In like manner, the shadowes of them that dwell Northerly vnder the Solstitiall circle in Summer, falling all at noone tide, Northward, but at Sunne-rising, Westward, doing the same demonstration. Which possibly could not be, vlesse the Sunne were far greater than the earth. Moreouer, in that, when he rises, he surpasses in breadth the hill Ida, compassing the same at large both on the right hand and the left, and namely, being so farre distant as he is. The eclipse of the Moone doth shew also the bignesse of the Sunne, by an infallible demonstration; like as himselfe eclipsed, declareth the littleness of the earth. For whereas there be of shadowes three formes and figures: and euident it is, that if the darke materiall body which casteth a shadow, be equal in bignesse to the light, then the shadow is fashioned like a colume or pillar, and hath no point at the end: if it be greater, it yeeldeth a shadow like a top directly standing vpon the point, so as the nether part thereof is narrowest, and then the shadow likewise is of infinite length: but if the said body be lesse than the light, then is represented a pyramidal figure like an hey-cocke, falling out sharpe pointed in the top; which manner of shadow appeareth in the Moones eclipse: it is plaine, manifest, and without all doubt, that the Sunne is much bigger than the earth. The same verily is seen by the secret and couert proofes of Nature it selfe. For why in diuiding the times of the yeere, departeth the Sunne from vs in the winter: marry, euen because by meanes of the nights length and coolnesse, he would refresh the earth, which otherwise no doubt he should haue burnt vpon: for, it notwithstanding, he burneth it in some measure, so excessiue is the greatnesse thereof.

CHAP. XII.

¶ The inuentions of man as touching the obseruation of the heauens.

The reason verily of both eclipses, the first Romane that published abroad and divulged, was *Supritus Gallus*, who afterward was Consul, together with *M. Marcellus*: but at that time being a Colonell, the day before that King *Perseus* was vanquished by *Panlus*, he was brought forth by the General into open audience before the whole host, to fore-tell the eclipse which should happen the next morning: whereby he deliuered the armie from all pensiveness and feare, which might haue troubled them in the time of battell, and within a while after he compiled also a booke thereof. But among the Greeks, *Thales Miletus* was the first that found it out, who in the eight and fortieth Olympiads, and the fourth yeere thereof, did prognosticate and foresaw the Sunnes eclipse that happened in the reigne of *Halyattes*, and in the 170. yeere after the foundation of the citie of Rome. After them, *Hipparchus* compiled his Ephemerides, containing the course and aspects of both these planets, for six hundred yeeres ensuing: comprehending withall the moneths according to the calculation & reckonings of sundry nations, the daies, the houres, the situation of places, the aspects, and latitudes of diuers townes and countries: as the world will beare him witnesse: and that no lesse assuredly, than if he had been priuie to Natures counsels. Great persons and excellent these were double life, who aboue the reach of all capacitie of mortall men, found out the reason of the course of so mighty starres and diuine powers: and whereas the sillie minde of men

was

A was before set and to seeke, fearing in these eclipses of the starres, some great wrong and violence, or death of the planets, secured them in that behalfe: in which dreadfull feare stood *Stesichorus* and *Pindarus* the Poets (notwithstanding their lofty stile,) and namely at the eclipse of the Sun, as may appear by their poems. As for the Moone, mortall men imagining, that by magickes, forceries, and charmes, she is enchanted, and therefore helpe her in such a case when she is eclipsed by dissonant ringing of obafons. In this fearefull fit also of an eclipse, *Nicias* the General of the Athenians, as a man ignorant of the course thereof, feared to set sail with his fleet out of the haue, and so greatly endangered and distressed the state of this country. Faire chieue yee then for your excellent wit, O noble Spirits, interpreters of the heauens, capable of Natures works, and the deuisers of that reason whereby ye haue surmounted both God and man. For who is he, that seeing these things, and the painfull ordinarie trauels, since that this terme is now taken vpon, of the stars; would not beare with his owne infirmities, and excuse this necessitie of being born to die? Now for this present I will briefly and summarily touch those principall points which are confessed and agreed vpon as touching the said eclipses, hauing lightly rendered a reason thereof in most needfull places: for neither such prouing and arguing of these matters belongs properly to our purposed worke; neither is it lesse wonder to be able to yeeld the reason and causes of all things, than to be resolute and constant in some.

CHAP. XIII.

¶ Of Eclipses.

Certaine it is, that all Eclipses in 222 moneths haue their reuolutions, and return to their former points: as also that the Sun's eclipse neuer happeneth but vpon the change of the Moone, namely either in the last of the old, or first of the new, which they call conjunction: and that the Moone is neuer eclipsed but in the full, and alwaies somewhat preuent the former Eclipse. Moreouer, that euery yeare both planets are eclipsed at certaine daies and houres vnder the earth. Neither be these eclipses in all places scene when they are about the earth, by reason sometimes of cloudy weather, but more often, for that the globe of the earth hindereth the sight of the bending conuexities of the heauen. Within these two hundred yeeres was it found out by the witty calculation of *Hipparchus*, that the Moone sometimes was eclipsed twice in five moneths space, and the Sun likewise in seven: also that the Sun and Moone twice in thirty daies were darkned about the earth: howbeit scene this was not equally in all quarters, but of diuers men in diuers places: and that which maketh me to maruell most of all in this wonder, is this, that when agreed it is by all, that the Moone light is dimmed by the shadow of the earth, one while this eclipse happeneth in the West, and another while in the East: as also by what reason it hapned, that seeing after the Sunne is vpon, that shadow which dusketh the light of the Moone must needs be vnder the earth; it fell out once, that the Moone was eclipsed in the West, and both planets to be scene aboue the ground in our horizon: for that in twelve daies both these lights were missing, and neither Sun nor Moon were seen, it hapned in our time, when both the *Vespasians* (Emperors) were Consuls, the father the third time, and the son the second.

CHAP. XIV.

¶ Of the Moones motion.

Clearer it is, that the Moone alwaies in her encreasing hath the tips of her hornes turned from the Sun toward the East: but in the waine contrariwise Westward. Also that she shines the first day of her apparition, 3 parts, and the foure and twentieth part of an houre, and so riseth in proportion the second day forward, vnto the full: and likewise decreaseth in the same manner to the change. But alwaies she is hidden in the change within foureteen degrees of the Sunne. By which argument we collect, that the magnitude of the other Planets is greater than that of the Moone, for so much as they appear otherwhiles when they be but few degrees off. But the cause why they shew lesse, is their altitude: like as also the fixed starres, which by reason of the brightness of the Sunne are not scene in the day time; whereas indeed they shine as clearly by day as by night. And that is manifestly proued by

some

some eclipses of the Sun, and exceeding deepe pits, for so they are to be seene by day light: G

CHAP. XV.

¶ *Generall rules touching the motions and lights of other Planets.*

Those three which we say are about the Sun be hidden when they goe their course together with him. They arise in the morning, and be called Orientall Matutine, and neuer depart farther than eleuen degrees. But afterwards meeting with his raies and beames, they are couered, and in their triple aspect retrograde, they make their morning station a hundred and twenty degrees off, which are called the first; and anon in a contrarie aspect or opposition, 180 degrees off, they arise in the euening, and are Occidentall Vespertine. In like sort approaching from another side within an hundred and twenty degrees, they make their euening stations, which also they call the second, vntill he ouertake them within twelue degrees, and so hide them, and these are called the euening settings. As for *Mars*, as he is neerer vnto the Sun, so feeleth he the Sun beames by a quadrat aspect, to wit ninetie degrees, whereupon that motion rooke the name, called the first and second Nonagenarie from both risings. The same planet keepeth his stationarie residence six moneths in the signes: whereas otherwise of his owne nature but two moneths. But the other planets in both stations or houses continue not all out four moneths apiece. Now the other two inferior planets vnder the Sun go downe and are hidden after the same manner in the euening Coniunction, and in as many degrees they make their morning rising: and from the farthest bounds of their distance they follow the Sun, and after they haue once ouertaken him, they set againe in the morning, and so outgo him. And anon keeping the same distance, in the euening they arise againe vnto the same limits which we named before, from whence they are retrograde, and return to the Sun, and by the euening setting they be hidden. As for *Venus*, the likewise maketh two stations, according to the two manners of her apparance, morning and euening, when she is in farthest bounds and vnto most of her Epicycle. But *Mercurie* keepeth his stations so small a while that they cannot be obserued. This is the manner and order as well of the lights and appearances of the planets, as of their occultations, and keeping close intricate in their motion, and enfolded within many strange wonders. For change they do their magnitudes and colours; sometime they approach into the North, the same againe go backe toward the South, yea, and all on a sudden they appeare one while neerer to the earth, and another while to the heauen: wherein if we shall deliuer many points otherwise than former Writers, yet confesse we do, that for these matters we are beholden vnto them, who first made demonstration of seeking out the wayes thereto: howbeit let no man dispaire, but that hee may profit and goe forward alwaies in further knowledge from age to age. For, these strange motions fall out vpon many causes. The first is, by reason of those eccentrique circles or Epicycles in the stars, which the Greekes call *Abides*; for needs we must vse in this treatise the Greeke termes. Now every one of the planets haue particular Auges or circles aforesaid by themselves, and these different from those of the starry heauen: for that the earth from those two points which they call Poles, is the very centre of the heauen, as also of the Zodiacke, situate ouerthwart betweene them. All which things are certainly knowne to be so by the compasse, that neuer can lie. And therefore for every centre there arise their owne *Abides*, whereupon it is, that they haue diuers circuits, and different motions, because necessarie it is, that the inward and inferior *Abides* should be shorter.

CHAP. XVI.

¶ *Why the same Planets seeme sometime higher, and some lower.*



The highest *Abides* therefore from the centre of the earth are of *Saturne*, in the signe Scorpio: of *Iupiter*, in Virgo: of *Mars*, in Leo: of the Sun, in Gemini: of *Venus* in Sagittarius: of *Mercurie* in Capricorne: and namely in the middle or fiftenth degree of the said signes: and contrariwise the said planets in the same degrees of the opposite signes are lowest, and to the centre of the earth nearest. So it cometh to passe, that they seeme to moue more slowly when they goe their highest circuit: not for that

Plinies Naturall History.

At that naturall motions doe either hasten or slacke, which be certaine and seuerall to euery one: out because the lines which are drawne from the top of the *Abides*, must needs grow narrow and nere to gether about the centre, as the spokes in cart wheeles: and the same motion by reason of the neerenesse of the centre, seemeth in one place greater, in another lesse. The other cause of the of their own eccentrique circles. Thus *Saturne* is in the height of his Auge in the 20. degree of Libra, *Iupiter* in the 15. of Cancer, *Mars* in the 28. of Capricorne, the Sunne in the 29. of Aries, *Venus* in the 16. of Pilces, *Mercurie* in the 15. of Virgo, and the Moone in the 4. of Taurus. The third reason of their altitude or eleuation, is not taken from their Auges or circles accen- trique, but vnderstood by the measure and conuexitie of heauen, for that these planets seeme to the eies as they rise and fall, to mount vp or settle downward through the aire. Hereunto is knit and vniued another cause also, to wit, the Zodiackes obliquitie, & latitude of the planets, in regard of the eclipticke: For through it the starres which we called wandering, do moue and take their course. Neither is there any place inhabited vpon earth, but that which lieth vnder it. For all the rest without the poles, are fruitles, desart, and ill faoured. Only the planet *Venus* goeth beyond the circle of the Zodiacke, 2. degrees: which is supposed to be the very efficient cause, that certaine liuing creatures are ingendred and bred: euen in the desart and vnhabitable parts of the world. The Moone likewise rangeth throughout all the breadth of it, but neuer goeth out of it. Next after these, the starre of *Mercurie* hath the largest scope in the Zodiacke, but yer soes of 12. degrees (for that is the breadth thereof) he wandreth out 8. and those not equally, but two in the middle, foure above, and two beneath. Then the Sunne in the middle, goeth alwaies betweene the two extremities of the Zodiacke: but in his declining course from South and North, he seemeth to wind bias after the manner of Dragons or Serpents, vaequally. *Mars* in his latitude 12. ueth the eclipticke line foure half degrees, *Iupiter* two degrees and a halfe, *Saturne* no more but ascend Northward. And vpon this is the reason grounded also of the 3. opin on of them, who haue thought, although vntuly, that they climbe in this manner. But to the end that they may be reprobued and confuted, we must lay open an infinite and incomprehensible subtiltie, & that which containeth all those causes & reasons aforesaid. First therefore this is a need on and resolved, that these stars or planets in their euening setting, are nearest to the earth, both in regard of latitude, & also of altitude: and then they be called Occidentall Vespertine; when the Sun toward the euening couereth them with his raies aloft, when they be farthest from the earth, as well in latitude as eleuation, they be Orientall Matutine, & arise or appeare in the morning before the Sun is vpon also that then they are Stationaries in their houses, which be in the middle points of the latitudes which they call eclipticks. Likewise, confessed it is, that so long as the planets are neer to the earth, their motion seemeth to encrease & be quicker: but as they depart on high, to decrease and be slow. And this reason is approued & confirmed principally by the eleuations and depressions of the Moone. As doubles it is also, and held for an infallible rule, that every planet being Orientall Matutine, riseth every day higher than other. The superior **E** three about the Sun diminish euen from their first stations vnto the second. Which being so, it will plainly appeare, that every planet Orientall Matutine, rising before the Sun, begins to mount the latitude Septentrional, & decline from the Ecliptick Northward in such sort, that from the time they begin to dismarch, their motion increases by little and little more sparsely. But in the first Stations, they are at the highest altitude & ascent: for then and not before, the numbers begin to be withdrawn, & the planets to go backward, and be retrograde. Whereof a particular reason by it selfe may be giuen, in this manner: The Planets being smitten in that part wherof we spake, they are both inhibited by the triangular beames or Trine aspect of the sun, to hold on a straight and direct course in the longitude of heauen, and so be retrograde: and so are raised vp aloft by the fire power of the said sun. This cannot presently at the first be vnderstood by our eiesight: whereupon they are supposed to stand, and hereof their Stations took thereof by repercussion, forceth them to be evidently retrograde, and go backward. And much more is this perceived in their euen rising, when they be Orientall Vespertine, when the Sun is wholly against them, and when they be drawn to the very top of their *Abides*, and so not seene

at all, because they are at the highest, and goe their least motion, which is so much the lesse, when as it hapneth in the highest signes of their Auges or *Absides*. From the euen arising after the Sunne setting, they descend toward the latitude meridiol all, for now the motion lesse diminisheth, but yet encreaseh not before the second stations: for that they are forced to descend, by reason of the Sun beames coming from the other side of their Epicycle: and the same force beareth them downward againe to the earth, which by the former triangular aspect raised them aloft towards heauen. So much skilleth it whether the said beames came from beneath or above. The same happeneth much more in the euen setting, when they be hidden with the raies of the Sun. This is the reason of the superiour planets above the Sunne: but the Theoricke is more difficult of the rest, and hath by no man before vs been deliuered.

CHAP. XVII.

¶ Generall rules as touching the Planets.



First and formeost therefore let vs set downe the cause why *Venus* starre neuer departh from the Sunne more than 46. degrees, and *Mercurie* not about 23. and (being as they are diuers Planets) why oftentimes they retyre backe vnto the Sunne within that compasse. For to be resolu'd in this point, note we must, that both of them haue their *Absides* turned opposite to the rest, as being seated vnder the Sun: and so much of their circles is vnderneath, as the forenamed were above: and therefore farther off they cannot be, because the curuature and roundell of their *Absides* in that place hath no greater longitude. Therefore both edges of their *Absides*, by a like proportion keepe an indifferēt meane, & their course is limited: but the short spaces of the longitudes, they recomperce againe with the wandring of their latitudes. But what is the reason that they reach not alwaies to 46. degrees, and to 23. y^e ywis do they: but this the Canonickall Astronomers haue misse d of in their Aphorismes. For it is apparent, that their *Absides* also or Auges do moue, because they neuer ouerpasse the Sunne. And therefore when their edges from either side are percieued to fall vpon the very point, then the planets also are supposed to reach vnto their longest distances: but when their edges or the points of their Epicycles be short so many degrees, the starres themselues are thought to returne more speedily in their retrogradation, than in their direct course forward, albeit the vtmost extremities which they both haue, is euer the same. And from hence is the reason vnderstood of the contrary motions of these two planets. For the superiour planets moue most swiftly in the euen setting, but these most slowly. They, I say, be farthest from the earth, when they moue slowest: and these when they goe swiftest: for as in the former the neerenesse of the centre halstenneth them; so in these, the extremitie of the circle: they, from their morning rising begin to slack their celeritie; but these, to encrease it: they returne back from their morning Station to their euening mansion; but *Venus* contrariwise is retrograding from the Station Vespertine, to the Matutine. Howbeit, she from the mornie rising beginneth to climbe the latitude Septentrional: but to follow the altitude and the Sunne, from the morning station, as being most swift, and at the highest, in the morn setting. Moreouer, shee beginneth to digresse in latitude, and to diminish her motion from the morn rising, but, to be retrograde, and withall to digresse in altitude, from the euening station. Again, the planet *Mercury*, being Oriental Matutine, begins both waies to climbe, that is, to mount higher day by day, but to digresse in latitude, being Oriental Vespertine: and when the Sunne hath overtaken him within the distance of fifteene degrees, he stands still for foure daies vnmoouable. Within a while he descendeth from his altitude daily, and goeth backe retrograde from the euen setting, namely, when the Sunne hideth him with his raies, to the Moone rising, when hee appeareth before the Sunne is vp. This starre onely, and the Moone, descend in as many daies as they ascend. But *Venus* ascendeth vp to her station in fifteene daies and the vantage. Again, *Saturne* and *Iupiter* are twice as long descending, and *Mars* foure times. See how great variety is in their nature, but the reason thereof is euident. For they which go against the vapour and heate of the Sunne do also hardly descend. Many secrets more of Nature, and lawes whereunto she is obedient, might be shewed about these things. As for example: The planet of *Mars*, whose course of all others can be least obserued, neuer maketh station but in quadrate aspect: as for *Iupiter*, in triangle aspect: and very seldom seuered from the Sunne 60. degrees, which number maketh fix angled formes of the heauen,

A heauen, that is to say, is the iust sixth part of the heauen: neither doth *Iupiter* shew his rising in the same signe this yeare, as in the former, saue onely in two signes, *Cancer* and *Leo*. The planet *Mercurie* seldom hath his euen rising in *Pisces*, but very often in *Virgo*, and the mornie rising in *Libra*. In like manner, the mornie rising in *Aquarius*, but very seldom in *Leo*. Neither becommeth he retrograde in *Taurus* and *Gemini*: and in *Cancer*, not vnder the 25 degree. As for the Moone, she encreth not twice in coniunction with the Sun in any other signe but in *Gemini*; and sometime hath no coniunction at all, and that only in *Sagittarius*. As for the last and first of the Moone, to be seene in one and the selfe same day or night, hapneth in no other signe but *Aries*, and few men haue had the gift to see it: and hereupon came *Lincolne* to be so famous for his eye sight. Also the planets *Saturne* and *Mars* are hidden with the Sun beames, and appeare not in the heauen at the most 170 daies: *Iupiter* 36, or at least ten daies wanting, *Venus* 69, or when least 52. *Mercury* 31, or at least 17.

CHAP. XVIII.

¶ What is the cause that the Planets alter their colour.

The reason of the Planets altitudes is it that tempereth their colours, according as they be neerer or farther off from the earth. For they take the likenesse of the aire, into the coats whereof they enter in their ascent: and the circle or circumference of another Planets motion coloureth them as they passe either way, ascending or descending. The colder setteth a pale colour, the hotter a red, and the windie a fearful and rough hue. Onely the points and coniunctions of the *Absides*, and the vtmost circumferences shew a darke blacke. Each planet hath a seuerall colour: *Saturne* is white, *Iupiter* cleare and bright, *Mars* fierie and red, *Venus* Oriental (or *Lucifer*) faire, Occidental (or *Vesper*) shining, *Mercury* sparkeling his raies; the Moone pleasant, the Sunne when he riseth burning, afterwards glittering with his beames. Vpon these causes the sight is intangled, and discouereth euen those stars also which are contained and fixed in the sky, more or lesse. For one while a number of them appeare thicke about the halfe Moone, when in a cleare and calme night she gently beautifieth them. Another while they are seen but here and there, inso much as we may wonder that they are fled vpon the full Moone, which hideth them: or when the beams either of the Sun or other about said haue dazled our sight. Yea, the very Moone her selfe hath a feeling doublelesse of the Sun beames, as they come vpon her: for those raies that come sidelong, according to the conuexitie of the heauen, giue but a darke and dim light to the Moone, in comparison of them that fall directly with straight angles. And therefore in the quadrangle aspect of the Sun she appeareth diuided in halfe: in the triangle she is well neere inuironed, but her circle is half empty and void, howbeit in the opposition she seemeth full: and againe, as she is in the waine she representeth the same formes, decreasing by quarters as the increased, with like aspects as the other three planets about the Sun.

CHAP. XIX.

¶ The reason of the Sunns motion, and the vnequalitie of daies.

As for the Sun himselfe, a man may obserue foure differences in his course, twice in the yeare making the night equall with the day, to wit, in the Spring and Autumne, for then he falleth iust vpon the entre of the earth, namely in the eight degree of *Aries* and *Libra*. Twice likewise exchanging the compasse of his race, to lengthen the day from the *Bruna* or mid-winter, in the eighth degree of *Capricorne*: and againe to lengthen the night from the Sommer Sunstid, being in as many degrees of *Cancer*. The cause of vnequall daies is the obliquitie of the Zodiack: whereas the one halfe iust of the world, to wit, fix signes of the Zodiack, is at all times above and vnder the earth. But those signes which mount vpright in their rising, hold light a longer tract, and make the daies longer: whereas they which arise crooked and go by as passe away in shorter and swifter time.

CHAP. XX.

¶ Why lightnings are attributed to *Iupiter*.

Most men are ignorant of that secret, which by great attendance vpon the heauens, deepe Clerkes and principall men of learning haue found out: namely, that they be the fires of the three vppermost planets, which falling to the earth carry the name of lightnings: but those especially which are seated in the midst, to wit, about *Iupiter*, haply because participating the excessive cold and moisture from the vpper circle of *Saturne*, and the immoderate heate from *Mars* that is next vnder, by this meanes he dischargeth the superfluitie, and hereupon it is commonly said, that *Iupiter* shooteth and darteth lightnings. Therefore, as out of a burning piece of wood a cole of fire flieth forth with a cracke; euen so from a star is spit out as it were and voided forth this celestiaall fire, carrying with it prefaces of future things: so as the heauen sheweth diuine operations euen in these parcels and portions which are reiecte and cast away as superfluous. And this most commonly hapneth when the aire is troubled, either because the moisture that is gathered mouth and stirreth forward that abundance to fall; or else for that it is disquieted with the birth (as it were) proceeding from a great belled starre, and therefore would be discharged of such excrements.

CHAP. XXI.

¶ The distances of the Planets.

Many haue essayed to finde out the distance and eleuation of the planets from the earth; and haue set downe in writing, that the Sun is distant from the Moon 18 degrees, euen much as the Moone from the earth. But *Pythagoras*, a man of a quicke spirit, hath collected, that there are 126000 furlongs from the earth to the Moone, and a double distance from her to the Sun, and so from thence to the twelue signes three times so much. Of which opinion was also our countryman *Gallus Sulpitius*.

CHAP. XXII.

¶ Of the Planets musike and harmonie.

But *Pythagoras* otherwhiles vsing the termes of Musicke, calleth the space betwene the earth and the Moone a Tonus, saying, that from her to *Mercurie* is halfe a tone, and from him to *Venus* in manner the same space. But from her to the Sun as much and half againe: but from the Sunne to *Mars* a Tonus, that is to say, as much as from the earth to the Moone. From him to *Iupiter* halfe a Tonus: likewise from him to *Saturne* halfe a Tonus: and so from thence to the signifer Sphere or Zodiacke, so much and halfe againe. Thus are composed seuen tunes, which harmonie they call Diapason, that is to say, the Generalitie, or whole state of consent and concord, which is perfect musike. In which, *Saturne* moueth by the Dorick tune: *Mercury* by Phryngus; *Iupiter* by the Phrygian; and the rest likewise. A subtilty more pleasant yw is than needfull.

CHAP. XXIII.

¶ The Geometry or dimension of the world.

A Stadium or Furlong maketh of our paces an hundred twentie and five, that is to say, fix hundred twenty and five foot. *Pogidonius* saith, That from the earth it is no lesse than forty stadia, to that height or altitude wherein thicke weather, windes, and clouds doe engender. Aboue which, the aire is pure, cleare, and light, without any troubled darkenesse. But from the cloudy and muddy region to the Moone is 200000 stadia: from thence to the Sun five thousand. By means of which middle space betwene it cometh to passe, that so exceeding great as the Sun is, he burneth not the earth. Many there be moreouer, who haue taught, that the clouds are eleuated to the height of nine hundred stadia. Vnknown these points are,

Are, and such as men cannot wind themselves out of: but as well may they now be deliuered to others, as they haue bin taught to vs: in which notwithstanding, one infallible reason of a Geometrical collection which neuer lieth, cannot be reiecte, if a man will search deep into these matters. Neither need a man to seeke a iust measure hereof; for to desire that, were in manner a point of fond and foolish idleness, as if men had nothing else to do, but only to make an estimate, and resolve vpon a guesse and coniecture thereof. For, whereas it is plaine and apparent by the course of the Sunne, that the circle through which he passeth, doth containe three hundred three score, and almost six degrees: and alwaies the dimetrent line, or diameter, taken a third part of the circumference, and little lesse than a seventh part of a 3. it is plaine, that deducting one halfe thereof (by reason that the earth situate as a centre, cometh betwene) the first part well nere of this great circuit which he makes about the earth (so farre as our mind doth comprehend) is the very height from the earth vp to the Sunne, but the twelfth part to the Moone, because the runneth so much a shorter compasse than the Sun: whereby it appeareth, that she is in the midst betwene the earth and the Sun. A wonder it is to see how farre the presumptuous minde and heart of man will proceed, and namely being invited and drawne on by some little success, as in the aboue named matter. The reason whereof, ministrerth plenteous occasion of impudencie, for they who dared once to giue a guesse at the space betwene the Sun and the earth, are so bold to do the like from thence to heauen. For presuming, that the Sunne is in the midst, they haue at their fingers ends by and by the very measure also of the whole world. For look how many seuen parts the dimetrent hath, so many 22. parts or thereabout hath the whole circle: as if they had gotten the iust and certain measure of the heauen by level, and the plumb or perpendicular line. The Egyptians according to the reckning which *Ptolomee* and *Necessus* haue inuented, do collect, That euery degree in the circle of the Moone, which is the least (as hath been said) of all other, containeth 33. stadia, and somewhat more: in *Saturne*, the greatest of all the rest, duple so much: and in the Sunne, which we said was the midst, the halfe of both measures. And this computation hath very great importance, for he that will reckon the distances betwene the circle of *Saturne* and the Zodiacke, by this calculation shall multiplie an infinite number of Stadia.

CHAP. XXIII. ¶ Of sudden Starres.

There remaine yet some few points as touching the world: for in the very heauen there be Starres that suddenly arise and appeare, whereof be many kinds.

CHAP. XXV.

¶ Of Comets or blazing stars, and celestiaall prodigies, their nature, situation, and diuers sorts.



E Hese blazing starres the Greekes call *Cometas*, our Romanes *Crinittas*: dreadfull to be seene, with bloody haire, and all ouer rough and shagged in the top like the bush of haire vpon the head. The same Greekes call those starres *Pogonias*, which from the nether part haue a maine hanging downe, in fashion of a long beard. As for those named *Acornie*, they brandish and shake like a speare or dart, signifying great swiftnesse. This was it, whereof *Tiberius Cæsar* the Emperour wrote an excellent Poeme in his first Consulship, the last that euer was seene to this day. The same, if they be shorter and sharpe pointed in the top, they vse to call *Xiphie*: and of all other *Xiphie*, palest they be, and glitter like a sword, but without any reies or beames, which another kind of them, named *Discus* (resembling a dish or coit, whereof it beareth the name, but in colour like to amber) putteth forth here and there out of the brimmes and edges thereof. As for *Pulsars*, it is seene in forme of tunnes, enuironed within a smokie light, as if it were a concautie. *Cerastis* resembleth an home: and such a one appeared when the whole manhood of Greece fought the battell of Salamis. *Leopardus* is like to burning torches: and *Hippus* to horse maines, most swift in motion, & turning round. There is also a white Comet with siluer haire, so bright and shining, that hardly a man can endure to looke vpon it, and in maine shape it sheweth the very image of a god. Moreover, there be blazing starres that become all shaggy, compassed round with haire fringes, and a kind of maine. One heretofore appearing in the forme of a maine, changed,

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ged into a speare, namely in the 108 Olympias, and the 398 yeare from the foundation of Rome. Noted it hath bin, that the shortest time of their appearance is a seven-night, and the longest eighty daies: some of them moue like the wandering planets; others are fixed fast, and stir not. All in manner are seen vnder the very North star called *Charlemagnes Wain*: some in no certain part thereof, but especially in that white, which hath taken the name of the * Milk circle. *Aristotle* saith that many are seene together, a thing that no man elsse hath found out, so far as I can learne. Mary, boisterous windes and much heate of weather are foretold by them. There are of them seene also in Winter season, and about the Antarticke South pole, but in that place without any beames. A terrible one likewise was seene of the people in Ethiopia and Egypt, which the King who reigned in that age named Typhon. It resembled fire, and was pleited and twisted in manner of a wreath, grim and hideous to be looked on, and no more truly to be counted a star than some knot of fire. Sometimes it falleth out, that the planets and other stars are bespred all ouer with haire: but a Comet lightly is neuer seen in the west part of the heauen.

A fearefull star for the most part this Comet is, and not easily expiated; as it appeared by the late ciuill troubles when *Octavianus* was Consul: as also a second time, by the intestine war of *Pompey* and *Cesar*. And in our daies about the time that *Claudius Caesar* was poysoned, and left the Empire to *Domitius Nero*, in the time of whose reigne and gouernment there was another in manner continually seen, and euer terrible. Men hold opinion, that it is materiall for presage to obserue into what quarters it shooteth, or what stars power and influence it receiue: also what similitudes it resembleth, and in what parts it shineth out and first ariseth. For if it be like vnto flutes or hautboies it portendeth somewhat to Musicians: if it appear in the priuy parts of any signe, then let ruffians, whore-masters, and such filthy persons take heed. It is respectiue to fine wits, and learned men, if it put forth a triangular or foure-square figure, with euen angles, to any situations of the perpetual fixed stars. And it is thought to presage, yea to sprinkle and put forth poison, if seen in the head of the Dragon either North or South.

In one only place of the whole world, namely in a Temple at Rome, a Comet is worshipped and adored, euen that which by *Augustus Caesar* himselfe, of happy memorie, was iudged verie lucky and happy to him; who when it began to appeare, gaue attendance in person, as ouerlender of those playes and games which he made to *Venus genetrix*, not long after the death of his father *Cesar*, in the colledge by him instituted and erected: testifying his ioy in these words, *In those very daies during the solemnities of my Plaies, there was seen a blazing star for seven daies together, in that region of the sky which is vnder the North star Septentriones. It arose about the 11 houre of the day, bright it was and cleare, and evidently seene in all lauds: by that star it was signified, as the common sort beleue, that the soule of (Iulius) Caesar was receiued among the diuine powers of the immortal gods. In which regard, that marke or ensigne of a star was set to the head of that statue of Iulius Caesar, which soon after we dedicated in the Forum Romanum.* These words published he abroad: but in a more inward ioy, to himselfe he interpreted and conceiued thus of the thing, That this Comet was made for him, and that himselfe was in it borne. And verily, if we wil confesse a truth, a healthfull, good, and happy presage that was to the whole world. Some there be who beleene, that these be perpetuall stars, and go their course round, but are not seen vnlesse they be left by the Sun. Others againe are of opinion, that they are ingendred casually by some humour, and the power of fire together, and thereby do melt away and consume.

CHAP. XXVI.

¶ *Hipparchus his opinion of the Stars. Also historicall examples of Torches, Lampes, Feaces, Fiery Darts, opening of the Firmment, and other such impressions.*

Hipparchus the foresaid Philosopher (a man neuer sufficiently praised, as who proued the affinitie of stars with men, and none more than he; affirming also that our soules were parcell of heauen) found out and obserued another new star ingendred in his time, and by the motion thereof on what day it first shone, he grew presently into a doubt, Whether it happened not very often that new stars should arise; and whether those starres also moued not, which we imagined to be fixed. The same man went so farre, that he attempted (a thing euen hard

A hard for God to performe, to deliuer to posteritie the iust number of starres. He brought the same stars within the compasse of rule and art, deuising certaine instruments to take their seuerall places, and set out their magnitudes: that thereby it might be easily discerned, not only whether the old died, and new were borne, but also whether they moued, and which way they tooke their course, likewise whether they increased or decreased. Thus he left the inheritance of heauen vnto all men, if haply any one could be found able to enter vpon it as lawfull heire.

There be also certaine flaming torches shining out in the sky, howbeit neuer seene out when they fall. Such a one was that which at the time that *Germ. Cesar* exhibited a shew of Sword-fencers at vrterance, ran at noontide in sight of all the people. And two sorts there be of them,

B namely *Lampades*, which they call plaine torches; and *Bolides*, i. Lances, such as the Mutinians saw in their calamitie when their city was sacked. Herein they differ, for that those lampes or torches make long traines, whiles the forepart only is on a light fire: but *Bolide* burnes all ouer, and draweth a longer taile. There appeare and shine out after the same manner certain beames, which the Greekes call *Docus*: like as when the Lacedemonians being vanquished at sea, lost the empire and dominion of Greece. The firmament also is seene to chinke and open, and this they name *Chasma*.

CHAP. XXVII.

¶ *Of the strange colour of the Sky.*

There appeareth in the Sky also a resemblance of bloud, and (than which nothing is more dread and feared of men) a fiery impression, falling from out of heauen to earth; like as it hapned in the 3 yeare of the 107 Olympias, at what time King *Philip* made all Greece to shake with fire and sword. And these things verily I suppose to come at certaine times by course of nature, like as other things, and not as the most part thinke, of sundry causes, which the subtill wit and head of man is able to deuise. They haue indeed been fore-runners of exceeding great miseries; but I suppose those calamities hapned not because these impressions were, but these therefore were procured to foretell the accidents that ensued afterward. Now for that they fall out so seldome, the reason thereof is hidden and secret, and so not knowne, as the rising of planets about said, the eclipses, and many other things.

CHAP. XXVIII.

¶ *Of the Heauen flame.*

Likewise there are seen stars together with the Sun all day long; yea, and very often about the compasse of the Sun other flames, like vnto garlands of corne eares; also circles of sundry colours, such as those were when *Augustus Caesar* in the prime of his youth entered the city of Rome after the decease of his father, to take vpon him his great name and imperial title.

CHAP. XXIX.

¶ *Of Celestiall Crownes.*

Also the same garlands appeare about the Moone and other goodly bright stars which are fixed in the firmament. Round about the Sun there was seene an arch, when *Lu. Opiimus* and *Q. Fabius* were Consuls: as also a round circle, when *L. Porcius* and *M. Atilius* were Consuls.

CHAP. XXX.

¶ *Of sudden Circles.*

There appeared a circle of red colour when *L. Iulius* and *P. Atilius* were Consuls. Moreover, there are strange eclipses of the Sunne, continuing longer than ordinarie; as namely when *Cesar* Dictator was murdered. Moreover, in the wars of *Antony* the Sun continued almost a whole yeare of a pale wan colour.

CHAP. XXXI.

¶ *Many Suns.*

Over and besides, many Suns are seene at once, neither about nor beneath the bodie of the true Sunne indeed, but crosse-wise, and ouerthwart: neuer neere nor directly against the earth, neither in the night season, but when the Sun either riseth or setteth. Once they

they are reported to haue bene scene at noone day in Bosphorus, and continued from mornē to euen. Three Suns together our Ancestors in old time haue often beheld, as namely when *Sp. Posthumus*, with *Q. Mutius*, *Q. Martius*, with *M. Porcius*, *M. Antonius*, with *P. Dolabella*, and *Mar. Lepidus*, with *L. Plancus*, were Consuls. Yea, and we in our daies haue scene the like, when *Cl. Caesar* (of famous memorie) was Consul, together with *Cornelius Orfitus* his Colleague. More than three we neuer to this day finde to haue been scene together.

CHAP. XXXII. ¶ *Many Moones.*

THREE Moones also appeared at once, and namely when *Cn. Domitius* and *C. Fannius* were Consuls, which most men called Night Sunnes.

CHAP. XXXIII. ¶ *Day light in the Night.*

OF the Firmament by night there was seen a light, when *C. Caelius* and *Cn. Papyrius* were Consuls, yea and oftentimes besides, so as the night seemed as light as the day.

CHAP. XXXIV. ¶ *Burning Shields or Targets.*

A Burning shield ran sparkling from the West to the East, at the Suns setting, when *L. Valerius* and *C. Marius* were Consuls.

CHAP. XXXV. ¶ *A strange sight in the Sky.*

BY report there was once scene, and neuer but once, when *Cn. Octavius* and *C. Scribonius* were Consuls, a sparkle to fall from a star: and as it approched the earth, it waxed greater; and after it came to the bignesse of the Moone it shined out and gaue light, as in a cloudy and darke day: then being retyred againe into the sky, it became, to mens thinking, a burning Lampe. This, *Lucius Syllanus* the Proconfull saw, together with his whole traine.

CHAP. XXXVI. ¶ *The running of Stars to and fro in the Sky.*

SEENE there be also Stars to shoot hither and thither, but neuer for nought and to no purpose: for, from the same quarter where they appeare, there rise terrible windes, and after them stormes and tempests both by sea and land.

CHAP. XXXVII. ¶ *Of the Stars called Cassio and Pollux.*

I Haue scene my selfe in the campe, from the soldiers sentinels in the night watch, the resemblance of lightning to sticke fast vpon the speares and pikes set before the rampier. They settle also vpon the crosse Saile yards and other parts of the ship, as men do faile in the sea, making a kind of vocall sound, leaping to and fro, and shifting their places as birds do which fly from bough to bough. Dangerous they be and vnlucky when they come one by one without a companion; and they drowne those ships on which they light, and threaten shipwrack, yea, and they set them on fire if haply they fall vpon the bottome of the keele. But if they appeare two and two together, they bring comfort with them, and foretell a prosperous course in the voiage, as by whole comming, they say, that dreadfull, curled, and threatening meteor called *Helena* is chased and driuen away. And hercupon it is that men asigne this mighty power to *Cassio* and *Pollux*, and inuocate them at sea no lesse than gods. Mens heads also in the euen tyde are scene many times to shine round about, and to be of a light fire, which prelageth some great matter. Of all these things there is no certain reason to be giuen, but secret these be, hidden with the maiestie of Nature, and reserved within her cabinet.

CHAP. XXXVIII. ¶ *Of the Aire.*

IT remaineth now (thus much and thus far being spoken of the world it selfe) to wit, the starry heaven and the planets) to speake of other memorable things obserued in the Skie. For euen that part also hath our forefathers called *Caelum*, (i. e.) the Skie, which otherwise they name *aere*: euen all that portion of the whole, which seeming like a void and empty place, yeeldeth this vitall spirit whereby all things do liue. This region is seated beneath the Moone, and farre vnder that Planet. (as I obserue it is in a manner by euery man agreed vpon.) And mingling together an infinite portion of the superiour celestially nature or elementarie fire, with

A with an huge deale likewise of earthly vapours, it doth participate confusedly of both. From hence proceed clouds, thunders, and thole terrible lightnings. From hence come haile, frosts, shoures of raine, stormes and whirlwindes: from hence arise the most calamities of mortall men, and the continuall warre that nature maketh with her owne selfe. For these grosse exhalations as they mount vpward to the heauen, are beaten backe and driuen downward by the violence of the starres: and the same againe when they lift, draw vp to them those matters, which of their owne accord ascend not. For thus we see, that shoures of raine do fall, foggie mists and light clouds arise, riuers are dried vp, haile stormes come downe amaine, the Sunne beames doe scorch and burne the ground, yea, and drie it euery where to the middle centre: but the same againe vnbroken, and not losing their force, rebound backe and take vp with them whatsoever they haue drunke vp and drawne. Vapours fall from aloft, and the same returne againe on high: winds blow forcibly, and come empty, but backe they goe with a bootie, and carry away euery thing before them. So many liuing creatures take their wind and draw breath from aboue: but the same laboureth contrariwise, and the earth insulseth into the aire a spirit and breath, as if it were cleane void and empty. Thus whiles the Nature goes too and fro, as forced by some engin, by the swiftnesse of the heauen, the fire of discord is kindled and groweth hot. Neither may the abide by it, and stand to the fight, but being continually carried away, the rollerth vp and downe: and as about the earth shee spreadeth and pitcheth her tents, as it were, with an vnmeasurable globe of the heauen, so euer and anon of the clouds she frameth another skie. And this is that region where the winds raigne. And therefore their kingdome principally is there to be scene, where they execute their forces, and are the cause well neere of all other troubles in the aire. For thunderbolts and flashing lightnings most men attribute to their violence. Nay, more than that, therefore it is supposed that otherwhiles it raineth stones, because they were taken vp first by the winde: so as we may conclude, that they cause many like impressions in the aire. Wherefore many matters besides are to be treated of together.

CHAP. XXXIX. ¶ *Of ordinary and set seasons.*

IT is manifest, that of times and seasons, as also of other things, some causes be certaine; others, casual and by chance; or, such as yet the reason thereof is vnkowne. For who need to doubt, that Summers and Winters, and those alternatiue seasons which we obserue by yearely course, are occasioned by the motion of the Planets. As therefore the Sunnes nature is understood by tempering and ordering the yeare: so the rest of the starres and planets also haue euery one their proper and peculiar power, and the same effectually to shew and performe their owne nature. Some are fruitfull to bring forth moisture, that is turned into liquid raine: others to yeeld an humour either congealed into frosts, or gathered and thickened into snow, or else frozen and hardened into haile: some afford winds: others warmth: some hot and scorching vapours: some, dewes: and others, cold. Neither yet ought these starres to be esteemed so little as they shew in sight, seeing that none of them is lesse than the Moone, as may appeare by the reason of their exceeding height. Well then, euery one in their own motion, exercise their severall natures: which appeareth manifestly by *Saturne* especially, who setteth open the gates for raine and shoures to passe. And not onely the scuen wandering starres be of this power, but many of them also that are fixed in the firmament; so often as they be either driuen by the exesse and approach of those planets, or pricked and prouoked by the casting and influence of their beams, like as we find it happeneth in the seuen stars called *Sueda*, which the Grecians of raine name *Hyades*, because they euer bring foule weather. Howbeit some of their owne nature, and at certain set times do cause raine, as the rising of the Kids, As for *Arcturus*, he neuer lightly appeareth without some tempestuous and stormie haile.

CHAP. XL. ¶ *The power of the Doge-starr.*

WE knoweth not, that when the Dogge-starr ariseth, the heate of the Sunne is fiery and burning: the effects of which starre are felt exceeding much vpon the earth. The seas at his rising do rage and take on, the wines in sellars are troubled, pooles also and standing waters doe stirre and moue. A wilde beast there is in *Aegypt*, called *Orix*, which the *Aegyptians* say doth stand full against the Doge-starr when it riseth, looking

looking wistly vpon it, and testifieth after a sort by freezing, a kind of worship. As for dogs, no man doubteth verily, but all the time of the canicular daies they are most ready to run mad.

CHAP. XLI.

¶ That the stars haue their severall influences in sundry parts of the signes, and at diuers times.

Moreouer, the parts of certaine signes haue their peculiar force, as appeareth in the Equinoctiall of Autumne, and in mid-winter, at what time we perceiue, that the Sun maketh tempests. And this is proued, not onely by raines and stormes, but by many experiments in mens bodies, and accidents to plants in the country. For some men are stricken by the Planet, and blasted: others are troubled and diseased at certaine times ordinarily, in their belly, sinewes, head, and minde. The Oliue tree, the Aspe or white Poplar, and Willows, turne or writh their leaues about at Mid-summer, when the Sun entrench Cancer. And contrariwise, in very Mid-winter, when he entrench Capricorne, the herbe Penyoiall flourisheth fresh, euen as it hangs within house, drie and ready to wither. At what time all parchments & such like bladders or skinned are so pient and stretched with spirit and wind, that they burst withall. A man might maruell hereat, who marketh not by daily experience, that one herbe called * *Heliotropium*, regardeth and looketh toward the Sun euer as he goeth, turning with him at all houres, notwithstanding he be shadowed vnder a cloud. Now certaine it is, that the bodies of Oysters, Muskles, Coles, and all shell fishes, grow by the power of the Moone, and thereby againe diminish: yea, and some haue found out by diligent search into Natures secrets, that the fibres or filaments in the liuers of rats and mice, answer in number to the daies of the Moones age: also that the least creature of all others, the Pismire, feelth the power of this Planet, and alwaies in the change of the Moone ceaseth from worke. Certes, the more shame it is for man to be ignorant and vnskillfull, especially seeing that he must confesse, that some labouring beasts haue certaine diseases in their eyes, which with the Moone do grow and decay. Howbeit the excessiue greatnesse of the heauen and exceeding height thereof, diuided as it is into 72 signes, maketh for him, and serueth for his excuse. Now these signes are the resemblances of things or liuing creatures, into which the skillfull Astronomers haue with good respect digested the firmament. For example sake, in the taile of Taurus there be seuen, which they named in old time *Perseus*; in the forehead other seuen called *Succulae*; and *Boötes*, who followeth after the wain or great Beare *Septentriones*.

CHAP. XLII.

¶ The causes of raine, showers, winds, and cloudes.

I Cannot denie but without these causes there arise raines and windes: for that certaine it is, how there is sent forth from the earth a mist sometimes moist, otherwhiles smokie, by reason of hot vapours and exhalations. Also that cloudes are ingendered by vapours which are gone vp on high, or else of the aire gathered into a waterie liqour: that they be thicke, grosse, and of a bodilij consistence, wee guesse and collect by no doubtful argument, considering that they ouer-shadow the Sun, which otherwise may be seene through the water, as they know well that due to any depth whatsoeuer.

CHAP. XLIII.

¶ Of Thunder and Lightning.

Denie I would not therefore, but that the fierie impressions from stars aboue may fall vpon these cloudes, such as we oftentimes see to shoot in cleare and faire weather: by the forcible stroke whereof, good reason it is, that the aire should be mightily shaken, seeing that arrowes and darts when they are discharged, sing and keepe a noise as they flie. But when they encounter a cloud, there arises a vapor with a dissonant sound (like as when a red hot yron maketh

A keth an hissing being thrust into water) & a smokie fume walmeth vp with many turnings like waues. Hereupon stormes do breed. And if this flatuositie or vapour doe struggle and wrestle within the cloud, from thence it cometh that thunderclaps be heard; but if it breake through still burning, then flieeth out the thunderbolt: if it be longer time a struggling, and cannot pierce through, then leams and flashes are seene. With these, the cloud is clouen, with the other, burst in sunder. Moreouer, thunders are nothing els but the blows and thumps giuen by the fires beating hard vpon the clouds: and therefore presently the fry chinkes and rifts of those clouds do glitter and shine. Possible it is also, that the breath and winde eleuated from the earth, being repelled back, and kept downe by the stars, & so held in and restrained within a cloud, may thunder, whiles Nature choketh the rumbling sound, all the while it striueth and quarelleth; but sendeth forth a crack when it breaketh out, as we see in a bladder puffed vp with winde. Likewise it may be, that the same wind or spirit whatsoeuer, is set on fire by fretting and rubbing, as it violently passeth headlong downe. It may also be stricken by the conflict of two clouds, as if two stones hit one against another; and so the leams and flashes sparkle forth, so as all these accidents happen by chance-medley, and be irregular. And hereupon come those bruiuish & vain lightnings, such as haue no natural reason, but are occasioned by these impressions abovesaid. With these are mountains and seas smitten, and of this kind be all other blasts and bolts that do no hurt to liuing creatures. As for those that come from aboue, and of ordinary causes, yea, and from their proper stars, they alwaies presage and foretell future events. In like manner as rouching the windes, or rather blasts, I would not denie but that they may proceed from a dry exhalation of the earth, void of all moisture: neither is it impossible, but that they do arise out of waters, breathing and sending out an aire, which neither can thicken into a mist, nor gather into clouds: also they may be driuen by the legitation and impulsion of the Sun, because the winde is conceited to be nought els but the fluctuation and waiaing of the aire, and that by many means also: for some we see to rise out of riuers, firths, and seas, euen when they be still and calme: as also others out of the earth, which winds they name *Atani*. And those verily when they come backe againe from the sea, are called *Tropae*: if they go onward, *Apogae*.

CHAP. XLIIII.

¶ What is the reason of the resounding and doubling of the Echoes.

But the windings of hills, and their often turnings, their many tops, their crests and ridges also bending like an elbow or broken, and arched as it were into shoulders, together with the hollow nookes of vallies, do cut vnequally the aire that reboundeth them from which is the cause of reciprocal voices called Echoes, answering one another in many places, when a man doth holla or houpe among them.

CHAP. XLV.

¶ Of Winds againe.

Now there be certaine caues and holes which breed windes continually without end: like as that is one which we see in the edge of Dalmatia, with a wide mouth gaping, & leading to a deep downfall: into which if you cast any matter of light weight, be the day neuer so calm otherwise, there ariseth presently a stormie tempest like a whistle puffed. The places name is *Senta*. Moreouer, in the prouince Cyrenaica there is reported to be a rock consecrated to the South-wind, which without prophanation may not be touched with mans hand; but if it be, presently the South wind doth arise and cast vp heaps of sand. Also in many houles there be hollow places deuised & made by mans hand for receipt of wind, which being inclosed with shade and darkness, gather their blasts. Whereby we may see how all winds haue one cause or other. But great difference there is betwene such blasts and winds. As for these, they be fettered and ordinarie, continually blowing, which, not some smal tracts & particular places, but whole lands do feele: which are not light gales nor stormy pusses, named *Aura* and *Procella*, but simply called winds, by the Masculine name *Venti*: which whether they arise by the continuall motion of the heauen, and the contrary course of the Planets; or whether this winde be that spirit of Nature that engendreth all things, wandering to and fro as it were in some wombe; or rather the

the aire, beaten and driven by the vnlike influences and raies of the straying starres or planets, and the multiplicitie of their beames: or whether all winds come from their owne stars, namely these planets nearer at hand, or rather fall from them that be fixed in the firmament. Plaine and euident it is, that guided they by an ordinary law of Nature, not altogether vnknewne, although it be not yet thoroughly knowne.

CHAP. XLVI.

¶ The Natures and observations of the Winds.



The old Greeke writers, not so few as twentie, haue set downe and recorded their obseruations of the Winds. I maruell so much the more, that the World being so at discord, and diuided into kingdomes, that is to say, dismembred as it was; so many men haue had care to seek after these things, so intricate and hard to be found out, and namely in time of wars, and amid those places where was no safe lodging nor abode, and especially when pyrats and rouers, common enemies to mankind, held welcome all passages: I maruell, I say, that at this day each man in his owne tract and country taketh more light and true knowledge of some things by their commentaries and bookes, who neuer set foot there, than they do by the skill and information of home-born inhabitants; whereas now in time of so blessed and ioiuous peace, and vnder a prince who taketh such delight in the progresse of the State and of all good arts, no new thing is learned by farther inquisition, nay, nor so much as the inuentions of old writers are thoroughly understood. And verily it cannot be said, that greater rewards were in those daies giuen, considering that the bountie of Fortunewas dispersed, and put into many mens hands: and in truth most of these deepe Clerkes and learned men, sought out these secrets for no other reward or regard, than to doe good vnto posteritie. But now, mens manners are waxen old and decay; now, all good customes are in the waine: and notwithstanding that the fruit of learning be as great as euer it was, and therecompences as liberall, yet men are become idle in this behalfe. The seas are open to all, an infinite multitude of saylers haue discovered all coasts whatsoeuer; they saile through and arrive familiarly at euery shore: all for gaine and lucre, but none for knowledge and cunning. Their mindes altogether blinded, and bent vpon nothing but couetousnesse, neuer consider that the same might with more safetie be performed by skill and learning. And therefore seeing there be so many thousand poore saylers that hazard themselves on the seas, I will treat of the winds more curiously and exquisitely than perhaps becomes the present worke that is begun.

CHAP. XLVII.

¶ Many sorts of Winds.



En in old time obserued foure Winds only, according to so many quarters of the world (and therefore Homer nameth no more): a blockish reason this was, as soone after it was iudged. The Age ensuing added eight more; and they were on the other side in their conceit too subtil and concise. The Modern saylers of late daies found out a meane betweene both: and they put vnto that short number of the first foure winds and no more, which they tooke out of the later. Therefore euery quarter of the Heauen hath two windes apiece. From the equinoctiall Sunne-rising bloweth the East-winde *Sub-solanus*: from the rising thereof in the Mid-winter, the South-east *Vulturnus*. The former of these twaine the Greekes call *Apelotes*, and the later *Eurus*. From the Mid-day, riseth the South-winde: and from the Sun-setting in Mid-winter the South-west, *Africus*. They also name these two, *Notus* and *Lilis*. From the Equinoctiall going downe of the Sun, the West-winde *Fenestrus* cometh: but from that in Summer season, the North-west *Caurus*. And by the same Greekes they are termed *Zephyrus* and *Argestes*. From the North-waine or pole Arctick bloweth the North-winde *Septentrio*: betweene which and the Sun rising in Summer, is the North-east-winde *Aquilo*, named *Aspautus* and *Boreas* by the Greekes. A greater reckoning than this for number, is brought in by some, who haue thrust in foure more betweene; namely, *Thoras* betwene the North and the Summer-setting of the Sunne: in like manner *Cacius*

- A *Cacius* in the midst betweene the North-east *Aquilo*, and that of the Sun rising in the Equinoctiall *Sub-solanus*. Also, after the Sun-rising in Sommer, *Phenicias* in the midst, betweene the South-east and the South. Last of all, betweene the South and the South-west, *Lybaretus*, iust in the midst, compounded of them both, namely, betweene the Noonestead, and the Sun-setting in Winter. But here they could not lay a straw, and see to make an end. For others haue set one more yet called *Mess*, betweene the North-east-winde *Borias* and *Cacius*: also *Euronotus* betweene the South and the South-west winds. Besides all these, there be some winds appropriate and peculiar to euery nation, which passe not beyond one certaine tract and region: as namely *Seyros* among the Athenians, declining a little from *Argestes* a winde vnknewne to other parts of Greece. In some other place it is more aloft, and the same then is called *Olympias*, as coming from the high hill Olympus. But the vsuall and customable manner of speech vnderstandeth by all these names *Argestes* only. Some call *Cacius*, by the name of *Hellepontias*, and giue the same winds in sundry places diuers names. In the prouince likewise of Narbon, the most notorious winde is *Circius*, and for violence inferior to none, driuing directly before it very often, the current at Ostia, into the Ligurian sea. The same winde is not only vnknewn in all other climats of the heauen, but reacheth not so much as to Vienna, a citie in the same prouince. As great & boisterous a winde as he is otherwise, yet a restraint he hath before he come thither, and is kept within few bounds by the opposition of a meane and small hill. *Fabianus* also auouches, that the South winds enter not so far as into Egypt. Whereby, the law of Nature sheweth it selfe plainly, that euen winds haue their times and limits appointed.
- C To proceed then, the Spring openeth the sea for saylers: in the beginning whereof, the West winds mitigate the Winter weather, at what time as the Sun is in the 25 degree of Aquarius; and that is the sixt day before the Ides of February. And this order holdeth in manner with all other winds, that I will set downe one after another, so that in euery leape yeare ye anticipate and reckon one day sooner, and then againe keep the same rule throughout all the foure yeares following. Some call *Fanionius* (which beginneth to blow about the 7 day before the Calends of March) by the name of *Chelidonius*, vpon the sight of the first Swallows, but many name it *O-rimibias*, comming the 71 day after the shortest day in winter, by occasion of the comming of birds: which wind bloweth for nine daies. Opposite vnto *Fanionius* is the VVind which we called *Sub-solanus*. Vnto this VVind is attributed the rising of the *Virgilia* or seven stars, in as many degrees of Taurus, six daies before the Ides of May; which time is a southerly constitution: and to this Winde the North is contrarie. Moreouer, in the hottest season of the Sommer, the Dog-star ariseth, at what time as the Sun entrench into the first degree of Leo, which commonly is the 15 day before the Calends of August. Before the rising of this star for eight daies space or thereabout, the Northeast winds are aloft, which the Greekes call *Prodomi*, i. forerunners. And two daies after it is risen, the same winds hold still more stiffely, and blow for the space of fortie daies, which they name *Etesia*. The Suns heat redoubled by the hotnesse of that star, is thought to be asswaged by them: and no winds are more constant, nor keep their set times better than they. Next after them come the Southerne winds againe, which are vsually vp, vntill the star *Arcturus* riseth, and that is nine daies before the Equinoctiall in Autumne. With it entereth *Caurus*, and thus *Caurus* beginneth the Autumne. And to this *Vulturnus* is contrarie. After that Equinoctiall, about 44 daies the *Virgilia* go downe, and begin winter, which season vsually falleth vpon the third day before the Ides of Nouember. This is the winter Northeast wind, which is far vnlike to that in Sommer, opposite and contrary to *Africus*. Now, a seven night before the Mid-winter day, and as much after, the sea is allaid and calme for the fitting and hatching of the birds: Ialciones, whereupon these daies tooke the name *Ialcione*: the time behind, plaith the part of Winter. And yet these boisterous seasons full of tempests, flut not vpon the sea: for pyrats and rouers at the first forced men with present perill of death, to run headlong vpon their death, and to hazard themselves in Winter seas; but now a daies couerousnesse causeth men to doe the like.
- F The coldest winds of all other, be those which we said to blow from the North-pole, and together with them their neighbor, *Caurus*. These winds do both allay and still all others, and also scatter and drive away clouds. Moist winds are *Africus*, and especially the South-wind of Italy called *Asper*. Men report also, that *Cacius* in Pontus gathereth & draweth to it selfe clouds. *Caurus* and *Vulturnus* are dry, but onely in the end when they giue over. The Northeast and the North,

North engender snow. The North winde also bringeth in haile, so doth *Cornu*. The South wind is exceeding hot and troublous withall. *Pulturnus* and *Favonius* be warme. They also be drier than the East: and generally all winds from the North and West are drier than from the South and East. Of all winds the Northern is most heathfull: the Southern wind is noisome, and the rather when it is drie, haply, because that when it is moist, it is the colder. During the time that it bloweth, living creatures are thought to be lesse hungry: the *Etesia* giue ouer ordinarily in the night, & arise at the third houre of the day. In Spaine and Asia they blow from the East: but in Pontus, from the North: in other quarters from the South. They blow also after the Mid-winter, when they be called *orimbis*, but those are more milde, & continue fewer daies. Two there be that change their nature together with their site and place: the South winde in Affricke bringeth faire weather, and the North wind there is cloudy. All winds keep their course in order for the more part, or els when one ceaseth, the contrary beginneth. When some are laid, & the next to them do arise, they go about from the left hand to the right, according to the Sun. Of their manner and order monthly, the prime or fourth day after the change of the Moone, doth most commonly determine. The same windes will serue to faile contrariwise, by means of setting out the sailles: so as many times in the night, ships in failing run one against another. The South winde raiseth greater billowes and more surging waues than the North: for that the South wind ariseth below from the bottome of the Sea; the other blustereth aloft, and troubleth the top of the water. And therefore after Southern winds, earth-quakes are most hurtful. The South wind in the night time is more boisterous, the Northern wind in the day. The winds blowing from the East, hold and continue longer than those from the West. The Northern winds giue over commonly with an odde number: which obseruation serueth to good vse in many other parts of naturall things, and therefore the male winds are iudged by the odde number. The Sun both raiseth, and also laith the windes. At rising and setting hee causeth them to be aloft: at noon-tide hee represseth and keepeth them vnder, in Summer time. And therefore at mid-day or mid-night commonly the winds are down and lie still, for both cold and heat if they be immoderate, do spend and consume them. Also rain doth lay the winds: and most commonly from thence they are looked for to blow, where clouds break and open the skie to be seen. And verily *Eudoxus* is of opinion (if wee list to obserue the least reuolutions) that after the end of every fourth yere, not only all winds, but other tempests and constitutions also of the weather, return again to the same course as before. And alwaies the Lustum or computation of the five yeres beginneth at the leap yere, when the Dog-star doth arise. Thus much touching general winds.

CHAP. XLVIII.

¶ Of sudden Blasts.

Now wil we speake of sudden blasts, which being risen (as hath bin said before) by exhalations of the earth, and cast downe againe; in the meane while appeare of many fashions, enclosed within a thin course of clouds newly ouercast. For such as be vnconstant, wandering, and rushing in manner of land floods (as some men were of opinion, as wee haue shewed) bring forth thunder and lightning. But if they come with a greater force, sway, and violence, and withall burst and cleaue a dry cloud asunder all abroad, they breed a storme, which of the Greeks is called *Encephias*; but if the clift or breach be not great, so that the wind be constrained to turne round, to roll and whirle in his descent, without fire (i.) lightning, it makes a whirle-puffe or ghuft called *Typhon* (i.) the storme *Encephias* aforesaid, sent out with a winding violence. This takes with it a piece broken out of a congealed cold cloud, turning, winding, and rolling it round, and with that weight maketh the owne fall more heauie, and changeth from place to place with a vehemence and sudden whirling; the greatest danger and mischiefe that poore failers haue at sea, breaking not only their crose saile yards, but also writhing and bursting in peeces the very ships; and yet a small matter is the remedy for it, namely, the casting of vinegre out against it as it commeth, which is of nature most cold. The same storme beating vpon a thing, is it selfe smitten backe againe with a violence, and snatcheth vp whatsoever it meeteth in the way aloft into the skie, carrying it back, and swallowing it vp on high. But if it breake out from a greater hole of the said cloud, by it so borne down, and yet not altogether so broad as the abouenamed storm *Procella* doth, not without a cracke; they call this boisterous winde

A wind *Turbo*, casting downe and ouerthrowing all that is next it. The same, if it be more hot and catching a fire as it rageth, is named *Prester*; burning, and withall laying along, whatsoever it toucheth and encountereth.

CHAP. XLIX.

¶ Other enormous kinds of Tempests.

NO *Typhon* commeth from the North, ne yet any *Encephias* with snow, or while snow lieth on the ground. This tempestuous winde, if when it brake the cloud burned light withall, hauing fire of the owne before, and caught it not afterward, it is very lightning; and differeth from *Prester*, as the flame from a cole of fire. Again, *Prester* spreadeth broad with a flash and blast; the other gathereth round with forcible violence. *Typhon* moreover or *Porter*, differeth from *Turben* in flying backe, and as much as a crash from a cracke. The storme *Procella* from them both, in breadth: and to speake more truly, rather scattereth than breaketh the cloud. There riseth also vpon the sea a darke mist, resembling a monstrous beast; and this is euer a terrible cloud to sailers. Another likewise called a Colonne or Pillar, when the humour and water ingendred is so thicke and stiffe congealed, that it standeth compact of it selfe. Of the same sort also is that cloud which draweth water to it, as it were into a long pipe.

CHAP. L.

¶ In what Lands Lightnings fall not.

IN Winter and Summer seldome are there any Lightnings, and that is long of contrary causes: because in Winter the aire is driuen close together, and thickened with a deeper course of clouds; besides, all the exhalations breathing and rising out of the earth, being stark, congealed, and frozen hard, do extinguishe cleane what fire vapour soeuer otherwise they receiue: which is the reason that Scythia and other cold frozen quarters thereabout, are free from lightnings. And *Egypt* likewise vpon the contrarie cause, and exempt from Lightnings, namely, exceeding heate: for the hot and dry exhalations of the earth, gather into very slender, thin, and weake clouds. But in the Spring and Autumne, lightnings are more rife; because in both those seasons, the causes as well of Summer as Winter, are confused and corrupt. And this is the reason also, that lightnings are common in our Italie; for that the aire being more moueable and wauering, by reason of a kinder Winter and a cloudie Summer, is alwaies of the temperature of Spring or Autumne. In those parts also of Italy which lie off from the North, and encline to warmth (as namely in the tract about Rome and Campania) it lightneth in Winter and Summer alike, which happeneth in no other part thereof.

CHAP. LI.

¶ Sundry sorts of Lightnings, and Wonders thereof.

VERIE many kinds of Lightnings are set downe by Authors. Those that come drie, burne not at all, but onely dissipate and disperse. They that come moist, burne not neither, but blast things, and make them looke dusky. Now a third kinde there is, which they call Bright and Cleare, and that is of a most strange and wonderfull nature; whereby runs and such like vessels are drawne drie, and their sides, boops, and heads, neuer toucht therewith or hurt, nor any other shew and token thereof is left behinde: Gold, copper, and silver money is melted in the bags, and yet the very bags no whit scorched, nor the wax of the scale hurt and defaced, or put out of order. *Martia* a noble Ladie of Rome being great with childe, was stricke with lightning: the childe she went withall was killed within her, and she without any harme at all liued still. Among the *Catilina* prodigies it is found vpon Record, that *M. Herennius* (a Counsellor and States-man of the incorporate towne Pompeianum) was in a faire and cleare day smitten with Lightning.

THe Antient Tuscans by their learning do hold, that there be nine gods that send forth Lightnings, and those of eleven sorts: for *Iupiter* (say they) casteth three at once. The Romans have observed two of them, and no more; attributing those in the day time to *Iupiter*, and them in the night to *Summanus* or *Pluto*. And these verily be more rare, for the cause aforesaid; namely, the coldnesse of the aire above. In *Hetruria*, they suppose that lightnings break all out of the earth, which they call *Inferaj*. Infernall, and such be made in Mid-winter. And these they take to be terrene and earthly, and of all most mischievous and exorable: neither be those general and universall lightnings, nor proceeding from the stars, but from a very neere and more troubled cause. And this is an evident argument for distinction, that all such as fall from the upper skie above, strike a land and side-wise: but those which they call earthly, smite straight and directly. But the reason why these are thought to issue forth of the earth is this; because they fall from out of a matter nearer to the earth, forasmuch as they leave no markes of a stroke behind: which are occasioned by force not from beneath, but coming full againe. Such as have searched more subtilly into these matters, are of opinion, that these lightnings come from the Planet *Saturne*, like as the burning lightning from *Mars*: And with such lightning was *Volsinij* (a most welchly cite of the Tuscans) burnt full and whole to ashes. Moreover, the Tuscans call those lightnings Familiar, which presage the fortune of some race, and are significant during their whole life: and such are they that come first to any man, after he is newly entred into his owne patrimonie or familie. Howbeit their iudgement is, that these priuat lightnings are not of importance and force-tokning about ten yeres; velle they happen either vpon the day of first marriage, or of wedding. As for publike lightnings, they be not of force about 30 yeres, except they chance at the very time that townes or colonies be erected and planted.

CHAP. LIII. ¶ Of raising or calling out Lightnings by Coniuration.

IT appeareth vpon record in Chronicles, that by certaine sacrifices and prayers, Lightnings may be either compelled or easily intreated to fall vpon the earth. There goeth a report of old in *Hetruria*, that such a lightning was procured by exorcismes and coniurations, when there entered into the cite *Volsinij* (after all the territory about it was destroyed) a monster which they named *Volta*. Also, that another was raised and coniuied by *Perenna* their King. Moreover, *L. Piso* (a writer of good credit) reporteth in his first booke of *Annales*, that *Numa* before him praised the same feat many a time and often: and when *Tullus Hostilius* would have imitated him and done the like (for that he observed not all the ceremonies accordingly) was himselfe stricken and killed with lightning. And for this purpose, sacred groues we haue and altars, yea and certaine sacrifices due thereto. And among the *Iupiters* turnamed *Statores*, *Iouan-tes*, and *Feretrj*, we haue heard that one also was called *Elicius*. Sundry and diuers are mens opinions as touching this point, and every man according to his owne liking and fancie of his minde. To beleue that Nature may be forced and commanded, is a very audacious and bold opinion: but it is as blockish on the other side, and fencelesse, to make her benefits of no power and effect; considering that in the interpretation of Lightning, men haue thus farre forth proceeded in skill and knowledge, as to foretell when they will come at a set and prescript day: and whether they will fordoe and frustrate the dangers pronounced, or rather open other destinies, which lie hidden: and an infinite sort of publike and priuat experiments of both kinds are to be found. And therefore (since it hath so pleased Nature) let some men be resolute herein, and others doubtfull: some may allow thereof, and others condemne the same. As for vs, we will not omit the rest which in these matters are worth remembrance.

CHAP. LIIII. ¶ General rules of Lightning.

That the Lightning is seene before the Thunderclap is heard, although they come indeed jointly both together, it is certainly knowne. And no maruell, for the eye is quicker to see light, than the eare to heare a sound. And yet Nature doth so order the number and measure,

Appause that the stroke and the sound should accord together. But when there is a noise, it is a signe of the lightning proceeding of some naturall cause, and not sent by some god: and yet overcome this is a breath or winde that cometh before the thunderbolt: and hereupon it is, that every thing is shaken and blasted: ere it be smitten; neither is any man stricken, who either saw the lightning before, or heard the thunderclap. Those lightnings that are on the left hand, be supposed to be luckie and prosperous, for that the East is the left side of the world; but the coming thereof is not so much regarded as the return, whether the fire leap back after the stroke given; or whether after the deed done and fire spent, the spirit and blast about the stroke be againe. In that respect the Tuscans haue diuided the heauen into 16 parts. The first is from the North to the Suns rising in the Equinoctiall line: the second, to the Meridian line, or the South: the third, to the Sun-setting in the Equinoctiall: and the fourth taketh vp all the rest from the said West to the North star. These quarters againe they haue parted into foure regions apiece of which eight from the Sun-rising, they called the Left, & as many again from the contrary part, the Right. Which considered, most dreadfull and terrible are those lightnings, which from the Sun-setting reach into the North, and therefore are skill'd very much, from whence lightnings come, and whither they go: the best thing obserued in them, when they return into the Easterly parts. And therefore when they come from that first and principall part of the skie, and haue recourse again into the same, it is holden for passing good hap: such was the signe and token of victories giuen (by report) to *Sylla* the Dictator. In all other parts of the element they be lesse fortunate or fearful. They that haue written of these matters, haue deliuered in writing, that there be lightnings, which to vtter abroad is held vnlawfull, as also to giue care vnto them, if they be disclosed, ylesse they be declared either to parents, or to a friend and guest. How great the vanity is of this obseruation, was at Rome, vpon the blasting of *Ioues* temple, found by *Scourus* the Consul, who soone after was President of the Senate. It lightner without thunder, more in the night than day time. Of all creatures that haue life and breath, man only it doth not alwaies kill, the rest it dispatcheth presently. This prindge & honour we see Nature hath giuen to him; whereas otherwise so many great beasts surpass him in strength. All other creatures smitten with lightning, fall downe vpon the contrary side; man onely (ylesse he turne vpon the parts stricken) dyeth not. Those that are smitten from above vpon the head, lie downe and sinke directly. He that is stricken watching, is found dead with his eyes winking and close shut; but who sleepeth is smitten sleeping, is found open eyed. A man thus coming by his death, may not by law be buried: Religion hath taught, that he ought to be entred and buried in the earth. No liuing creature is set a fire by lightning, but it is breathlesse first. The wounds of them that be smitten with thunderbolts, are colder than all the body besides.

CHAP. LV.

¶ What things are not smitten with Lightning.

Ofall those things which grow out of the earth, Lightning blaseth not the *Laurell tree*; nor entrench at any time aboute five foot deep into the ground; and therefore, men fearful of lightning, suppose the deeper causes to be the surest and most safe: or els booths made of skins of sea-beasts, which they call *Scales*, or *Sea-calues*, for of all creatures in the sea, this alone is not subiect to the stroke of lightning; like as of all flying fowles the Eagle, (which for this cause is imagined to be the armour-bearer of *Iupiter*, for this kinde of weapon.) In *Italie* betwene *Tarracina* and the temple of *Feronia*, they gaue ouer in time of warre, to make towers and forts, for not one of them escaped, but was overthrowne with lightning.

CHAP. LVI.

¶ Of strange and prodigious raine, to wit, of Milke, Bloud, Fleish, Iron, Wool, Tyles, and Bricks.

Besides these things above, in this lower region vnder heauen, we finde recorded in monuments, that it rained milke and bloud, when *M. Atilius* and *C. Porcius* were Consuls. And many times els besides it rained fleish, as namely, whiles *L. Volcanius* and *Serv. Sulpicius*

pitius were Consuls: and took what of it the foules of the aire caught not vp nor carried away, it neuer putrified. In like manner, it rained yron in the Lucanes countrey, the yere before that *M. Crassus* was slaine by the Parthians, and together with him all the Lucanes his souldiers, of whom there were many in his army. That which came downe in this raine resembled in some sort Sponges: and the Wisards and South fayers being fought vnto, gaue warning to take heed of wounds from above. But in the yere that *L. Paulus* and *C. Marcellus* were Consuls, it rained wooll about the Castle Carilla, neare to which a yere after, *T. Annius Milo* was slaine. At the time that the same *Milo* pleaded his owne cause at the bar, there fell a raine of tyles and bricks, as it is to be seene in the Records of that yere.

CHAP. LVII.

¶ *Of the rustling of Armour and sound of Trumpets heard from Heauen.*

IN the time of the Cimbrian warres, we haue bin told, that Armour was heard to rustle, and the trumpet to sound out of heauen. And this happened very often both before and after those wars. But in the third Consulship of *Marius*, the Amerines and Tudertes saw men in armes in the skie, rushing and running one against another from the East and West, and might behold those of the West discomfited. That the very firmament it selfe should be of a light fire, it is no maruel at all; for oftentimes it hath been seene, when clouds haue caught any greater deale of fire.

CHAP. LVIII.

¶ *Of Stones falling downe from the Skie.*

AMong the Greeks there is much talke of *Anaxagoras Clazomenius*, who by his learning and skill that he had in Astronomie, foretold in the second yere of the 78 Olympias, what time a stone should fall from out of the Sun: and the same happened accordingly in the day time, in a part of Thracia neere the riuer Aegos; which stone is shewed at this day as big as a waite load, carrying a burnt and adust colour: at what time as a comet or blazing starre also burned in those heights. Which if any man beleue that it was fore-signified, must needs also confesse, that this diuinitie or fore-telling of *Anaxagoras* was more miraculous and wonderful than the thing it selfe: and then farewell the knowledge of Natures workes, and welcome confusion of al; in case we should beleue that either the Sun were a stone, or that euer any stone were in it. But, that stones fall oftentimes downe, no man will make any doubt. In the publicke place of Exercise in Abydos, there is one at this day vpon the same cause preferred and kept for to be seene, and held in great reuerence: it is but of a meane and small quantity, yet it is that which the selfe same *Anaxagoras* (by report) fore-signified that it should fall in the mids of the earth. There is one also at Cassandria, which was in old time vsually called Potidæa, a colony from thence deducted. I my selfe haue seene another in the territorie of the Vocantians, which was brought thither but a little before.

CHAP. LIX. ¶ *Of the Rainbow.*

THose which we call Rain-bowes are seene often without any wonder at all, or betokening any great matter: for they portend not so much as rainy or faire daies, to trust vpon. But manifest it is, that the Sun beames striking vpon an hollow cloud, when their edge is repelled, are beaten backe against the Sun: and thus arise the varietie of colours by the mixture of clouds, aire, and fire light together. Certes, they neuer are knowne but opposite to the Sun; nor at any time otherwise than in forme of a Semicircle: ne yet in the night season, although *Aristotle* faith there was a Rain-bow seen by night: howbeit he confesseth, that it could not possibly be but at the full of the Moone. Now they happen for the most part in winter, namely from the Autumne Equinoctiall, as the daies decrease and wax shorter. But as daies grow longer againe, that is to say, after the Spring Equinoctiall, they be not seene no more about the Summer Sunstead, when daies are at longest. But in Bruma, namely when they bee shortest

A test, they chance very often. The same appeare aloft, when the Sun is low; and below, when he is aloft. Also, they be of narrower compass, when the Sun either riseth or setteth, but their body spreadeth broad: and at noone narrower it is, and final, yet greater and wider in circumference. In Sommer time they be not seene about noon-tide, but after the Autumne Equinoctiall, at all houres; and neuer more at once than twaine. The rest of the same nature I fee few men doe make any doubt of.

CHAP. LX:

¶ *Of Haile, Snow, Frost, Mist, and Dew.*

B HAile is ingendred of Raine congealed into an Ice: and Snow of the same humor growne together, but not so hard. As for frost, it is made of dew frozen. In winter Snowes fall, and not haile. It haileth oftner in the day time than in the night, yet haile sooner melteth by farre than snow. Mist is not seene neither in Summer, nor in the cold weather. Dewes thew not either in frost, or in hot seasons; neither when winds be vp, but only after a calm and cleere night. Frosts dry vp wet and moisture, for when the yce is thawed and melted, the like quantitie of water in proportion is not found.

CHAP. LXI.

¶ *Of the shapes of Clouds.*

C Sundry colours and diuers shapes are seene in clouds, according as the fire intermingled therein is either more or lesse.

CHAP. LXII.

¶ *Of the properties of weather in diuers places.*

MOREouer, many properties there be of the weather, peculiar to certain places: the nights in Africke bedewie in Vwinter. In Italy, about Locri and the lake Velinus, there is not a day but a Rainbow is seene. At Rhodes and Syracuse, the aire is neuer so dimme and cloudy, but one houre or other the Sun shineth out. But such things as these shall be related more fitly in due place. Thus much of the Aire.

CHAP. LXIII.

¶ *Of Earth, and the nature thereof.*

THE Earth followeth next: vnto which alone of all parts of the world, for her singular benefits we haue giuen the reuerend and worshipfull name of Mother. For like as the Heauen is the (mother) of God, euen so is she of men. She it is that taketh vs when wee are comming into the world, nourisheth vs when we are new borne: and once being come abroad, euer sustaineth and beareth vs vp: and at the last when wee are reiecte and forlorne of all the world besides, she embraceth vs then most of all other times, like a kinde mother, she couereth vs all ouer in her bosom; by no merit more sacred than by it, wherewith she maketh vs holy and sacred, euen bearing our tombes, monuments, and titles, continuing our name, and extending our memorie, thereby to make recompence and weigh against the shortnes of our age: whose last power we in our anger wish to be heavy vnto our enemy, and yet she is heavy to none, as if wee were ignorant that she alone is neuer angry with any man, waters ascend vp, & turn into clouds, they congeale and harden into haile, swel they do into waues and billows, & down they hasten headlong into brooks and land-floods. The aire is thickened with clouds, & rageth with winds and stormes. But she is bountifull, mild, tender ouer vs, & indulgent, ready at all times to attend and wait vpon the good of mortall men. See what she breeds being forced; nay, what the yeeldeth of her owne accord; what odoriferous smells, and pleasant fauors; what wholesome iuices and liquors, what soft things to content our feeling, what louely colors doth she giue to please our eie, how faithfully and iustly doth she repay with vsury that which was lent and credited out vnto her! Finally, what store of all things doth shee feed and nourish for our sake! Alas

poor wretch, pestiferous and hurtfull creatures, when the vitall breath of the aire was too blame to giue them life, she could not otherwise chuse but receiue them, after they were sown in her, and being once ingendred and bred, keepe and maintain them. But in that they prooued afterwards bad and venomous; the fault was to be laid vpon the parents that ingendred them, and not to be imputed vnto her. For, shee entertaineth no more a venomous serpent after it hath stung a man: nay, more than that, she requireth punishment, for them that are slow and negligent of themselves to seeke it. She it is that bringeth forth medicinable herbes, and cuermore is in trauell to be deliuered of some thing or other, good for man.ouer and besides, it may be thought and beleued, that for very pittie of vs the ordained and appointed some poisons, that when we were weary of our life, curled famine (most aduerse and crosse of all other to the merits of the earth) should not consume and waste vs with languishing and pining consumption, and so procure our death; that high and steepe rockes should not dash and crush our bodies in peeces; nor the ouerthwart and preposterous punishment by the halter, wreath our necks, and stop that vital breath which we seek to let out and be rid of: last of all, that we might not worke our owne death in the deep sea, and being drowned feed fishes, and be buried in their bellies; ne yet the edge and point of the sword cut and pierce our bodies, and so put vs to dolorous paine. So that it is no doubt, but in a pittifull regard and compassion of vs, shee hath ingendred that payson, by one gentle draught whereof, going most easily downe, we might forgoe our life, and die without any hurt and skin broken of our body, yea, and diminish no one drop of blood: without grieuous paine, I say, and like onely to them who be athirst: that being in that manner dead, nether soule of the aire, nor wilde beast prey vpon or touch our bodies, but that he should be referred for the earth, who perished by himselfe, and for himselfe, and to confesse and say the troth, the earth hath bred the remedy of all miseries, howeouer we haue made it a venome and poison to our life. For after the like sort we employ iron and Steele, which we cannot possibly be without. And yet we should not do well and iustly to complain, in case she had brought it forth for to do hurt and mischief. Now surely to this only part of Nature and the world, we are vnthankfull, as though shee serued not mans turne for all dainties; not for contumely and reproch to be misused. Cast she is into the sea, or else to let in peeres and frithes, eaten away with water. With yron tooles, with wood, fire, stone, burdens of corne tormented she is euery houre: and all this much more to content our pleasures and wanton delights than to serue vs with naturall food and necessary nourishment. And yet these misusages which she abideth aboue, and in her outward skin, may seeme in some sort tolerable. But we, not satisfied therewith, pierce deeper and enter into her very bowels, we search into the veins of gold and silver, we mine and dig for copper and lead mettals. And for to seek out gemmes and some little stones, we sinke pits deep within the ground. Thus we plucke the very heart-strings out of her, and all to waile on our finger one gemme or precious stone, to fulfill our pleasure and desire. How many hands are worne with digging and deluing, that one ioynt of our finger might thine again. Surely, if there were any diuels or infernall spirits beneath, ere this time verily these mines (for to feed couetousnes and riot) would haue brought them vp aboue ground. Maruell we then, if she hath brought forth some things hurtfull and noisome: But sauage beasts (I well thinke) ward and fave her, they keepe sacrilegious hands from doing her iniurie. Nay ywis it is nothing so. Dig we not amongst dragons and serpents: and together with veins of gold, handle we not the roots of poisoned and venomous herbes? howbeit this goddesse we finde the better appaied, and lesse discontented for all this misusage, for that the end and issue of all this wealth tends to wickednesse, to murder and wars, and her whom we drench with our blood, we couer also with vnburied bones. Which neuertheless, as if she did reprocue and reproch vs for this rage and surrie of ours, she her selfe couereth in the end, and hideth close euen the wicked parts of mortall men. Among other imputations of an vnthankfull minde, I may well count this also, That we be ignorant of her nature.

CHAP. LXIII.

¶ Of the forme of the earth.

The first and principall thing that offereth it selfe to be considered, is her figure, in which by a generall consent we doe all agree. For surely we speake and say nothing more commonly, than the round ball of the earth; and confesse that it is a globe enclosed within 2 poles. But yet the forme is not of a perfecte and absolute roundle, considering so great height

A of hills and such plaines of downs: howbeit, if the compasse thereof might be taken by lines, the ends of those lines would meet iust in circuit, and proue the figure of a iust circle. And this the very consideration of naturall reason doth force and conuince, although there were not those causes which we alledged about the heauen. For in it the hollow bending conuexitie boweth and beareth vpon it selfe, and euery way retheth vpon the centre thereof, which is that of the earth. But this, being solid and close compact, ariseth still like as if it swelled, stretching and growing forth. The heauen bendeth and inclineth toward the centre, but the earth goeth from the centre, whiles the world with continuall volubilitie and turning about it, diueth the huge and excessiue globe thereof into the forme of a round ball.

CHAP. LXV.

¶ Of the Antipodes, whether there be any such. Also of the roundnesse of water.

Much adoe there is here, and great debate betweene learned men; and contrariwise those of the leaud and ignorant multitude: for they hold, that men are ouerspread on all parts vpon the earth, and stand one against another, foot to foot: also that the Zenith or point of the heauen is euen and alike vnto all: and in what part soeuer men be, they go still and tread after the same manner in the middest. But the common sort aske the question and demand, How it happeneth that they opposite iust against vs fall not into Heauen? as if there were not a reason also ready, That the Antipodes againe shall maruell why we fell not downe. Now there is reason that commeth betweene, carrying a probability with it euen to the multitude, were it neuer so blockish and vnapt to learne; That in an vneuen and vnequall Globe of the Earth, with many ascents and degrees, as if the figure thereof resembled a Pine-apple; yet neuertheless it may be well enough inhabited all ouer in euery place. But what good doth all this, when another wonder as great as it ariseth; namely, That it selfe hangeth, and yet falleth not together with vs: as if the power of that Spirit especially which is enclosed in the World were doubted: or that any thing could fall, especially when nature is repugnant thereto, and affordeth no place whither to fall: for like as there is no seat of Fire, but in fire; of Water, but in water; of Aire and Spirit, but in aire; euen so, there is no roome for Earth but in earth, seeing all the Elements besides, are ready to put it backe from them. Howbeit, wonderful it remaineth still, How it should become a Globe, considering so great flatnesse of Plaines and Seas: Of which doubtfull opinion, *Dicaearchus* (a right learned man as any other) is a fauourer; who, to satistie the curious endeauiours of Kings and Princes, had a charge and commission to leuell and take measure of mountaines: of which he said, that Pelion the highest, was a mile and a halfe high by the plumb rule; and collected thereby, that it was nothing at all to speake of, in comparison of the vniuersall rounditie of the whole. But surely in my conceit, this was but an vncertaine guesse of his, since that I am not ignorant, that certaine tops of the Alpes, for a long tract together, arise not vnder fiftie miles in height.

But this is it that troubles the vulgar sort most of all, if they should be forced to beleue, that the forme of water also gathers round in the top. And yet there is nothing in the whole world more euident to the sight, for the drops euery where not onely as they hang, appeare like little round bals, but also if the light vpon dust, or rest vpon the hairy downe of leaues, we see they keepe a perfect and exquisite roundnes. Also in cups that are filled brim full, the middle part in the top swell most. Which thing considering the thinnes of the humour, and the softnes thereof, setting flat vpon it selfe, are sooner found out by reason, than by the eye. Nay, this is a thing more wonderful, that when cups are filled to the full, put neuer so little more liquor thereto, the ouerplus will run ouer all about: but contrariwise it falleth out, if you put in any solid weights, yea, and it were to the weight of twenty deniers or French crowns in a cup. Forsooth the reason is this, for that these things receiued within lift vp the liquor aloft to the top, but poured vpon the tumour that beareth aloft about the edges, they must needs glide off and run by. The same is the reason why the land cannot be seen by them that stand vpon the hatches of the ship, but very plainly at the same time from the top of the masts. Also as a ship goeth a far off from the land, if any thing that thineth and giueth light be fastened to the top-gallant, it seemeth from the land side to goe downe and sinke into the sea by little and little, untill at last it be hidden cleane.

clean. Last of all the very Ocean, which we confesse to be the vtmost and farthest bound enuironing the whole globe, by what other figure else could it hold together, and not fall downe, since there is no other banke beyond it to keepe it in? And euen this also is as great a wonder, how it commeth to passe, although the sea grow to be round, that the vtmost edge thereof faileth not downe? Against which, if the seas were euen, flat, and plaine, and of that forme as they seem to be, the Greeke Philosophers to their own great ioy and glory do conclude, and proue by Geometrical subtilly demonstration, that it cannot possibly be that the waters should fall. For seeing that waters run naturally from aloft to the lower parts, and that all men confesse, that this is their nature, and no man doubteth that the water of the sea came euen in any shore so far as the deucitie would haue suffered; doublelesse it appears, that the lower a thing is, the neerer it is to the centre; and that all the lines which from thence are sent out to the next waters, are shorter than those which from the first waters reach to the vtmost extremitie of the sea. Hereupon the whole water from every part thereof bends to the centre, and therefore falls not away, because it inclines naturally to the inner parts. And this we must beleue that Nature the work-mistresse framed and ordained so, to the end that the earth being dry, could not by it selfe alone, without some moisture keepe any consistence; and the water likewise could not abide and stay vnlesse the earth vpheld it; in which regard they were mutually to embrace one another, and so to be vnited, whiles the one opened all the creeks and nouks, and the other ran wholly into the other, by means of secret veins within, without, and aboue, like ligaments to claspe it, yea, and so break out at the vtmost tops of hills, whether being partly caried by a spirit, and partly exprest forth by the ponderositie of the earth, it mounteth as it were in pipes; and so far is it from danger of falling away, that it leapeth vp to the highest and loftiest things that be. By which reason it is euident also, why the seas swell not and grow, notwithstanding so many riuers daily run into them.

CHAP. LXXVj.

¶ How the matter is vnited and knit to the earth.

THe earth therefore in his whole globe is in the midst thereof, hemmed in by the sea running round about it. And this need not to be sought out by reason and argument, for it is knowne already by good proofe and experience.

CHAP. LXXVij.

¶ Navigation vpon the sea and great Riuers.

From Gades and *Hercules* pillars, the West sea is at this day nauigable and failed all ouer euen the whole compasse of Spaine and France. But the North Ocean was for the most part discovered vnder the conduct of *Augustus Caesar* of famous memorie, who with a fleet compassed all Germanie, and brought it about as far as to the cape of the Cimbrians: and so from thence hauing kenned and viewed the vast and wide sea, or else taken notice thereof by report, he passed to the Scythian Clymat and those cold coasts, frozen, and abounding with too much moisture. For which cause there is no likelihood that in those parts the seas are at an end, whereas there is such excessiue wet that all stands with water. And nere vnto it from the East, out of the Indian sea, that whole part vnder the same clyme of the world which bendeth vnder the Caspian sea, was failed throughout by the Macedonian armies, when *Seleucus* and *Antiochus* reigned, who would needs haue it so, that *Seleucus* and *Antiochus* should beare their names. About the Caspian sea also many coasts and shores of the Ocean haue bin discovered, and by pice-meale rather than all whole at once, the North of one side or other hath been failed or rowed ouer. But yet to put all out of coniecture, there is a great argument collected out of the Mere *Maotis*, whether it be a gulfe and arme of that Ocean (as I know many haue beleued) or an ouerflowing of the same, and diuided from it by a narrow pice of the continent. In another side of Gades, from the same West, a great part of the South or Meridian gulfe round about Mauritania is at this day failed. And the greater part verily of it, like as of the East also, the victories of *Alexander the Great* viewed and compassed on euery side, euen as farre as vnto the Arabian Gulfe. Wherein when *Gaius Caesar*, the sonne of *Augustus*, warred,

A warred in those parts, the marks and tokens by report were seen remaining after the Spaniards shipwracke. *Hanno* likewise in the time that Carthage flourished in puissance failed round about from Gades to the vtmost bounds and lands end of Arabia, and set downe that his voyage in writing. Like as also *Himilco* was at the same time sent out in a voyage to discouer the vter coasts of Europe. Moreouer, *Cornelius Nepos* writeth, that in his time one *Eudoxius* a great sailer, at what time he fled from King *Lathyrus*, departed out of the Arabian gulfe, and held on his course as far as Gades. Yea, and *Celsus Antipater* long before him reporteth, that he saw the man who had failed out of Spain to Ethiopia for traffique of merchandise. The same *Xenok* maketh report as touching the compassing about of the North, That vnto *Qu. Metellus Celer*, **B** Colleague to *C. Africanus* in the Consulship, but at that time Proconsull in Gaule; certain Indians were given by a King of the Sueuians, who as they failed out of India for traffick as merchants, were driven by tempests, and cast vpon Germanie. Thus the seas flowing on all sides about this globe of the earth, diuided and cut into parcels, bereaue vs of a part of the world, so as neither from thence hither, nor from hence thither there is a thorow-faire and passage. The contemplation whereof serueth fit to discouer and open the vanitie of men, seemes to require and challenge of me, that I should prouide to the view of the eye, how great all this is, whatsoever it be, and wherein there is nothing sufficient to satisfie and content the feuerall appetite of each man.

CHAP. LXXviii.

¶ What portion of the earth is habitable.

Now first and foremost me thinks men make this reckoning of the earth, as if it were the iust halfe of the globe, and that no portion of it were cut off by the Ocean: which notwithstanding, clasping round about all the midst thereof, yielding forth and receiuing againe all other waters besides, and what exhalations sweeter that go out for clouds, and seeding withall the very stars, so many as they be, and of so great a bignesse, what a mighty space thinke you will it be thought to take vp and inhabit, and how little can there be left for men to inhabit? surely the possession of so vast and huge a deale must needs be exceeding great and infinite. What say you then to this, That of the earth which is left the heauen hath taken away the greater part? For whereas there be of the heauen five parts, which they call Zones, all that lieth vnder the two vtmost, to wit, on both sides about the poles, namely this here, which is called *Septentrio*, that is to say, the North, and the other ouer againe it, named the South, it is ouercharged with extreme and rigoros cold, yea, and with perperuall frosts and ice. In both Zones it is alwaies dim and darke, and by reason that the aspect of the more milde and pleasant planets is diuerted cleane from thence, the light that is, sheweth little or nothing, and appeareth white with the frost onely. Now the middle of the earth, whereas the Sun hath his way, and keepeth his course, scorched and burnt with flames, is euen parched and fried againe with the hot gleames thereof, being so neere. Those two only on either side about it, namely betweene this burnt Zone and the two frozen, are temperate; and euen those haue not access and passage the one to the other, by reason of the burning heate of the said planet. Thus you see that the heauen hath taken from the earth three parts, and what the Ocean hath plucked from it besides no man knoweth. And euen that one portion remaining vnto vs, I wot not whether it be not in greater danger also. For the same Ocean entreing, as we will shew, into many armes and creeks, keepeth a roaring against the other gulfes and seas within the earth, and so neere comes vnto them, that the Arabian gulfe is not from the Egyptian sea about 115 miles: the Caspian likewise from the Ponticke but 375. Yea, and the same floweth betweene, and entreth into so many armes, as that thereby it diuideth Africke, Europe, and Asia asunder. Now what a quantity of land it taketh vp may be collected and reckoned at this day, by the measure and proportion of so many riuers, and so great Meres. Adde thereto both Lakes and pooles, and withall take from the earth the high mountains bearing vp their heads aloft into the sky, so as the eye can hardly reach their heights: the woods besides, and steepes descents of the vallies, the Wildernes, and waste wildes left desart vpon a thousand causes. These so many pices of the earth, or rather, as most haue written, this little pricke of the world (for surely the earth is nothing else in comparison of the whole) is the only matter of our glory. This, I say,

is the very feat thereof: here we seeke for honors and dignities; here we exercise our rule and G
 authoritie: here we couet wealth and riches: here all mankind is set vpon flirs and troubles; here we raise ciuill wars still one after another, and with mutuall massacres and murders wee make more room in the earth. And to let passe the publique furious rages of nations abroad, this is it, wherein we chafe and drie out our neighbor borders, and by stealth dig turfe from their soile to put vnto our owne: and when a man hath extended his lands, and gotten whole countries to himselfe far and neere, what a goodly deale of earth enioyeth he: and say that he set out his bounds to the full measure of his couetous desires, what a great portion thereof shall he hold when he is once dead, and his head laid low.

CHAP. LXIX.

¶ That the earth is in the middelt of the world.

THat the earth is in the midst of the whole world it appeareth by manifest and vndoubted reasons: but most evidently by the equal houres of the Equinoctial; for vnlesse it were in the midst, the Astrolabe and instruments called *Diopha* haue proued, that nights and daies could not possibly be found equal: and those aboue-said instruments aboue all other confirme the same: seeing that in the Equinoctial, by one and the same line both rising and setting of the Sun are seen; but the Sommer Sun rising, and the Winter setting, by their owne severall lines: which could by no means happen, but that the earth resteth in the centre.

CHAP. LXX.

¶ Of the vnequall rising of the stars: of the Eclipse, both where and how it commeth.

NOw three circles there be infolded within the Zones afore named, which distinguish the inequalities of the dayes: namely the Sommer Solstitiall Tropicke, from the highest part of the Zodiacke in regard of vs, toward the North Clyme. And against it another called the Winter Tropicke toward the other Southern Pole: and in like maner the Equinoctial, which goes in the midst of the Zodiacke circle. The cause of the rest, which we wonder at, is in the figure of the very earth, which together with the water is by the same arguments knowne to be like a globe: for so doubtlesse it commeth to passe, that with vs the stars about the North pole neuer go downe, and those contrariwise about the Meridian neuer rise. And againe, these here be not seene of them, by reason that the globe of the earth swelleth vp in the midst between. Again, Trogloditine and Egypt confining next vpon it, neuer set eye vpon the North pole stars, neither hath Italy a sight of Canopus, named also Berenices haire. Likewise another, which vnder the Empire of *Augustus* men firamed *Casarius Thronon*: yet be they stars there of speciall marke. And so evidently bendeth the top of the earth in the rising, that Canopus at Alexandria seemeth to the beholders cleuate aboue the earth almost one fourth part of a signe: but if a man looke from Rhodes, the same appeareth after a sort to touch the verie horizon: and in Pontus, where the eleuation of the North pole is highest, not seene at all: yea, and this same pole at Rhodes is hidden, but most in Alexandria. In Arabia all hid it is at the first watch of the night in Nouember, but at the second it sheweth. In Merce, at Midsummer in the evening it appeareth for a while; but some few daies before the rising of *Arcturus* seene it is with the very dawning of the day. Sailors by their voiaiges finde out and know these stars most of any other, by reason that some seas are opposite vnto some stars; but other lie flat and incline forward to other: for that also those pole stars appeare suddenly, and rising out of the sea, which lay hidden before vnder the winding compass as it were of a ball. For the heauen riseth not aloft in this higher pole, as some men haue giuen out; else should these stars be seen in euery place: both those that vnto the next Sailors are supposed to be higher, the same seeme to them as farre off drowned in the sea. And like as this North pole seemeth to be aloft vnto those that are situate directly vnder it; for them that be gone so far as the other deuexitie or fall of the earth, those aboue-said starres rise vp aloft there, whiles they decline downward which here were mounted on high. Which thing could not possibly fall out but in the figure of

A of a ball. And hereupon it is that the inhabitants of the East perceiue not the eclipses of Sun or Moone in the evening, no more than those that dwell West in the morning: but those that be at noone in the South they see very oft. At what time *Alexander* the great won that famous victorie at Arbela, the Moone by report was eclipsed at the second houre of the night; but at the very same time in Sicily she arose. The eclipse of the Sun, which chanced before the Calends of May, when as *Vipsianus* and *Fomcius* were Consuls (being not many yeares past) was seene in Campania, betwene the 7 and 8 houres of the day: but *Corbulo*, a General Commander then in Armenia, made report, that it was seene there betwene the tenth and 11 houres of the same day; by reason that the compass of the globe discouereth and hides some things to some, and other to others. But if the earth were plaine and leuell, all things should appeare at once to all men, for neither should one night be longer than another, ne yet should the day of 12 houres appeare euen and equal to any, but to those that are seated in the mids of the earth, which now in all parts agree and accord together alike.

CHAP. LXXI.

¶ What is the reason of the day light vpon earth.

AND hence it commeth, that it is neither night nor day at one time in all parts of the world, by reason that the opposition of the globe brings night, and the round compass or circuit thereof discouereth the day. This is knowne by many experiments. In Africk and Spaine there were raised by *Hamilcar* high watch-towers; and in Asia for the same feare of rousers and pyrats, the like helpe of beacons was erected; wherein it was noted oft times, that the fires giuing warning afore-hand (which were kindled at the sixth houre of the day) were defiered by them that were farthest off in Asia at the third houre of the night. *Philonides* the currior or Post of the same *Alexander* aboue named, dispatched in 9 houres of the day 1200 stadia, euen as far as from Sicyone to Elis: and from thence againe (albeit he went downe hill all the way) he returned oftentimes, but not before the third houre of the night. The cause was, for that he had the Sun with him in his first setting out to Elis, and in his returne backe to Sicyone he went full against it, met with it, and ere he came home ouerpassed it, leaving it in the West behind going from him. Which is the reason also, that they who by day light saile westward in the shortest day of the yeare, rid more way than those who saile all night long at the same time, for that the other do accompany the Sun.

CHAP. LXXII.

¶ The Gnomonick art of the same matter: as also of the first Diall.

ALso the instruments seruing for the houres, as Quadrants and Dials, will not serue for all places, but in euery 300 stadia, or 500 at the farthest, the shadowes that the Sun casteth change; and therefore the shadow of the style in the Diall, called the Gnomon, in Egypt at noone tide in the Equinoctial day is little more in length than halfe the Gnomon. But in the city of Rome the shadow wanteth the ninth part of the Gnomon. In the towne Ancona it is longer than it is in a 35 part. But in Venice at the same time and houre the shadow and the Gnomon be all one.

CHAP. LXXIII.

¶ Where and when there be no shadowes at all.

IN like manner they say, that in the towne Syene (which is aboue Alexandria 50 stadia) at noone tide in the midst of Sommer there is no shadow at all: and for further experiment thereof, let a pit be sunke in the ground and it will be light all ouer in euery corner. Whereby it appeareth, that the Sun then is iust and directly ouer that place, as the very Zenith thereof. Which also at the same time hapneth in India aboue the riuer Hypasis, as *Onesicritus* hath set downe in writing. Yea and it is for certain knowen, that in Berenicea a city of the Troglodites, and from thence 480 stadia in the same countrey, at the towne of Ptolemais (which was built at the first vpon the very banke of the Red sea, for the pleasure of chafing and hunting of

of Elephants) the selfe same is to be seen 45 daies before the Summer Sunsted, and as long af-
ter, and that for 90 daies space all shadowes are cast into the South. Again, in the Isle Merce,
the capital place of the *Æthiopian* nation, inhabited 5000 *stadia* from Syene vpon the River
Nilus, twice in the yeare the shadowes are gon, and none at all seen; to wit, when the Sun is
in the 18 degree of *Taurus*, and the 14 of *Leo*. In the country of the *Oretes* within India there
is a mountaine named *Maleus*, neere which the shadowes in Summer are cast into the South,
and in Winter into the North. There for 15 nights and no more is the star *Charles-wain* neere
the pole to be seen. In the same India at *Parales* (a most famous and frequented port) the Sun
ariseeth on the right hand, and all shadowes fall to the South, Whiles *Alexander* made abode
there, *Onesicritus* a captaine of his wrot, that it was obserued there, that the North star was seen
the first part only of the night: also in what places of India there were no shadowes, there the
North star appeared not: and that those quarters were called *Asias*, (i. without shadow) nei-
ther keepe they any reckoning of houres there.

CHAP. LXXIV.

¶ Where twice in the yeare the shadowes go contrarie waies.

B Vt throughout all *Trogiliditine*, *Cratobenes* hath written, that the shadowes two times in
the yeare for 45 daies fall contrarie waies.

CHAP. LXXV.

¶ Where the day is longest, and where shortest.

IT comes thus to passe, that by the variable increment of the day light, the longest day in
Merce doth comprehend 12 Equinoctial houres, and 8 parts of one houre aboue; but in *A-*
lexandria 14, in *Italy* 15, in *Britaine* 17: where in Sommer time the nights being light
and short, by infallible experience shew that which reason forceth to beleue; namely, that at
Midsummer time, as the Sun maketh his approach neere vnto the pole of the world, the places
of the earth lying vnderneath hath day continually for six moneths, and contrariwise night,
when the Sun is remote as far as *Brama*. The which *Pythias* of *Massiles* hath written of *Thule*,
an Island distant Northward from *Britaine* six daies sailing. Yea, and some affirme the same
of *Mona*, an Island distant from *Camalodunum*, a towne of *Britaine*, about 200 miles.

CHAP. LXXVI. ¶ Of Dials and Quadrants.

THis cunning and skill of shadowes, named *Gnomonice*, *Anaximines* the Milesian, the disci-
ple of *Anaximander* aboue named, invented: and hee was the first also that shewed in
Lacedemon the Horologe or Dial which they call *Sciotericon*.

CHAP. LXXVII. ¶ How the dayes are obserued.

THe very day it selfe men haue after diuers manners obserued. The *Babylonians* count for
day all the time betwene two Sun-risings: the *Athenians*, betwene the settings. The
Vmbrians from noone to noone. But all the common sort euery where, from day light
vntill it be darke. The *Roman Priests*, and those that haue defined and set out a ciuill day, like-
wise the *Egyptians* and *Hipparchus*, from midnight to midnight. That the spaces or lights are
greater or lesse betwixt Sun risings, neere the Sunsteds, than the equinoctials, it appeareth by
this, that the position of the *Zodiacke* about the middle parts thereof is more oblique and croo-
ked, but toward the Sunsted more streight and direct.

CHAP. LXXVIII.

¶ The reason of the varietie and difference of sundry Countries and Nations.

HErunto we must ioine such things as are linked to celestiaall causes. For doubtlesse it is,
that the *Æthiopians* by reason of the Sunnes vicinitie are scorched and tanned with
the heate thereof, like to them that be adust and burnt, hauing their beards and bush
of haire curled. Also, that in the contrarie *Clime* of the world to it, in the frozen and icie re-
gions

A gions the people haue white skins, haire growing long downeward, and yellow; but are fierce
and cruell by reason of the rigorous cold aire: howbeit the one as well as the other in this mu-
tabilitie are dull and grosse, and the very legs do argue the temperature: for in the *Æthiopians*
the iuice or bloud is drawne vpward againe by the naturall heate. But among the nations *Septen-*
trionall the same is driuen to the inferior parts, by reason of moisture apt to fall downward.
Here breed noisome and hurtfull wilde beasts; but there be ingendered creatures of sundry and
diuers shapes, especially birds. Tall they are of bodily stature, as well in one part as the other;
in the hot regions by the occasional motion of fire: in the other by the moist nourishment.
But in the midst of the earth there is an wholesome mixture from both sides: the whole *Tract*
is fertill and fruitfull for all things, the habit of mens bodies of a mean and indifferent consti-
tution, the colour also shewing a great temperature. The fashions and manners of the people
are ciuill and gentle, their fences cleare and lightsome, their wits pregnant and capable of all
things within the compasse of Nature: they also beare soueraigne rule, and sway empires and
monarchies, which those vttermoost nations neuer had. Yet true it is, that euen they who are out
of the temperate Zones may not abide to be subiect, nor accommodate themselves to these:
for such is their sauage and brutish nature that it vrgeth them to liue solitarie by themselves.

CHAP. LXXIX.

¶ Of Earthquakes.

THe *Babylonians* were of this opinion, that earthquakes and gaping chinks, and all other
accidents of that nature are occasioned by the power and influence of the planets, but of
those three only to which they attribute lightnings: and by this means, namely as they
keepe their course with the Sun, or meet with him; and especially when this concurrence is a-
bout the quadratures of the heauen. And surely if it be true which is reported of *Anaximander*,
the Milesian naturall Philosopher, his prefrence and foreknowledge of things was excellent,
and worthy of immortalitie; who, as it is said, forewarned the *Lacedemonians* to looke well to
their city and dwelling houses, for that there was an earthquake toward: which hapned accord-
ingly, when not only their whole city was shaken, and fell downe, but also a great part of the
mountain *Taygetus*, which bare out like to the poupe of a ship, broken as it were from the rest,
came down too, wholly couering the foresaid ruines. There is reported another shrewd guesse
of *Pherecydes*, who was *Pythagoras* his master, and the same likewise diuine and propheticall: he
by drawing water out of a pit both foresaw and also foretold an earthquake there. Which if
they be true, how far off I pray you may such men seeme to be from God, euen while they liue
here on earth. But as for these things verily, I leaue it free for every man to weigh and deeme
of them according to their owne iudgement, and for mine owne part I suppose, that without
all doubt the windes are the cause thereof. For neuer beginneth the earth to quake but when
the sea is still, and the weather so calme withall, that the birds in their flying cannot moue and
hang in the aire, by reason that all the spirit and winde which should beare them vp is with-
drawne from them: ne yet at any time, but after the windes are laid, namely when the blast is
pent and hidden within the veines and hollow caues of the earth. Neither is this shaking in
the earth any other thing than is thunder in the cloud; nor the gaping chinke thereof ought
else but like the cleft whereout the lightning breaketh, when the spirit inclosed within *Rug-*
leth and stirreth to go forth at libertie.

CHAP. LXXX.

¶ Of the gaping chinks of the earth.

After many and sundry sorts the earth therefore is shaken, and thereupon ensue wondrous
effects: in one place the walls of cities are laid along: in another they be swallowed vp
in a deepe and wide chawne: here are cast vp mighty heaps of earth; there are let out Ri-
uers of water, yea and sometimes fire doth breathe forth, and hot springs issue abroad in another
place the course and channell of riuers is turned cleane away and forced backward. There goeth
before and commeth with it a terrible noise: one while a rumbling more like the lowing
and

and bellowing of beasts: otherwhiles it resembles a mans voice, or else the clattering and rustling of armor and weapons, beating one vpon another according to the qualitie of the matter that catcheth and receiueth the noise, or the fashion either of the hollow cranes within, or the cranny by which it passeth, whiles in a narrow way it taketh on with a more slender and whistling noise: and the same keepeth an hoarse din in winding and crooked caues, rebounding againe in hard passages, roaring in moist places, wauiing and floting in standing waters, boiling and chafing against solid things. And therefore a noise is often heard without any earthquake, and neuer at any time shaketh it simply after one and the same manner, but trembles and waggeth to and fro. As for the gaping chink, sometimes it remaineth wide open, and sheweth what it hath swallowed vp; otherwhiles it closeth vp the mouth, and hideth all, and the earth is knit together so againe, as there remaine no marks and tokens to be seene: notwithstanding many times it hath deuoured cities, and drawne into it a whole tract of ground and fields. Sea coasts and maritime regions most of all other feeble earthquakes. Neither are the hilly countries without this calamitie: for I my selfe haue known for certain, that the Alps and Apennine haue often trembled. In the Autumne also and Spring there happen more earthquakes than at other times, like as lightnings. And hereof it is that France and Egypt least of all other are shaken: for that in Egypt the continuall Sommer, and in France the hard Winter, is against it. In like manner, earthquakes are more rife in the night than in the day time: but the greatest vs to be in the morning and euening. Toward day light there be many; and if by day, it is usually about noon. They fortune also to be when the Sun and Moone are eclipsed, because then all tempests are asleepe and laid to rest. But especially, when after much raine there followes a great time of heate, or after heate store of raine.

CHAP. LXXX.

¶ Signs of Earthquake comming.

Sailors also haue a certaine foreknowledge thereof, and guesse not doubtfully at it, hamely when the waues swell suddenly without any gale of wind, or when in the ship they are thocked with billowes shaking vnder them: then are the things seen to quake which stand in the ship, as well as those in houses, and with a rustling noise giue warning before-hand. The foules likewise of the aire sit not quietly without feare. In the sky also there is signe thereof; for there goeth before an earthquake, either in day time, or soon after the Sun is gon downe, a thin streake or line as it were of a cloud, lying out in a great length. Moreover, the water in wells and pits is more thicke and troubled than ordinary, casting out a sinking sent.

CHAP. LXXXij.

¶ Remedies or helps against Earthquakes toward.

But a remedie there is for the same, such as vaults and holes in many places do yeeld: for they vent and breathe out the wind that was conceiued there before: a thing noted in certain townes, which by reason they stand hollow, and haue many sinks and vaults digged to conuey away their filth, are lesse shaken: yea, and in the same townes, those parts which be pendant be the safer: as is well seen in Naples, where that quarter thereof which is folliid and not hollow is subiect to such casualties. And in houses the arches are most safe, the angles also of walls, yea, and those posts which in shaking will jog to and fro euery way. Moreover, walls made of brick or earth take lesse harme when they be shaken in an earthquake. And great difference there is in the very kinde and manner of earthquakes, for the motion is diuers: the safest is, when houses as they rocke keep a trembling and warbling noise: also when the earth seemeth to swell vp in rising, and again to settle down and sink with an alternatiue motion. Harmlesse it is also when houses run on end together by a contrary stroke, and butt or jurr one against another; for the one moving withstandeth the other. The bending downward in manner of wauiing, and a certain rolling like to surging billowes is it that is so dangerous, and doth all the mischief: or when the whole motion beareth and forceth it selfe to one side. These quakings or tremblings of the earth giue ouer when the winde is once vented out: but if they continue still, then they cease not vntill forty daies end, yea, and many times it is longer ere they stay, for some of them haue lasted the space of a year or two.

CHAP.

¶ Monstrous Earthquakes seene neuer but once.

Here hapned once (which I found in the books of the Tuscanes learning) within the territorie of Modena, whiles *L. Marius* and *S. Iulius* were Consuls, a great strange wonder of the earth; for two hills encountered together, charging as it were, and with violence assaulting one another, yea and retrying againe with a most mighty noise. It fell out in the day time, and between them there issued flaming fire and smoke mounting vp into the sky, while a great number of Roman Gentlemen (from the highway *Aemylia*) and a multitude of seruants and passengers stood and beheld it. With this conflict and running of them together all the villages vpon them were dashed and broken to pieces: very much cattell that was within died therewith. And this hapned the year before the war of our Associates: which I doubt whether it were not more pernicious to the whole land of Italy, than the ciuill wars. It was no lesse monstrous a wonder that was knowne also in our age, in the very last year of *Nero* the Emperour (as we haue shewed in his acts) when meadows and oliue rowes (notwithstanding the great publike port way lay betwene) passed ouerthwart one into anothers place, in the Marrucine territorie, within the lands of *Vellius Marcellus* a gentleman of Rome, Procurator vnder *Nero* in his affaires.

CHAP. LXXXIV.

¶ Wonders of Earthquakes.

Here happen together with earthquakes deluges also and inundations of the sea, being infused and entering into the earth with the same aire and wind, or else receiued into the hollow receptacle as it setteth down. The greatest earthquake in mans memory was that which chanced during the empire of *Tiberius Caesar*, when twelue cities of Asia were laid leuell in one night. But the earthquakes came thickest in the Punick war, when in one year were reported to be in Rome 57. In which year verily, when the Carthaginians and Romans fought a battell at *Thrasymenus* lake, neither of both armies tooke notice of a great earthquake. Neither is this a simple euill thing, nor the danger consisteth only in the very earthquake, and no more: but that which it portendeth is as bad or worse. Neuer abode the city of Rome any earthquake, but it gaue warning thereof before hand of some strange accident and unhappie euent following.

CHAP. LXXXV.

¶ In what places the seas haue gone backe.

The same cause is to be rendred of some new hill or piece of ground not seen before; when as the said winde within the earth, able to huffe vp the ground, was not powerful enough to brake forth and make issue. For, firme land groweth not only by that which Riuer bring in (as the Isles *Echinades*, which were heaped and raised vp by the riuer *Achelous*; and by *Nilus* the greater part of Egypt, into which, if wee belecue *Homer*, from the Island *Pharus* there was a cut by sea of a day and a nights sailing) but also by the retiring and going backe of the sea, as the same poet hath written of the *Circiae*. The like (by report) hapned both in the bay of *Ambracia* for ten miles space, and also in that of the Athenians, for five miles, nere *Piræum*: also at *Ephesus*, where sometime the sea beate vpon the temple of *Diana*. And verily, if we giue care to *Herodotus*, it was all a sea from about *Mempbis* to the *Ethyopian* hills: and likewise from the plaines of Arabia. It was sea also about *Ilium*, and the flat of *Teuthrania*; and all that Ieuell whereas the riuer *Mæander* now runneth by goodly meadows.

CHAP. LXXXVI.

¶ The reason of Islands that newly appeare out of the sea.

Here be lands also that put forth after another manner, and all at once shew on a sudden in some sea; as if Nature cried quittance with her selfe, and made euen, paying one for another, namely by giuing againe that in one place, which those chawnes and gaping gulfs tooke away in another.

¶ *What Islands haue sprung up, and when.*

THese famous Islands long since, to wit, Delos and Rhodes, are recorded to haue growne out of the sea: and afterwards others that were lesse, namely Anaphe beyond Melos, and Nea, betwene Lemnus and Hellepont. Alone also, betwene Lebedus and Teos. Thera likewise, and Therafia, among the Cyclades, which shewed in the fourth yere of the 135 Olympias. Moreover, among the same Isles 130 yeres after, Hiera, which is the same that Automate. And two furlongs from it, after 110 yeres, Thira, euen in our time, vpon the 8 day before the Ides of Iuly, when *M. Iunius Syllanus* and *L. Balbus* were Consuls.

¶ *What Lands the Seas haue broken in betwene.*

EVEN within our kenning, neere to Italy, betwene the isles *Æoliæ*. In like maner neer Creta there was one shewed it selfe with hot fountaines out of the sea, for a mile and halfe; and another in the 3 yere of the 143 Olympias, within the Tuscan gulf, this burned with a violent winde. Recorded it is also, that when a great multitude of fishes flored ebbe about it, those persons died presently that did feed thereof. So they say that in the Campaine gulf the *Pitheculæ* Islands appeared. And soon after, the hill *Epops* in them (at what time as suddenly there burst forth a flaming fire out of it) was laid leuell with the plain champion. Within the same also there was a town swallowed vp by the sea: and in one earthquake there appeared a standing poole; but in another, by the fall and tumbling downe of certain hills, grew the Island *Prochyta*. For after this maner also Nature hath made Islands; thus she di-ioyned Sicily from Italy, Cyprus from Syria, Eubœa from *Bæotia*, *Atalante* and *Macris* from Eubœa, *Besbycus* from *Bithynia*, *Leucoftia* from the promontorie and cape of the *Syrenes*.

¶ *What Islands came to ioine vnto the Maines.*

AGaine, these hath taken Islands from the sea, and ioyned them to the firme land; namely, *Antissa* to *Lesbos*, *Zephyria* to *Halicarnassus*, *Aethusa* to *Myndus*, *Dromiscos* and *Pern* to *Miletus*, and *Narthecusa* to the promontorie *Parthenius*. *Hybanda*, sometime an Isle of *Ionia*, is now distant from the sea 200 stadia. As for *Syrie*, *Ephefus* hath it now in the midland parts far from the sea. So *Magnesia* neighbouring to it, hath *Deraftis* and *Sophonias*. As for *Epidaurus* and *Oricum*, they are no more Islands at this day.

¶ *What Lands haue been turned wholly into sea.*

NATURE hath altogether taken away certaine lands: in the first place, whereas now the sea *Atlanticum* is, was sometime the continent for a mighty space of ground, as *Plato* saith. Likewise in our Mediterranean sea, all men may see at this day how much hath bene drowned vp, to wit, *Acarnania* by the inward gulf of *Ambracia*, *Achaia* within that of *Corinth*, *Europ* and *Asia* within *Propontis* and *Pontus*.ouer and besides, the sea hath broken through *Leucas*, *Antirrhium*, *Hellepont*, and the two *Bosphori*.

¶ *What Lands haue swallowed up themselves.*

AND now to passe ouer armes of the sea and lakes; the very earth hath deuoured and buried her selfe: to wit, that most high hill *Cybotus*, with the towne *Curites*; *Sipylos* in *Magnesia*; and in the same place before time the most noble city called *Tantalus*; the territories of *Galanis* and *Gamale* in *Phœnice*, together with the very cities. *Phogium* also, a passing high hill in *Ethiopia*, as if the very stronds and continent were not to be trusted, but they also must worke hurt and mischief.

¶ *What Cities haue been drowned with the sea.*

THE sea *Pontus* hath ouerwhelmed *Pyrria* and *Antyssa* about *Mæotis*, *Elice* and *Bura* in the gulf of *Corinth*; whereof the marks and tokens are to be seene in the Deep. Out of the Island *Cea* more than 30 miles of ground was lost suddenly at once, with many men. In *Sicily* also the sea came in and bare away halfe the city *Thindaris*, and all that *Italy* nurfeth betwene it and *Sicily*. The like it did in *Bæotia* and *Eleufina*.

¶ *Of the strange wonders of the Land.*

FOR let vs speake no more of Earthquakes, and what fouer else of that kind, as of graues and sepulchres of cities buried, and extant to be seen; but discourse we rather of the wonders, than the mischiefes wrought by Nature in the earth. And surely the story of celestiall things was not more hard to be declared: the wealth is such of metalls and mines, in such varietie, so rich, so fruitfull, rising still one vnder another for so many ages, notwithstanding daily there is so much wasted and consumed throughout the world, with fires, ruines, shipwrecks, wars, and fraudulent practices: yea and so much spent in ryot and superfluous vanities, that it is infinite: yet see how many sorts of gemmes there be still, so painted and set out with colors? in precious stones what varieties of sundry colours, and how bespotted are they: and amongst them behold the brightnesse and white hue of some, excluding all else but only light! The vertue and power of medicinable fountaines: the wonderfull burning so many hundred yeres together of fire issuing forth in so many places: the deadly dampes and exhalations in some places, either sent out of pits when they are funke, or else from the very native seat and position of the ground, present death in one place to the birds and foules of the aire only (as at *Soracte*, in a quarter neere the city:) in other, to all other liuing creatures save only man; yea and sometimes to men also, as in the territories of *Sinuessa* and *Puteoli*. Which damp holes breaching out a deadly aire some call *Charoneæ Scrobes*, i. *Charons* ditches. Likewise in the *Hirpines* land, that of *Amfancus*, a caue neere vnto the temple of *Nephites*, wherinto as many as enter dy presently. After the like manner at *Hierapolis* in *Asia* there is another such, hurting all that come to it, except the priest of *Cybele*, the great mother of the gods. In other places there be also caues and holes of a prophetical power; by the exhalation of which men are intoxicate and as it were drunken, and so foretell things to come, as at *Delphi* that most renowned Oracle. In all which things what other reason can any mortall man make, than the diuine power of Nature, diffused and spread through all, which breaketh forth at times in sundry sorts.

¶ *Of certaine Lands that alwaies quake.*

SOME parts of the earth there be that shake and tremble vnder mens feet as they go: namely in the territorie of the *Gabians* not far from *Rome*, there be almost two hundred acres of ground which tremble as horsemen ride ouer them. And the like is in the territorie of *Reate*.

¶ *Of Islands neuer sitting and swimming.*

CERTAINES Isles are alwaies waiting and neuer stand still, as in the countrey about *Cæcubum*, *Reate* aboue named, *Mutina*, and *Statonia*. Also in the lake *Vadimonis*, and neer the waters *Cutylia*; there is a shadowie darke groue which is neuer seen in one place a day and night together. Moreover in *Lydia*, the Isles *Calanuca* are not only driuen to & fro by winds, but also many be shroued and thrust with long poles which way a man will: a thing that faued

many a mans life in the war againſt *Mithridates*. There be other little ones alſo in the Riuer *Nymphæus*, called *Saltuares* or *Dancers*, becauſe in any conſort of Muſicians ſinging they ſtir and moue at the ſtroke of the feet, keeping time and meaſure. In the great lake of *Italy*, *Tarquinienſis*, two Iſlands carry about with them groues and woods: one while they are in faſhion three ſquare, another while round, when they cloſe one to the other by the drift of winds, but neuer ſouere ſquare.

CHAP. XCVI.

In what lands it neuer raineth, Alſo many ſtrange wonders and miracles of the earth, and other Elements heaped together.

Paphos hath in it a famous temple of *Venice*, vpon a certain ſloue and altar whereof it neuer raineth. Likewiſe in *Nea* a towne of *Troas* a man ſhall neuer ſee it raine about the Image of *Minerva*. In the ſame alſo the beaſts killed in ſacrifice, if they be left there neuer putrifie. Neere to *Harpafia* a towne in *Aſia* ſtands a rocke of ſtone of a ſtrange and wonderful nature, lay one finger to it and it will ſtir, but thruſt at it with your whole body, it moueth not at all. Within the demy Iſland of the *Tauri*, and city *Paraſinum*, there is a kinde of earth that healeth all wounds: but about *Aſſos* in *Troas* there growes a ſtone, wherewith bodies are conſumed, and therefore is called *Sarcophagus*. Two hills there be neere the riuer *Indus*: the nature of the one is to hold faſt all manner of iron, and of the other not to abide it: wherefore if a mans ſhooe ſole be clouted with hob nailes, in the one of them a man cannot plucke away his foot, and in the other he can take no footing at all. Noted it is, that in *Locri* and *Crotone* was neuer peſtilence knowen, nor any danger by earthquake. And in *Lycia* euer after an earthquake it hath been faire for forty daies. In the territorie of *Arda* if come be ſowed it neuer comes vp. At the altars *Murtia* in the *Veicntian* field, likewiſe in *Tuſcanum* and the wood *Cyminia*, there be certaine places, wherein what ſoeuer is pitched into the ground, can neuer be plucked vp againe. In the *Cruſtumine* countrey all the hay there growing is hurtfull in the ſame place: but being once without, it is good and wholeſome.

CHAP. XCVII.

What is the reaſon of the reciprocall ebbe and flow of the ſeas, and where it is that they keepe no order, and are without reaſon.

OF the nature of waters much hath bin ſaid: but the ſea tide that it ſhould flow and ebbe againe is moſt manuellous of all other: the maner thereof verily is diuers, but the cauſe is in the Sun and Moon. Between two riſings of the Moone they flow twice, and twice go backe, and alwaies in the ſpace of 24 houres. And firſt as he riſeth aloft together with the world the tides ſwell, and anon again, as it goeth from the height of the Meridian line, and enclineth Weſtward, they ſlake again, as ſhe mouth from the Weſt vnder our horizon, and approacheth to the point contrarie to the Meridian, they flow, and then they are receiued backe into the ſea vntill ſhe riſe again: and neuer keepeth the tyde the ſame houre that it did the day before; for it waiteth and attendeth vpon the planet, which greedily draweth with it the ſeas, and euer riſeth to day in ſome other place than it did yesterday. Howbeit the tides keepe iuſt the ſame time between, and hold alwaies fix houres apiece: I meane not of euery day and night, or place indifferently, but only the equinoctial. For in regard of houres the tides of the ſea are vnequall, for ſomuch as by day and night the tydes are more or leſſe one time than another: in the equinoctial only they are euen and alike in all places. A very great argument this is, full of light, to conuince that groſſe and blockiſh conceit of them who are of opinion, that the planets being vnder the earth loſe their power, and that their vertue beginneth when they are aboute only: for they ſhew their effects as well vnder as about the earth, as well as the earth, which worketh in all parts. And plaine it is, that the Moone performeth her operations as well vnder the earth, as when we ſee her viſibly aloft: neither is her courſe any other beneath, than about our horizon. But yet the difference and alteration of the Moone is manifold, and firſt euery ſeuen daies: for whiles ſhe is new the tides be but ſmall vntill the firſt quarter:

for

A For as the groweth bigger, they flow more, but in the full they ſwell and boile moſt of all. From that time they begin again to be more milde; and in the firſt daies of the wain to the ſeuenth, the tides are equal: and againe when ſhe is diuided on the other ſide, and but halfe Moon, they increaſe greater. And in the Coniunction or the change, they are equal to the tides of the full. And euidently it appeareth, that when ſhe is Northerly, and retired higher & farther from the earth, the tides are more gentle, than when ſhe is gone Southerly; for then ſhe worketh neerer hand, and putteth forth her full power. Euery eight yer ſhe alſo, & after the hundreth reuolution of the Moone, the ſeas returne to the beginning of their motions, and to the like encreaſe and growth by reaſon that the augmenteth all things by the yerely courſe of the Sun: for ſomuch as in the two equinoctials they euer ſwel moſt, yet more in that of the Autumne, than the Spring: but nothing to ſpeak of in Mid-winter, & leſſe at Mid-ſummer. And yet theſe things fall not out iuſt in theſe very points and inſtants of the times which I haue named, but ſome few daies after: like as neither in the full nor in the change, but afterward: ne yet preſently ſo ſoon as the heauen either ſheweth vs the Moon in her riſing, or hideth her from vs at her ſetting, or as ſhee declineth from in the middle climat, but later almoſt by two equinoctial houres. For aſmuch as the effect of all influences and operations in the heauen reach not ſo ſoon vnto the earth, as the eleſtial pierceth vp to the heauen: as it appeareth by lightnings, thunders, & thunderbolts. Moreouer, all tides in the main Ocean, ouerſpread, couer, and ouerflow much more within the land, than in other ſeas beſides: either becauſe the whole and vniuerſall element is more courageous than in a part: or for that the open greatneſſe and largeneſſe thereof, ſeeth more effectually the power of the Planet, working forcibly as it doth far and neere at liberty, than when the ſame is pent and reſtrained within thoſe ſtreights. Which is the cauſe that neither lakes nor little riuers ebbe and flow in like manner. *Pythias* of *Maſſiles*, writeth, That about *Brittain* the tide floweth in height 80 cubits. But the more inward and *Mediterranean* narrow ſeas are ſhut vp within the lands, as in an haue. Howbeit in ſome places a more ſpacious liberty there is that yeeldeth to the power and command of the Moon: for we haue many examples and experiments of them that in a calm ſea without wind and ſaile, by a ſtrangewater onely, haue tided from *Italy* to *Vtica* in three daies. But theſe tides and quick motions of the ſea are found to be about the ſhores, more than in the deep maine ſea. For euen ſo in our bodies the extreme and vmoſt parts haue a greater feeling of the beating of arteries, that is to ſay, the vitall ſpirits.

D Yet notwithstanding in many firſts and armes of the ſea, by reaſon of the vnlike riſings of the planets in euery coaſt, the tides are diuers, and diſagreeing in time, but not in reaſon and cauſe, as namely in the *Syrtes*. And yet ſome there be that haue a peculiar nature by themſelues, as the *Firſt Taurominitanum*, which ebbeh and floweth oftner than twice: and that either in *Eubœa*, called likewiſe *Euripus*, which hath ſeuen tides to and fro in a day and a night. And the ſame tide three daies in a moneth ſtandeth ſtill, namely in the 7, 8, and 9 daies of the moons age. At *Gades*, the fountaine next vnto the chappell of *Hercules*, is incloſed about like a well, the which at ſometimes riſeth and falleth as the Ocean doth: at others againe it doth both at contrary ſeaſons. In the ſame place there is another ſpring that keepeth order and time with the motions of the Ocean. On the banke of *Betis* there is a towne, the wells whereof as the tide floweth, do ebbe; and as it ebbeh, do flow: in the mid times betweene, they ſtirre not. Of the ſame qualitie there is one pit in the towne *Hiſpalis*; all the reſt be as others are. And the ſea *Pontus* euermore floweth and runneth out into *Propontis*, but the ſea neuer retireth backe againe within *Pontus*.

CHAP. XCVIII.

Marmels of the Sea.

ALl ſeas are purged and ſcoured in the full Moone; and ſome beſides at certain times, About *Meſſala* and *Nyla*, there is voided vpon the ſhore certaine dregges and filthineſſe like to beaſts dung: whereupon aroſe the fable, That the Sunnes oxen were there kept in ſtall. *Hercun*to addeth *Ariſtole* (for I would not omit willingly any thing that I know) that no liuing creature dieth but in the reflux and ebbe of the ſea. This is obſerued much in the Ocean of *France*, but found only in man by experience, true.

CHAP.

BY which it is truly guesſed and collected, that not in vaine the planet of the Moone is ſuppoſed to be a Spirit: for this is it that ſatiſfieth the earth to her content: (ſhee it is that in her approach and coming toward, filleth bodies full; and in her retire and going away, emptieth them again. And hereupon it is, that with her growth all ſhell-fiſh wax & encreaſe: and thoſe creatures which have no bloud, them moſt of all do ſeele her ſpirit. Alſo the bloud in men doth increaſe or diminith with her light more or leſſe: yea the leaues of trees and the graſſe for fodder (as ſhall be ſaid in conuenient place) do ſeele the influence of her, which euermore the ſame pierceth, and entreth effectually into all things.

CHAP. C.

¶ *Of the power of the Sun, and why the Sea is ſalt.*

THUS by the ſeruent heate of the Sun all moiſture is dried vp: for wee haue been taught, that this Planet is Maſculine, trying and ſucking vp the humidity of all things. Thus the broad and ſpacious ſea hath the taſte of ſalt ſodden into it: or elſe it is, becauſe when the ſweet and thin ſubſtance thereof is ſucked out from it, which the fire power of the Sun moſt eaſily draweth vp, all the tarter and more groſſe parts thereof remaine behinde: and hereupon it is, that the deep water toward the bottom is ſweeter and leſſe brackiſh than that aboue in the top. And ſurely, this is a better and truer reaſon of that vnpleaſant ſmacke and taſte that it hath, than that the ſea ſhould be a ſweat iſſuing out of the earth continually: or, becauſe ouermuch of the dry terrene element is mingled in it without any vapour: or elſe becauſe the nature of the earth infecteth the waters, as it were, with ſome ſtrong medicine. We finde among rare examples and experiments, that there happened a prodigious token to *Demis* tyrant of Sicily, when he was expelled and depoſed from that mightie ſtate of his, and this it was; the ſea water within one day in the haven grew to be ſweet and ſweet.

CHAP. CI.

¶ *In like manner of the Moones Nature*

ON the contrary, they ſay that the Moone is a planet Fœminine, tender & nightly, diſſolueſt humors, draweth the ſame, but carieth them not away. And this appeareth evidently by this prooffe, that the carcaſſes of wilde beaſts ſlain, ſhe putriſieth by her influence, if ſhe ſhine vpon them. When men alſo are found aſleepe, the dull nummedneſſe thereby gathered, ſhe draweth vp into the head: ſhe thaweth yce, and with a moiſtning breath proceeding from her, enlargeth and openeth all things. Thus you ſee how Natures turn it ſerued and ſupplied, and is alwaies ſufficient; whiles ſome ſtars thicken and knit the elements, others againe reſolve the ſame. But as the Sun is fed by the ſalt ſea, ſo the Moone is nourished by the freſh riuer waters.

CHAP. CII.

¶ *Where the Seas is deepeſt.*

FAbianus ſaith, that the ſea where is deepeſt, exceedeth not fifteen furlongs. Others againe do report, that in Pontus the ſea is of an vmeaſurable depth, ouer againſt the Nation of the Coraxians, the place they call *Babeis Ponti*, whereof the bottome could neuer bee found.

CHAP. CIII.

¶ *The wonders of Waters, Fountaines and Riuers.*

OF all wonders this paſſeth, that certain freſh waters hard by the ſea, iſſue & ſpring forth as out of pipes: for the nature of the waters alſo ceaſeth not from ſtrange and miraculous properties. Freſh waters run aloſt the ſea, as being no doubt the lighter: and therefore

Afore the ſea water (which naturally is heavier) vpboldeth and beareth vp whatſoeuer is brought in. Yea and amongſt freſh waters, ſome there be that ſtote and glide ouer others. As for example, in the lake *Fucinus*, the riuer that runneth into it in *Larius*, *Addua*, in *Verbanus*, *Ticinus*, in *Benacus*, *Mincius*, in *Seuinus*, *Ollius*, in *Lemanus* lake, the riuer *Rhodanus*. As for this riuer beyond the Alpes, and the former in Italy, for many a mile as they paſſe, carry forth their owne waters from thence where they abode as ſtrangers, and none other; and the ſame no larger than they brought in with them. This is reported likewiſe of *Orontes*, a riuer in Syria, and of many others. Some riuers againe there be, which vpon an hatred to the ſea, run euener vnder the bottom thereof, as *Arethuſa*, a fountaine in *Syracula*: wherein this is obſerued, that whatſoeuer is caſt into it, cometh vp againe at the riuer *Alpheus*, which running through *Olimpia*, falleth into the ſea ſhore of *Peloponneſus*. There go vnder the ground, and thew aboue the ground againe, *Icyus* in *Aſia*, *Eraſinus* in *Argolica*, *Tygris* in *Meſopotamia*. And at *Athens* what things ſoeuer are drowned in the fountain of *Æſculapius*, be caſt vp againe in *Phalericus*. Alſo in the *Attinate* plaines, the riuer that is buried vnder the earth, twentie miles off appeareth againe. So doth *Timavus* in the territory of *Aquileia*. In *Aſphaltites* (a lake in Iury which ingenders *Bitumen*) nothing will ſinke nor can be drowned, no more than in *Arcthuſa* in the greater Armenia; and the ſame verily, notwithstanding it be full of Nitre, breedeth and feedeth fiſh. In the *Salentines* country, neere the towne *Manduria*, there is a lake brim full: laide out of it as much water as you will, it decreaſeth not; yet augmented, poure in neuer ſo much to it. In a riuer of the *Cicionians*, and in the lake *Velinus* in the *Picene* territory, if wood be throwne in, it is couered ouer with a ſtony barke. Alſo in *Surius*, a riuer of *Colchis*, the like is to be ſeen: in ſomuch, as ye ſhall haue very often the bark that ouergrowes it, as hard as any ſtone. Likewiſe in the riuer *Silarus* beyond *Surrentum*, not twigs onely that are dipped therein, but leaues alſo grow to be ſtones; and yet the water thereof otherwiſe is good and wholeſome to be drunk. In the very paſſage and iſſue of *Reatine* meere, there grows a rocke of ſtone bigger and bigger by the daſhing of the water. Moreouer in the red ſea there be oliue trees and other ſhrubs, that grow vp green. There be alſo very many ſprings, which haue a wonderfull nature, for their boiling heat; yea, and that vpon the very mountains of the Alpes; and in the ſea between Italy and *Ænariæ* in the *Firrh* *Bajanus*, and the riuer *Liris*, and many others. For in diuers and ſundry places ye may draw freſh water out of the ſea, namely about the iſlands *Chelidoniæ* and *Araduſi*; yea and in the Ocean about *Gades*. In the hot waters of the *Padouans* there grow greene herbes: in thoſe of the *Piſanes* there breed frogs; and at *Vetulonij* in *Hetruria*, not far from the ſea, fiſhes alſo are breed. In the territory *Cafinas* there is a riuer called *Scatebra*, which is cold, and in Summer time more abounding and fuller of water than in winter: in it, alſo in *Stymphalis* of *Arcadia*, there breed & come forth of it little water-mice, or ſmall *Limpins*. In *Dodone*, the fountain of *Iupiter* being exceeding chill and cold, ſo as it quencheth and putteth out light torches dipped therein, yet if you hold the ſame neere vnto it when they are extinct and put out, it ſetteth them on fire againe. The ſame ſpring at noon-tide euermore giueth out to boile, and wants water, for which cauſe they call it *Anapanomenos*: anon it begins to riſe vntill it be midnight, and then it hath great abundance; and from that time againe it faints by little and little. In *Illyricum* there is a cold ſpring, ouer which, if ye ſpread any clothes, they catch a fire and burne. The fountain of *Iupiter Hammon* in the day time is cold, all night it is ſeeching hot. In the *Troglodites* country there is a fountain of the Sunne, called the ſweet Spring, about noon it is exceeding cold, anon by little and little it growes to be warme, but at midnight it paſſeth and is offenſiue for heate and bitterneſſe. The head of the *Po*, at noon in Summer giueth out, as it were, and intermits to boile, and is then euer drie. In the Iſland *Tenedus* there is a ſpring, which after the Sommer Sunned euermore from the third houre of the night vnto the ſix, doth ouerflow. And in the iſle *Delos*, the fountain *Snopus*, falleth and riſes after the ſame fort that *Nilus* doth, and together with it. Ouér againſt the riuer *Timavus*, there is a little Iſland within the ſea, hauing hot wells, which ebbe and flow as the tide of the ſea doth, and iuſt therewith. In the territory of the *Pitinates* beyond *Apenninus*, the riuer *Nouanus* at euery mid-summertime ſwelles and runnes ouer the banks, but in mid-winter is cleane dry. In the *Callicane* countrie, the water of the riuer *Clitumnus* makes the oxen and kine white that drinke of it. And in *Bœotia*, the riuer *Melas* maketh ſheepe blacke: *Cephiffus* running out of the ſame lake, cauſeth them to be white; and *Penius* again giues them a black colour; but *Xanthus* neere

vnto Ilium, coloureth them reddish; and hereupon the river tooke that name. In the land of G Pontus there is a river that watereth the plains of Asiae, vpon which those mares that feed, giue blacke milke for the food and sustenance of that nation. In the Reatine territorie there is a fountaine called Nemina: which, according to the springing and issuing forth out of this or that place, signifyeth the change in the price of come and victuals. In the haue of Brindis there is a Well, that yeldeth vnto sailers and sea-fering-men, water, which will neuer corrupt. The water of Linceltis, called Acidula [*z. Soure*] maketh men drunken nolesse than wine. Semblably, in Paphlagonia, and in the territory of Cales. Also in the Ille Andros there is a fountaine neere the temple of Father *Bacchus*, which vpon the Nones of Ianuarie, alwaies runneth with water that tasteth like wine, as *Mulianus* verily beleueth, who was a man that had bene thrice Confull: The name of the spring is Dios Tecnosia. Neere H vnto Nonacris in Arcadia, there is the river Styx, differing from the other Styx neither in smell nor colour: drinke of it once, and it is present death. Also in Berofis (an hill of the Tauri) there be three fountaines, the water wherof whofoeuer drinketh, is sure to die of it, remedlesse, and yet without paine. In the Country of Spaine called Carrinensis, two Springs there bee that runne neere together, the one rejecteth, the other swalloweth vp all things. In the same country there is another water, which sheweth all fishes within it of a golden colour, but if they be once out of that water, they be like to other fishes. In the Cananenian territory, neere to the lake Larius, there is a large and broad Well, which every houre continually, swelleth and fallett downe againe. In the Island Sydonia before Lesbos, an hor fountaine there is that runneth onely in the Spring. The lake Sinnaus in Asia, is infected with the wormewood growing about it, and there of it tasteth. At Colophon in the vault or caue of *Apollonius*, there is a gutter or trench standing full of water: they that drinke of it, shall prophesie and foretell strange things like Oracles, but they liue the shorter time for it. Riues running backward, euen our age hath seen, in the later yerres of Prince *Nero*, as we haue related in the acts of his life. Now, that all Springs are colder in Summer than Winter, who knoweth not? as also these wonderous workes of Nature, That brasie and lead in the masse or lumpes sinke downe and are drowned, but if they be driuen out into thin plates, they flote and swim aloft: and let the weight be all one, yet some things fettle to the bottome, others againe glide about. Moreouer, that heauie burdens and lodes be stirred and remoued with more ease in water. Likewise, that the stone Thyrrus, be it neuer so big, doth swim whole and intire: breake it once into pieces, and it sinketh. As also, that bodies newly dead, fall downe to the bottome of the water, but if they be swollen once, they rise vp againe.ouer and besides, that empty vessels are not so easily drawne forth of the water, as those that be full: that raine water for salt pits is better and more profitable than all other: and that salt cannot be made, vnlesse fresh water be mingled withall: that sea-water is longer before it congeale, but sooner made hot and set a fecthing. That in Winter the sea is hotter, and in Autumne more brackish and salt. And that all seas are made calme and still with oile: and therefore the Diuers vnder the water doe spit and sprinkle it abroad with their mouthes because it dulceth and allaieth the vpleasant nature thereof, and carrieth a light with it. That no snowes fall where the sea is deep. And, whereas all water runneth downward by nature, yet Springs leape vp; euen at the very foot of *Aetna*, which burneth of a light fire so farr forth, as that for fiftie, yea, and an hundred miles, the waulning round bals and flakes of fire cast out sand and ashes.

CHAP. CIIII.

¶ The mannailes of fire and water ioinly together, and of Maltha.

NOW let vs relate some strange wonders of fire also, which is the fourth element of Nature. But first, out of waters. In a cite of Comagene, named Samofatis, there is a pond, yelding forth a kinde of slimie mud (called Maltha) which will burne cleare. When it meeteth with any thing solide and hard, it sticketh to it like glew: also, if it be touched, it followeth them that flee from it. By this meanes the townesmen defended their walls, when *Lucullus* gaue the assault, and his souldiers fried and burned in their owne armours. Cast water vpon it, and yet it will burne. Experience hath taught, That earth onely will quench it.

CHAP.

Plinies Naturall History.

CHAP. CV. ¶ Of Naphtha.

OF the like nature is Naphtha: for so is it called about Babylonia, and in the Austacenes country in Parthia, and it runneth in manner of liquid Bitumen. Great affinitie there is betweene the fire and it; for fire is ready to leape vnto it immediatly, if it be any thing neere it. Thus (they say) *Media* burnt her husbands concubine, by reason that her giuill and annotated therewith, was caught by the fire, after she approached neere to the altars, with purpose to sacrifice.

CHAP. CVI. ¶ Of places continually burning.

BUT amongst the wonderfull mountaines, the hill *Aetna* burneth alwaies in the nights: and for so long continuance of time yeldeth sufficient matter to maintain those fires: in winter it is full of snow, and couereth the ashes cast vp, with frosts. Neither in it alone doth Nature tyrannize and shew her cruelty, threatening as she doth a general consuming of the whole earth by fire. For in Phoselis the hill *Chimera* likewise burneth, and that with a continuall fire night and day. *Ctesias* of Gnidos writeth, that the fire therof is inflamed and set a burning with water, but quenched with earth. In the same Lycia the mountaines *Hephæstij*, being once touched and kindled with a flaming torch, do so burne out, that the very stones of the riues, yea, and the sand in waters, are on fire withall, and the same fire is maintained with raine. They report also, that if a man make a furrow with a staffe that is set on fire by them, there follow gutters as it were of fire. In the Baetrians country, the top of the hill *Cophantus* burneth euery night. Amongst the Medians also, and the Cæstian nation, the same mountaine burneth: but principally in the very confines of Persis. At Susis verily, in a place called the white tower, out of fifteene chimnies or tunnels the fire issueth, and the greatest of them, euen in the day time carrieth fire. There is a plaine about Babylonia, in manner of a fish poole, which for the quantity of an acre of ground burneth likewise. In like sort neere the mountaine *Hesperius* in *Aethyopia*, the fields in the night time do glitter and shine like stars. The like is to be seene in the territorie of the *Megapolitanes*, although the field there within-forth be pleasant, and not burning the boughes and leaues of the thicke groue about it. And neere vnto a warme Spring, the hollow burning furnace called *Crater Nymphae* alwaies portendeth some fearefull misfortunes to the *Apollonians*, the neighbours thereby, as *Theopompus* hath reported. It increaseth with showers of raine, and casteth out Bitumen to be compared with that fountaine or water of Styx that is not to be tasted, otherwise weaker than all Bitumen besides. But who would marvell at these things: in the mids of the sea, *Hiera* one of the *Aetolian* Islands neere to Italy burned together with the sea for certaine daies together, during the time of the allies war, till a solemne embassage of the Senat made expiation therefore. But that which burneth with the greatest fire of all other, is a certaine hill of the *Aethyopians* Thæet *Ochema*, and sendeth out most parching flames in the hottest Sun-shine daies. Lo in many places with sundry fires E Nature burneth the earth.

CHAP. CVII.

¶ Wonders of fires by themselves.

MOREOVER, since the Nature of this onely element of fire is to be so fruitfull, to breed if selfe, & to grow infinitely of the least sparks; what may be thought will be the end of so many funnerall fires of the earth? what a nature is that which feedeth the most greedy voracitie in the whole world without losse of it selfe? Put thereto the infinit number of stars, the mighty great Sun; moreover, the fires in mens bodies, & those that are inbred in some stones; the attrition also of certain woods one against another; yea, and those within clouds, the verie original of lightnings. Surely, it exceedeth all miracles, that any one day should passe, & not all the world be set on a light burning fire, since that the hollow fry glasses alse set opposit against the Sun beams, sooner set things a burning than any other fire. What should I speake of innumerable

merable others, which beindeed little, but yet naturally issuing out in great abundance? In the Promontorie Nymphæum there cometh forth a flaming fire out of a rock, which is set a burning with rain. The like is to be seene also at the waters called Scantiae. But this verily is but feeble when it passeth and remoueth, neither endureth it long in any other matter. An ash there is growing ouer his fiery fountain, and couering it, which notwithstanding is alwaies green. In the territorie of Mutina there riseth vp fire also, vpon certaine set holy daies vnto *Pulcan*. It is found written, That if a cole of fire fall down vpon the arable fields vnder Aricia, the very soile presently is on fire. In the Sabines territorie, as also in the Sidicines, flones if they be fired or greafed, will be set on a light fire. In a towne of the Salantines called Egnatia, if a fire be laid vpon a certaine hallowed stone there, it will immediatly flame out. Vpon the alter of *Iuno Lacinia* standing as it doth in the open aire, the ashes lie vmmoueable and stir not, blow what stormy winds that will on euery side.ouer and besides, there be fires seene suddenly to arise, both in waters and also about the bodies of men. *Valerius Antias* reporteth, That the lake Thrasymenus once burned all ouer: also that *Servo Tullius* in his childehood, as he lay asleepe, had a light fire shone out of his head: likewise, as *L. Marius* made an oration in open audience to the army, after the two *Scipios*, were slain in Spain, and exhorted his soldiers to reuenge their death, his head was on a flaming fire in the same fort. More of this argument, and in better order, will we write soone hereafter. For now we exhibit and shew the maruells of all things huddled and intermingled together. But in the mean while, my mind being passed beyond the interpretari, on of Nature, hasteneth to leade as it were by the hand the minds also of the readers, through out the whole world.

CHAP. CVIII.

¶ The measure of the whole earth in length and breadth.

THIS our part of the earth whereof I speak, siting as it were within the Ocean (as hath bin said) lieth out in length most from the East to the West, that is to say from India to *Hercules* pillars consecrated at Gades: and as mine Author *Artemidorus* thinketh, it containeth 85 hundred, & 78 miles. But according to *Isidorus*, 98 hundred, and 18. *M. Artemidorus* addeth moreover, from Gades within the circuit of the sacred Promontorie, to the Cape Artabrum, where the front and head of Spain beareth out farthest in length 891 miles. This measure runneth two waies. From the riuer Ganges and the mouth thereof, whereas he dischargeth himself into the East Ocean, through India and Parthyene vnto Myriandrum a city of Syria, scituate vpon the gulfes or Firth of Issa, 52 hundred & 15 miles. From thence taking the next voiage to the Island Cyprus, to Patara in Lycia, Rhodes and Asphyataa (Islands lying in the Carpathian sea) to Tanagerus in Laconia, Lilybæum in Sicilie, Calaris in Sardinia, 34 hundred & 50 miles. Then to Gades 14 hundred and 50 miles. Which measures being put all together, make in the whole from the said sea, 85 hundred 78 miles. The other way, which is more certain, lieth most open and plain by land, to wit, from Ganges to the riuer Euphrates 50 hundred miles and 21. From thence to Mazaca in Cappadocia 244 miles, & so forward through Phrygia and Caria, to Ephesus, 400 miles, 98. From Ephesus through the Egean sea to Delos 200 miles. Then to Isthmus 12 miles. From thence partly by land, and partly by the Laconian sea and the gulfes of Corinth, to Patra in Peloponnesus 202 miles and a halfe: so to Leucas 86 miles & a halfe, and as much to Corcyra. Then to Acrocerania 132 miles and a halfe: to Brundisium 86 miles and a halfe: so to Rome 3 hundred miles and 60. Then to the Alpes as far as the village Cincomagus 518 miles. Through France to the Pyrenæan hills, vnto Illiberis 556 miles, to the Ocean and the sea coast of Spaine 332 miles. Then the cut ouer to Gades seven miles and a halfe. Which measure by *Artemidorus* his account, maketh in all 86 hundred 85 miles. Now the bredth of the earth, from the Meridian or South-point, to the North, is collected to be lesse almost by the one halfe, namely, 54 hundred and 62 miles. Whereby it appeareth plainly, how much of the one side heate of fire, and on the other side frozen water hath stolne away. For I am not of minde that the earth goeth no farther than so, for then it should not haue the forme of a globe; but that the places on either side be uninhabitable, and therefore not found out and discovered. This measure runneth from the shore of the Ethyopian Ocean, which now is habited, vnto Meroc, 550 miles. From thence to Alexandria 1200 and 40 miles. So, to Rhodes 583 miles;

A miles; to Gnidus, 84 miles and a halfe; to Cos, 25 miles; to Samus, 100 miles, to Chius, 84 miles; to Mitylene, 65 miles; to Tenedos, 28 miles; to the cape Sigæum, 12 miles and a halfe; to the mouth of Pontus, 312 miles and a halfe; to Carambis the promontorie, 350 miles; to the mouth of Mæotis, 12 miles and a halfe; to the mouth of Tanais, 265 miles: which voiage may be cut shorter (with the vantage of sailing direâly) by 89 miles. From the mouth of Tanais, the most curious Authors haue set downe no measure. *Artemidorus* was of opinion, that all beyond was vnfound and not discovered; confessing, that about Tanais the Sarmatian Nations do inhabit, who lie to the North pole. *Isidorus* hath addeth hereto twelue hundred miles, as far as to Thule: which is a iudgement of his grounded vpon bare guesse and cōiecture. I take it, B that the borders of the Sarmatians are knowne to haue no lesse space of ground than this last mentioned cometh vnto. And otherwise, how much must it be, that would containe such an innumerable company of people shifting their seats euer and anon, as they doe. Whereby I guesse, that the ouer-measure of the clime inhabitable is much greater. For I know certainly, that Germany hath discovered mightie great Islands not long since. And thus much of the length and breadth of the earth, which I thought worth the writing. Now the vniuersall compass and circuit thereof, *Eratosthenes* (a great Clerke verily for all kinde of literature, & in this knowledge aboue all others doubtlesse most cunning, and whom I see of all men approued and allowed) hath set downe to be 252000 stadia. Which measure, by the Romanes account and reckoning, amounteth to 300 hundred and 15 hundred miles. A wonderous bold attempt of his! but yet so exquisitely calculated and contriued by him, that a flame it were not to beleuee him. *Hipparchus*, a wonderful man both for conuincing him, and all his other diligence besides, addeth moreover little lesse than 25000 stadia.

CHAP. CIX.

¶ The Harmonicall measure, and Circumference of the World.

DIONYSIDORUS in another kind would be beleueed: (for I will not beguile you of the greatest Example of Grecian vanitie.) This man was a Melian, famous for his skill in Geometrie: he dyed very aged in his owne country: his neere kinsf-women (who by right were his heires in remainder) solemnized his funerals, & accompanied him to his graue. These women (as they came some few daies after to his sepulchre for to performe some solemne obsequies thereto belonging) by report, found in his monument an Epistle of this *Dionysidorus*, written in his owne name, To them aboue, that is to say, To the liuing: and to this effect, namely, That he had made a step from his sepulchre to the bottome and centre of the earth, and that it was thither 41000 stadia. Neither wanted there Geometricians, who made this interpretation, that he signified that this Epistle was sent from the middle centre of the earth, to which place downward from the vppermost aloft, the way was longest; and the same was iust halfe the diameter of the round globe: whereupon followed this computation, That they pronounced the circuit to be 255000 stadia. Now the Harmonicall proportion, which forceth this vniuersalitie and nature of the World to agree vnto it selfe, addeth vnto this measure 7000 stadia, and so maketh the earth to be the 96000 part of the whole world.



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THE



THE THIRD BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECUNDVS.

The Proeme, or Preface.

Hitherto haue we written of the position and wonders of the Earth, Waters, and Starres: also we haue treated in generall termes of the proportion and measure of the whole world. Now it followeth, to discourse of the parts thereof: albeit this also be iudged an infinite peece of worke, nor lightly can be handled without some reprehension: and yet in no kinde of enterprise pardon is more due; since it is no maruell at all, if he who is borne a mortall man, knoweth not all things belonging to man. And therefore I will not follow one Author more than another, but euerie one as I shall thinke him most true in the description of each part. Forasmuch as this hath been a thing common in manner to them all, namely, to learn or describe the situations of those places most exactly, where themselves were either borne, or whither they had discovered and seene: and therefore neither will I blame nor reprove any man. The bare names of places shall be simply set downe in this my Geographie, and that with as great breuitie as I can: the excellency, as also the causes and occasions thereof, shall be deferred to their severall and particular treatises: for now the question is as touching the whole earth in generallitie, which mine intent is to represent vnto your eyes: and therefore I would haue things thus to be taken, as if the names of countries were put downe naked, and void of renomme and fame, and such onely as they were in the beginning, before any alts there done: and as if they had indeed an indument of names, but respectiue onely to the World and vniuersall Nature of all.

Now the whole globe of the earth is diuided into three parts, Europe, Asia, and Africa. The beginning we take from the West and the Firth of Gades, even whercas the Atlanticke Ocean breaking in, is spread into the Inland and Mediterranean Seas. Make your entrance there, I meane at the Streights of Gibraltar, and then Africa is on the right hand, Europe on the left, and Asia before you lye betwene. The bounds confining these, are the riuers Tanais and Nilus. The mouth of the Ocean at Gades (whereof I spake before) lyeth out in length 15 miles, and stretcheth forth in breadth but five, from a village in Spaine called Mellaria, to the promontorie of Africke, called the VWhite, as Turannius Graccula born thereby, doth write. T. Lilius, and Nepos Cornelius haue reported, that the breadth thereof where it is narrowest, is seven miles ouer, but ten miles where it is broadest. From so small a mouth (a wonder is to consider) spreadeth the sea so huge and so vast as we see, and withall, so exceeding deepe, as the maruell is no lesse in that regard. For why? in the verie mouth thereof, are to be seen many barres and shallow shelves of white sands (so ebbe is the water) to the great terrour of shippes and sailers passing that way. And therefore many haue called those Streights of Gibraltar, The curie of the Mediterranean Sea. Of both sides of this gulf, nere vnto it, are two mountaines set as frontiers and rampiers to keepe all in: namely, Abila for Africke, Calpe for Europe, the utmost end of Hercules Labours. For which cause, the inhabitants of those parts call them, the two pillars of that God, and doe verily beleue, that by certaine draines and ditches digged within the Continent, the maine Ocean, before excluded, made way and was let in, to make the Mediterranean Seas, where before was firme land: and so by that meanes the very face of the whole earth is cleane altered.

CHAP.

CHAP. I.

¶ Of Europe.



And first, as touching Europe, the nource of that people which is the conqueror of all nations; and besides, of all lands by many degrees most beautifull: which may for right good cause, haue made not the third portion of the earth, but the one halfe (diuiding the whole globe of the earth into two parts): to wit, from the riuier Tanais vnto the Streights of Gades. The Ocean then, at this space abovesaid, entrench into the Atlanticke sea, and with a greedie current drowneth those lands which dread his coming like a tyrant; but where he meeteth with any that are like to resist, those he passeth iust by, and with his winding turns and reaches he catcheth and holloweth the shore continually to gaine ground, making many noukes and creekes euerie where: but in Europe most of all, wherein foure especiall great gulfes are to be seene.

Of which, the first, from Calpe the utmost promontorie (as is abovesaid) of Spaine, windeth and turneth with an exceeding great compasse, to Locri, and as far as the promontorie Bruttium. Within it lieth the first land of all others, Spaine; that part I meane, which in regard of vs at Rome, is the farther off, and is named also Boetia. And anon from the Firth Virgitanus, the hither part, otherwise called Tarraconensis, as far as to the hills Pyrenæi. That farther part of larger Spaine is diuided into two prouinces in the length thereof: for on the North side of Boetia, lyeth Lusitania afront, diuided from it by the riuier Ana.

This riuier beginneth in the territorie Laminitanus of the hither Spaine, one while spreading out it selfe into broad pooles or meeres, otherwhiles gathering into narrow brookes: or altogether hidden vnder the ground, and taking pleasure to rise vp oftentimes in many places, falleth into the Spanish Atlanticke Ocean. But the part named Tarraconensis, lying fast vpon Pyrenæus, & shooting along all the side thereof, and withal, stretching out it selfe ouerthwart & crosse from the Iberian sea to the Gauls Ocean, is separated from Boetia & Lusitania, by the mountaine Salarius, and the cliffes of the Orcanes, Carpetanes, and Asturians.

Boetia, so called of the riuier Boetis, that cutteth in the mids, out-goeth all other prouinces for rich furniture, and a certaine plentifull trimnesse and peculiar beautie by it selfe. There are held foure solemne Iudiciall great assizes and Parliaments, according to foure Counties or shires; to wit, the Gaditane, Cordubian, Astigitane, and Hispalensis. Townes in it are all in number 175; whereof there are colonies eight, free Borroughes, eight; townes induect with the ancient franchises of Latium 23; with freedome six; Confederate, foure; Tributarie paying custome, 120. Of which, those that be worth the naming, and are more current in the Latine tongue, be these vnderwritten: to wit, on the riuier Ana side and the Ocean coast, the citie Osonoba, furnamed also Lusturia. There run between, Luxia and Vrium, two riuers. The hills Ariani, the riuier Boetis; the shore Corenew with a winding creek.ouer against which, lyeth Gades, to be spoken of among the Islands. The cape or head of Tunn; the haven Bescippo, Townes, Belon, and Mellaria. The Streights or Firth out of the Atlanticke Sea. Carteia, called Terrestis by the Greekes; and the mountaine Calpe. Then, within the firm land, the towne Barbefula, with the riuier. Item, the towne Salbula, Sucl-Malachia vpon the riuier of our Confederates. Next to these, Menoba with a riuier: Sexi-fimum, furnamed Iulium: Schlaubina, Abdera, and Murgis the frontier towne of Boetia. All that whole coast, M. Agrippa thought to haue had their beginning and descent from the Carthaginians. From Ana, there lyeth against the Atlanticke Ocean, the region of the Bastuli and the Turduli.

M. Porro saith, that there entered into all parts of Spaine, the Herians, Persians, Phænicians, Celtes, and Carthaginians or Africans: for *Lusus*, the companion of Father *Libor* or *Luba* (which signifieth the frantick furie of those that raged with him) gaue the name to Lusitania; and *Pan* was the gouernour of it all. But those things which are reported of *Hercules* and *Pyrene*, or of *Saturne*, I thinke to be as vaine and fabulous tales as any other. As for Boetis, in the Tarraconensian prouince, rising, not as some haue said, at the towne Metela, but in the chafe or Forrest Tugrenis, which the riuier Tader watereth, as it doth the Carthaginian pale also at Ilorcum, shunneth the funerall fire and sepulchre of *Scipio*: and turning into the West, maketh toward

F 2

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the Atlantick Ocean, adopting the prouince and giuing it his owne name, is at first but small, G howbeit receiueh many other riuers into it, from which it taketh away both their name and their waters. And first being entred from Ossigintania into Boetia, running gently with a pleasant channel, hath many townes both on the left hand & the right, seated vpon it. The most famous and populous between it & the sea coast in the Mediterranean part thereof, are Segeda, surnamed Anguria: Iulia, which is also called Fidentia: Virgo, otherwise Alba, Ebura, otherwise Cereolis: Illiberi, which is also Liberini: Ilipua, named likewise Laus. Artigi or Iulienfes: Vesci the fame that Faventia: Singilia, Hegua, Atrialduni, Agla the lesse, Babro, Castra Vinaria, Epifibrum, Hipponoua, Illurco, Ofca, Escua, Succubo, Nuditatum, Tucci the old, all which belong to Bastitania, lying toward the sea. But within the countie or iurisdiction of Corduba, about the very riuier standeth the towne Ossigi, which is surnamed Laconicum: Illiurgi called also Forum Iulium. Ipaurgi the fame that Triumphale, Sitia: & 14 miles within the country Obulco, which is named Pontificense. And anon (you shall see) Ripepora, a town of the confederate, Sacili, Martialum, Onoba. And on the right hand Corduba, surnamed Colonia Patricia: and then beginneth Boetis to be nauigable, & not before. As you go lower, you shal find townes Carbulco, Decuma, the riuier Singulis, falling into the same side of Boetis. The townes of the country Hipalensis be these, Celtica, Axariata, Arucci, Menoba, Ilipa, surnamed Italica. And on the left hand, Hipalis a colony, surnamed likewise Romulensis. But right forward opposit to it, the town Ofset, which hath a name besides, Iulia Constantia: Vergentum, which also is the fame that Iulij Genitor, Hippo Caurasium, the riuier Menoba, which also entreth into Boetis on the right side. But within the washes & downs of Boetis there is the town Nebrissa surnamed Veneria & Colobona: also colonies, viz. Alay which is called Regia: & in the mid-land part, Asido, which is the fame that Caesariana. The riuier Singulus breaking into Boetis in that order as I haue said, runneth hard by the Colony Afigintania, surnamed also Augusta Firma, & so forward it is nauigable. The rest of the Colonies belonging to this Countie are free, & enioy immunitie of tribute, namely, Tucci, which is surnamed Augusta Gemella: Itucci, the fame that Virtus Iulia, Attubi all one with Claretas Iulij, exco Ilencie of Iulius. Vrio, which is Genua Vrbanozum: & among these, Munda, which together with Pompey's for, was taken. Free townes, Afigi the old, & Ostippon: tributarie, Caller, Calucula, Castra Gemina, Ilipula the lesse Merucra, Sacrana, Obulcula, Oningis. As a man commeth from the coast, neere to the riuier Menoba, which also will beare a ship, there dwel not far off the Alontigicili, & Alostigi. But all that region which without the forenamed, reacheth from Boetis to the riuier Ana, is called Beturia: diuided into two parts, & as many sorts of people: to wit, the Celtici, who meet with Lusitania, and are within the diuision or country Hipalensis: and the Turduli, who inhabit fast vpon Lusitania and Tarraconensis: and they owe seruice to the County court of Corduba: as for the Celtici, manifest it is, that they came from the Celtiberians out of Lusitania, as appeareth by their religion, tongue, & names of townes, which in Betica are distinguished by their additions or surnames, to wit, Seria, which is called Fama Iulia: Vculunium, which now is Curiga: Laconimurgi, Constantia Iulia, Terrefibus is now Fortunales, & Callenfibus, Emanici. Besides all these, in Celtica Acinippo, Arunda, Arucci, Turobrica, Lastigi, Alpela, Saxona, Scirippo. The other Beturia, which we said contained the Turduli, & belonged to the countie of Corduba, hath townes of no base account, Arfa, Mellaria and Miobrica: and regions or quarters Ofritigi, and Sisapone. Within the Countie of Gades there is of Romane citizens a town called Regia: of Latines there are Laxia, Ylia, Carifa surnamed Aurelia, Yrgia, which is likewise named Castrum Iulium: also, Caesaris Salutarienfis. But tributaries there be these, Besafro, Besippo, Berbesula, Lacippo, Besippo, Caller, Cappagum, Oleastro, Itucci, Brana, Lacibi, Saguntia, Andorissipo. The whole length of it, M. Agrippa hath set down 463 miles, & the bredth 257. But for that the bounds reached forward as far as to Carthage, which cause breedeth oftentimes errors in the taking of the measures, whiles in one place the limits of the prouinces were changed, and in another the paces in iourneying were either more or lesse: also, considering the seas in so long continuance of time haue incroched here vpon the land, and the banks again gotten there of the sea, and beare farther in; also, for that the reaches of the riuers haue either turned crooked or gone streight & direct: ouer and besides, for that some haue begun to take their measure from this place, others from that, and gon diuers waies: it is by these means come to passe, that no twain accord together in one long, as touching their measure & Geographic.

CHAP.

CHAP. II.

¶ The length and breadth of Betica.

THE length of Boetia at this day from the bound of the town Castulo vnto Gades, is 475 miles: and from Murgi the maritime coast or lands end, more by 22 miles. The bredth from the edge or border of Carteia, is 224 miles. And verily, who would beleue, that Agrippa, a man so diligent, and in this worke principally, so curious, did erre, when he purposed to set out a map of the whole world openly to be seene of the whole city, and namely, when Augustus Caesar of happy memorie, ioined with him? For he it was that finished the Porch or gallerie begun by Agrippa's sister, according to his will, appointment, and direction, which contained the

B laid pourtraict.

CHAP. III.

¶ The hither or higher Spaine.

THE old forme of the hither Spaine is somewhat changed, like as of many other prouinces: considering that Pompey the great in his triumphant trophies which he erected in Pyreneus, reftiteth, That 846 townes between the Alps and the marches of the farther or lower Spaine, were subdued by him and brought to obedience. Now, is the whole prouince diuided into 7 counties, the Carthaginian, the Tarraconian, Caesar Augustani, Clunienfis, Asturia, Lucensis, & Bracorum. There are besides Ilands, setting aside which without once naming them, and excepting the cities that are annexed to others, the bare prouince containeth 294 townes. In which there be 12 colonies, townes of Roman citizens thirteene, of old Latines fuenenteen, of allies within the league, one, tributarie, 136. The first in the very frontiers thereof, be the Bafilians: behind them in such order as shall be said, namely, those Inlanders that inhabit within-forth, the Mentefanes, Oretanes, and the Carpetanes vpon the riuier Tagus. Neere to them, the Vaceans, Vectones, Celtiberians, and Arrebaci. The townes next to the marches, Vrci, and Barca laid to Boetia: the country Mauritania, then Deitania: after that Constantia, and new Carthage a colonie. From the promontorie whereof called Saturnes cape, the cut ouer the sea to Caesaria a citie in Mauritania, is of 187 miles: In the residue of that coast is the riuier Taderate: free colonie Illici, of which, a fifth or arme of the sea tooke the name Illicitanus. To it owe seruice and are annexed the Icositanes. Soon after, Lucentum a towne of the Latines. Dranium a tributarie, the riuier Suero, which was sometime the frontier towne of Constantia. The region Edetania, which retireth inward to the Celtiberians, hauing a goodly pleasant poole bordering along the front of it. Valentia, a colonie lying three miles from the sea. The riuier Turium and iust as far from the sea, Saguntum, a towne of Roman citizens, renowned for their fidelitie. The riuier Idubeda, and the region of the Illegoanes. The riuier Hebre, yielding such riches of traffike and commerce, by reason that it is nauigable: which beginneth in the Cantabrian countie, not far from the towne Inlobrica, and holdeth on his course 430 miles: and for 260 of them, euen from the towne Varia, carrieth vessels of merchandise: in regard of which riuier, the Greekes named all Spaine Iberia: the region Cossletania, the riuier Subi, the colonie Tarraco, built by the Scipios, like as Carthage by the Africans. The countie of the Illegoanes, the towne Subur, the riuier Rubricatum, and from thence the Lacetanes and Indigetes. After them in this order following, within-forth at the foot of Pyreneus, the Ausetanes, Itanes, & Lacetanes: and along Pyreneus the Cerretanes, and then the Vacones. In the edge or marches thereof, the colony Barcin, surnamed Fauentia. Towns of Roman citizens, Batulo, Illuro, the riuier Lamum, Blanda: the riuier Alba, Emporia: to there be of these, to wit, of the old inhabitants, and of the Greeks, who were the off-spring descended from the Phocaeans. The riuier Tichus. From whence to Pyreneus Venus, on the other side of the promontorie, are fortie miles. Now besides the forenamed, shall be related the principall places of marke as they lie in euery countie. At Tarracon there plead in court foure and fortie States. The most famous and of greatest name among them, be of Roman citizens the Dertusanes, and Bisfargitanes: of Latines the Ausetanes and Cerretanes surnamed Iulianes: they also who are named Auguranes, the Sedctanes, Gerundenfes, Gessarianes, Tearians, the same that Iulienfes. Of Tributaries,

F 3

aries, the Aquicaldenfes, Onenfes, and Batulonenfes. Cæfar Augufta, a free colony, on which the river Iberus floweth: where the towne before was called Salduba: thefe are of the region Sedetania, and receiue 52 States: and among thefe, of Roman citizens the Bellitanes and Celfenfes: and out of the Colonie, the Calaguritanes furnamed alfo Nafciis. The Iberdians of the Surdaons Nation, neere vnto whom runneth the river Sicoris. The Oficians of the region Vefcetania, and the Turiafonenfes. Of old Latins, the Cafcantenfes, Ergancenfes, Gracchuritanes, Leonicenfes, Offigerdenfes. Of confederats within the league, the Tarragenfes, Tributarians, Leonicenfes, the Arcobricenfes, Andologenfes, Arocelitans, Burlaonenfes, Calaguritanes furnamed Fibularenfes, Complutenfes, Carenfes, Cincenfes, Gortonenfes, Dammanitanes, Larrenfes, Iurifienfes, Iſpalenfes, Ilumbetanefes, Lacetanefes, Vibienfes, Pompelonenfes and Segienfes. There refort to Carthage for law 63 feuerall States, befides the Iflanders. Out of the colonie Accitana, the Gemellenfes, alfo Libiſoſana furnamed Forauguſtana: which two are indued with the franchiſes of Italy: out of the colonie Salarienfis, the Oppidans of old Latium, Caſtulonenfes, whom Cæfar calleth *Vandales*. The Setabitanes, who are alfo Auguſtans, and the Valerrienfes. But of the Tributaries, of greateſt name be the Babauenfes, the Baſcianes, the Conſaburenſes, Dianenfes, Egeſtanes, Iloricitanis, Laminitanis, Mentefami, the ſame that Oritanis, and Mentelani who otherwiſe are Baſtuli: Oretanes who alfo are called Germani, the tribe of the Celtiberians, the Segobrigenſes, and the Toletanes of Carpetania, dwelling vpon the river Tagus. Next to them the Viacienſes and Virgilienſes. To the aſſiſs or law-court Clunienſis, The Varduli bring 14 nations; of which I liſt to name none but the Albanenſes: but the Turmodigi four, among whom are the Segiſamonenſes, Sagifamiulienſes. To the ſame aſſiſs, the Carietes & the Vennenfes do go out of five cities, of which the Velienſes are. Thither repaire the Pelendones, with 4 ſtates of the Celtiberians, of whom the Numantins were famous: like as in the 18 cities of the Vaceans, the Intercarienfes, Pallantini, Lacobricenfes, & Cauſenfes: for in the four ſtates of the Cantabrici, only Iuliobrica is named: in the 10 ſtates of the Autrigones, Tritium, & Vironſca. To the Arcuaci the river Arcua gaue name. Of them there be 7 townes; to wit, Saguntia and Vxama, which names be often vſed in other places: beſides Segouia, and Noua-auguſta, Termes, and Clunia it ſelfe the very vtmoſt bound of Celteberia, all the reſt lie toward the Ocean, & of the abouenamed the Varduli together with the Cantabri. To theſe there are ioined 12 nations of the Aſturs, diuided into the Auguſtans & Tranſmontans, hauing a ſtately city Aſturica: among theſe are reckned, Gиги, Peſici, Lanſienſes, & Zocla. The number of the whole multitude ariſeth to 240000 pols of free men, beſides ſlaues. The county or iuriſdiction Lucenſis comprifeth 16 townes (beſides the Celticks and Lebunians) of baſe condition, and hauing barbarous names; howbeit, of free-men to the number well-neere of 166000: in like manner 24 cities, which afford 275000 pols, owe ſeruice to the court of Bracarum: of whom beſides the Bracarians themſelues, the Vibili, Celerini, Gallaci, Equiſilici & Quinquerni, may be named without diſdain and contempt. The length of the hither Spain, from Pyrenæus to the bound of Caſtulo is 607 miles, & the coaſt thereof ſomewhat more. The breadth from Tarracon to the ſhore of Alarcon, 307 miles: & from the foot of Pyrenæus; where, between two ſeas it is pointed with the ſtreights, & ſo opening it ſelfe by little & little from thence, till it come to touch the farther Spain, it is as much, and addeth ſomewhat more. To the breadth ſhall Spain throughout in manner is full of metall mines, as lead, yron, braſſe, ſilver, and gold: the hither part thereof aboundeth beſides with ſtone glaſſes, or glaſſe ſtones: and Bœtica particularly with vermillion. There be alſo there quarries of Marble. Vnto all Spain throughout, *Veſpaſianus Auguſtus* the Emperour, toſſed with the tempeſts and troubles of the commonweale, granted the franchiſes of Latium. The mountaines Pyrenæi do confine Spain and France one from the other, lying out with their promontories into two contrary ſeas.

CHAP. IIII.

¶ The Province Narbonenſis.

That part of Gallia which is waſhed and beaten vpon with the Mediteranean ſea, is called the province Narbonenſis, named afore-time Braccata, diuided from Italy by the river Varus and the Alpes, moſt friendly mountaines to the Romane Empire: and from the other parts of Gaule, on the North ſide, by the hills Gebenna & Iura. For tillage of the ground

- A for reputation of men, regard of ciuillie and manners, and for wealth, worthy to be ſet behinde no other provinces whatſoeuer: and in one word, to be counted Italy, more truly than a province: in the edge or marches thereof lyeth the countrey of the Sardaons; & within, the region of the Conſuarones. The riuers be Tecum and Vernodubrum: the townes, Illiberis (a poore relique and ſimple ſheue of a citie to that it was in old time) & Ruſcio, inhabited by the Latines. The river Atax ſpringing out of Pyrenæus, runneth through the lake Rubrenſis, & floweth ouer it. *Narbo Martius* a colonie inhabited by the Legionaries of the tenth legion, twelue miles diſtant from the ſea. Rivers, Araris and Liria. Townes in the other parts, ſcattered here and there by reaſon of pooles and meeres lying before them: namely, Agatha, in times paſt belonging to the Maſſilians, and the region of Volſce Teſtoſages. Alſo, where Rhoda of the Rhodians was, whereof Rhodanus tooke name, the moſt fruitfull river by far of all Gallia, running ſwiftly out of the Alps through the lake Lemanus, & carrying with it the dead and ſlow river Araris, and Iſara running as faſt as it ſelfe, together with Druentia. The two ſmal mouths or paſſages thereof are called Lybica: of which, the one is Hiſpanienſium, the other Metapinum: a third there is beſides, and the ſame moſt wide and large, named Maſſalioticum. There be that write, how the towne Heraclea likewiſe ſtood vpon the mouth of Rhodanus. Beyond the ditch out of Rhodanus, which was the work of *C. Marius*, & bearing his name, there was a notable poole or meere. Moreouer the town Aſtromela, and the maritime tract of the Auatician and about it, the ſtonie plains, carrying the memoriall of *Hercules* his battels. The region of the Anatiſians, and within-forth, of the Deſiuiates and Cauians. Againe, from the ſea, Tricorum, and inward, the region of the Tricolliuocantians, Segouellanes, and anon of the Allobroges: but in the marches, Maſſilia of Greeke Phocæans: within the league. The promontorie Cithariſta, Zaopartus, and the region of the Camatullici. After them, the Suelteri; and a ſhore ſpace, Verucines: But in the coaſt alſo ſtill, Athenopolis vnder the Maſſilians, Forum Iuij, a Colonie of the ninth legion ſouldiers, which alſo is called Parenſis and Claſſica: in it is the river Argentæus: the region of the Oxubij and Liganians; about whom, are the Suetri, Quarieres, and Adunicates: but in the borders, a Latine towne Antipolis. The region of the Deciates, the river Varus gushing out of an hil of the Alpes, called Acema. In the middle part thereof the Colonies, Arelate of the ſixth legion ſouldiers, Blietæ of the ſeuenth, and Araulia of thoſe belonging to the ſecond. In the territorie of the Cauians, Valentia and Vienna of the Allobroges. Latine towns, Aquæ Sextiæ
- D of the Salyans, and Auenio of the Caviens, Apta Iulia of the Vulgentians, Albeccerriorum of the Apollinæres, Alba of the Heluans, Auguſta of the Tricoſines, Anatilia, Aeria, Bormanni, Comacina, Cabellio, Carcaſum, of the Volſcane Teſtoſages: Ceſſero, Carpentoraſte, of the Menineſes: the Ceniceſes, Camboleſti, who are named beſides Atlantici, Forum Voconij, Glanum, Liuij, Luteviani, who are the ſame that Foro-neronienſes, Nemaufum of the Arcomici, Piſcenæ, Ruteni, Sanugenſes, and Tolofani, of the Teſtoſages: The neighbor borderers vpon Aquitane, Taſco-dumetari, Canonienſes, Vmbriani. Two capitall townes of the confederat ſtate of the Vocontians, Vaſco and Lucus Auguſti. But baſe townes of no importance nineteen, as 24 more annexed to the Nemaufiens, and vnder their Seigneurie. To this charter or inſtrument inrolled, *Galba* the Emperour added of the Alpine inhabitants, the Auaticci and Eproduntij;
- E whoſe town is named Dima. *Agrippa* ſaith, that the length of this province Narbonenſis is 270 miles, and the breadth 248.

CHAP. V.

¶ Italy, Tiberis, Rome, Campania.

Next to them is Italy, and the fiſt of all, the Ligurians: then Hetruria, Vmbria, Latium, where be the mouthes of Tiberis and Rome the head citie of the whole earth, 16 miles diſtant from the ſea: after it is the maritime countrey of the Volſcians, and Campanians: then Picentium, Lucanum, and Brutium, the furtheſt point in the South, vnto which from the crooked mountaines of the Alpes, like in manner vnto the Moone croſſant, with ſome parts higher, other lower, Italic ſhooteth out in length to the ſeas: from it is the ſea coaſt of Græcia, and ſoone after, the Salentines, Pediculi, Apuli, Peligni, Ferentani, Marrucini, Veſtines, Sabines, Picentes, Gaules, Vmbrians, Thuſcanes, Venetians, Carnians, lapides, Iſtrians, and Liburnians.

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Neither am I ignorant, that it might be thought and that iustly, a point of an vnthankfull G mind and idle withall, if briefly in this sort, and as it were by the way, that land should be spoken of which is the source of all lands. She also is the mother, chosen by the powerfull grace of the gods, to make euen heauen it selfe more glorious; to gather into one the scattered empires, to soften and make ciuill the rude fashions of other countries; and whereas the languages of so many nations were repugnant, wilde, & sauage, to draw them together by commerce of speech, conference, and parley; to induce man with humanitie; and briefly, that of all nations in the world, there should be one onely country. But here, what should I do? so noble are all the places that a man shall come vnto, so excellent is every thing, and each state so famous and renowned, that I am fully possessed with them all, and to seeke what to say. Rome citie, the only faire face therein, worthy to stand vpon so stately a necke and pair of shoulders, what worke would it aske thinke you, to bee set out as it ought: the very tract of Campaine by it selfe, so pleasant and goodly, so rich and happie, in what sort should it be described? So as it is plaine and manifest, that in this one place there is the workmanship of Nature wherein she ioieth and taketh delight. Now besides all this, the whole temperature of the aire is euermore so vitall, healthy, and wholesome, the fields so fertile, the hills so open to the Sun, the forests so harmlesse, the groues so coole and shade, the woods of all sorts so bounteous and fruitful, the mountaines yielding so many breaching blasts of winde; the come, the vines, the olives so plentifull; the sheep so enriched with fleeces of the best wooll, the bulls and oxen so fat and well fed in the necke; so many lakes and pooles, such store of riuers and springs watering it throughout; so many seas and hauens, that it is the very bosom lying open and ready to receiue the commerce of all lands from all parts; and yet it selfe full willingly desireth to lie far into the sea to helpe all mankind. Neither do I speake now of the natures, wits, and fashions of the men; ne yet of the nations abroad subdued with their eloquent tongue, and strong hand. Euen the Greekes (a nation of all other most giuen to praise themselves beyond measure) haue giuen their iudgement of her, in that they called some small part thereof, Great Greece. But in good faith, that which we did in the mention of the heauen, namely, to touch some knowne planets and a few stars, the same must we likewise do in this one part: only I would pray the Readers to remember and carry this away, That I hasten to rehearse euery particular thing through the whole round globe of the earth.

Well then, to begin, Italy is fashioned like for all the world to an Oke lease, and much larger in length than breadth: to the left side bending with the top, and ending in the figure and fashion of an Amazonian shield, and where that tract of Calabria lyeth which is called Co-cinthos, it putteth forth into those two promontories or capes like the moones two hornes; the one, Leucopetra on the right hand; the other Lacinium on the left. In length it reacheth from the foot of the Alps, through Ostia or Prætoria Augusta, directly to the citie of Rome, and so forward to Capua, with a direct course leading to Rhegium a towne situate vpon the shoulder thereof: from which beeginneth the bending as it were of the necke; and beareth 1000 and 20 miles. And this measure would grow to be far more, if it went as farre as Lacinium, but that such an obliquitie and winding might seem to decline and beare out too much vnto one side. The breadth thereof is diuersly taken, namely, 40 miles between the two seas, the higher and the lower, and the riuers Varus and Arsa. The mids of which breadth (and that is much about the citie of Rome) from the mouth of the riuier Aternus running into the Adriaticke sea, vnto the mouthes of Tiberis, is 36 miles, and somewhat lesse: from Novum Castrum by the Adriaticke sea, to Alifium, and so to the Tuscan sea: and in no place exceedeth it in breadth 300 miles. But the full compass of the whole from Varus to Arsa, is 20049 miles. Distant it is by sea from the lands round about, to wit, from Istria and Liburnia in some places 100 miles; from Epirus and Illyricum 50 miles; from Africk lesse than 200, as Varro affirmeth; from Sardinia, an hundred and 20 miles; from Sicilia, a mile and a halfe: from Coreyra lesse than 70; from Issa 50. It goeth along the seas, to the Meridionall line verily of the heauen; but if a man examine it exactly indeed, it lyeth betweene the Sun rising in mid-winter, and the point of the Noone-lead.

Now will we describe the compass and circuit thereof, and reckon the cities; wherein I must needs pretest by way of Preface, that I will follow for mine Authour *Augustus* the Emperour of famous memorie, and the description by him made of all Italy, which be diuided into 11 Regions

- A Regions or Cantons. As for the maritime townes, I will set them downe in that order, as they stand, according to their vicinity one to another. But so far as much as in so running a speech and hastic pen, the rest cannot possibly be so orderly described: therefore in the inland part thereof, I will follow him as he hath digested them by the letters of the Alphabet, but mentioning withall, the colonies or chiefe cities by name, which he hath deliuered in that number. Neither is it an easie matter to know thoroughly their positions and foundations, considering the Ingaune Ligurians (to say nothing of all the rest) were endowed with lands thirtie times, and changed their seats. To begin with the riuier Varus therefore, there offereth to our eie, first the towne Nicæa, built by the Massilians: the riuier Po; the Alpes; the people within the Alpes of many names, but of most marke Capillati, with long haire: the towne Vediantorium, the Citie Cemel, or, a towne belonging to the State of the Vediantians, called Cemel: the port of *Hercules* and *Monachus*, and so the Ligurian coast. Of the Ligurians, the most renowned beyond the Alpes, are the Sallii, Deceates, and Oxubij: on this side, the Veneti, and descended from the Caturiges, the Vagienni, Staryelli, Vibelli, Magelli, Euburates, Casmonates, Veliates, and those, whose townes we will declare in the next coast. The riuier Rutuba, the towne Albium Intemelium, the riuier Merula, the towne Albium Ingaunum, the port or haue towne Vadum Sabatium, the riuier Porciferas, the towne Genua, the riuier Eritor, the Port Delphini, Tigulia: within, Segesta Tiguliorum: the riuier Macra which limiteth Liguria. Now on the back side behind all these townes aboue named, is Apenine, the highest mountain of all Italy, reaching from the Alpes with a continuall ridge of hills, to the streights of Sicilie.
- C From the other side thereof to Padus, the richest riuier in all Italy, all the countrey shinning with goodly faire townes, to wit, Liberna, Dertona a Colonie, Iria, Baderates, Industria, Pollentia, Carrea, which also is named Polentia, Foro Fuluij the fame that Valentinum, Augusta, of the Vagienni: Alba, Pompei Alta, and Aqua Staryellorum. And this is the ninth Canton after the Geographie of *Augustus*. This coast or tract of Liguria containeth betweene the riuers Varus and Macra 211 miles. To it is adioined the 7 wherein is Hetruria from the riuier Macra: and it oftentimes changed the name. In old time the Pelasgians chased the Vmbrians from thence: and by them the Lydians did the like, of whose king, named they were Tyrheni: but soon after, of their ceremonies in sacrificing, in the Greeks language *Thufei*. The first towne of Hetruria is Luna, famous for the haue; then the Colonie Luca, lying from the sea; and reuerent vnto it is Pisa, between the riuier Aufer and Arnus, which took the beginning from *Pelops* and the Pisians, or Atintanians a Greeke nation. Vada Volaterrana, the riuier Cecinna, Populonium of the Tuscans in times past, situate only vpon this coast. After these the riuier Prille, and anon after Vmbro, nauigable, and of it tooke name: so forward the tract of Vmbria, and the port towne Telamon: Costa Volscentium, a Colonie planted there by the people of Rome, Graulæx, Castrum Novum, Pyrgi, the riuier Carcanus, and Cere it self, standing foure miles within, called Agylla by the Pelasgians who built it: Alifium and Frugæ. The riuier Tiberis, distant from Macra 284 miles. Within forth are these Colonies, Faliska descended from Argi, as *Cato* saith, and for distinction is called Hetruscoform. Lucus Peronia, Russellana, Senefis and Sutrinia. As for the rest, these they be, Aretini the old, Aretini Fidentes, Aretini Idifenses, Amitinenses, Aquenses surnamed Taurini: Vlerani, Cortonenfes, Capenates, Clusines the old, Clusines the new, Fluentini, fast vpon the riuier Arnus that runs before them, Fesula, Ferentinum, Fescennia, Hortanum, Herbanum, Nepet, Nouempagi [i. the nine villages] the Shire-wick called Prefecture Claudia, or Foro Clodij: Pistrucini, Perusia, Suanenses, Saturnini, who beforetime were called Aurinini, Sudertani, Statones, Tarquinienfes, Tuscanienfes, Vetulonienfes, Veientani, Vesuntini, Volaterrani surnamed Hetrufci and Volsinienfes. In the same part lie the territories Crustuminus and Caletanus, bearing the names of the old townes. Tiberis, before named Tybris, and before that Albulia, from the middest well neere of Apenine, as it lies in length, runs along the marches of the Aretines: small and shallow at the first, and not able to beare a vessell without being gathered together, as it were, by fish-pooles into a head, and so let goe at fluces: as Tinea and Glanis which run into him, the which are at the same passe, and require 9 daies for collection of waters, and so are kept in for running out in case they haue no helpe of rain at all. But Tiberis by reason of the rough, stony, and rugged channell, for all that deuide, hold, on no long course together, but only for trouges, to speake more truly, than boats: & thus it doth for a hundred and fifty miles, not far from Tiferum, Perusia and Otriculum, diuiding as it passeth Hetruria

Hetruria from the Vmbrians and Sabines: and so forth vntill anon, within thirteen miles of the citie [Rome] it parts the Veientian country from the Crustumine: and soone after the Fidenate and Latine territories from the Labicane. But besides Tinia and Glanis, he is augmented with two and forty riuers, and especially with Nar and Anio: which riuier being also it selfe navigable, encloues Latium behind: and neuertheless so many waters and fountaines are brought thereby into the citie, whereby it is able to receiue any ships, be they neuer so great, from the Italian sea: and is the kindest marchant to conueigh all commodities growing and arising in any place of the whole world: it is the only riuier of all others, to speake of, and more villages stand vpon it and see it, than all other riuers in what land soeuer. No riuier hath lesse liberty than it, as hauing the sides thereof enclosed on both hands, & yet he is no quarreller, nor much harm doth he, albeit he hath many and those fuddain swellings, and in no place more than in the very citie of Rome do his waters overflow: yet is he taken to be a prophet rather, and a Counsellor to giue warning, yea, and in smelling, more religious and breeding scruple, to speake a truth, than otherwise cruell and doing any great harme. Old Latium from Tiberis to Circeios, was obserued to be in length 50 miles. So small roots at the first took this Empire. The inhabitants thereof changed often, and held it, some one time, some another: rowit, the Aborigines, Pelasgi, Arcadians, Sicilians, Auruncanes, and Rutilians. And beyond Circeios, the Volscians, Offians, Aufonians, from whence the name of Latium did reach soone after, as far as to the riuier Liris. In the beginning of it stands Ostia, a Colonie, brought thither and planted by a Roman king: the towne Laurentum, the groue of *Iupiter Indiges*, The riuier Numicius, and Ardea, built by *Danius* the mother of *Perseus*. Then the Colonie Antium, sometimes Aphrodisium: Attura, the riuier and the Island, The riuier Nymphæus, Calstra Romana Circeij, in times past an Island, yea and that verily enuioured with a mighty fea (if we beleue *Homer*) but now with a plain. A wonder it is what we are able to deliuer concerning this thing to the knowledge of men, *Theophrastus*, who of strangers was the first that writ (any thing diligently) somewhat of the Romans (for *Theopompus*, before whom no man made mention at all, said only, That the citie was woon by the Gauls: and *Clitarchus* next after him, spake of nothing else but an embassage sent vnto *Alexander*) this *Theophrastus*, I say, vpon a better ground and more certaintie now than bare hereaf, hath let downe the measure of the Island Circeij to be eighthe Stadia; in that booke which he wrot to *Nicodorus* the chiefe Magistrate of the Athenians, who liued in the 460 yeere after the foundation of Rome citie. What soeuer land therefore aboue tenne miles compass lie neere about it, hath beene annexed to the Island. But after that a yeere, another strange and wonderfull thing fell out in Italy: for not far from Circeij, there is a meere called Pomprina, which *Mutianus*, a man who had beene thrice Consul, reporteth to haue been a place wherein stood 23 cities. Then there is the riuier Vrsus, vpon which standeth the towne Taracina, called in the Volscian tongue Anxur, & where sometime was the citie Amyce, destroyed by serpents. After it is there the place of a caue or peak, the lake Fundanus, & the hauen Cajeta. The towne Formia named also Hormia, the ancient seat (as men thought) of the Læstrigones. Beyond it was the towne Pyra, the Colonie Minturne, diuided asunder by the riuier Liris, called Clanius. The vntmost frontier towne in this part of Latium laid to the other, is Sinuessa, which as some haue said, was wont to be called Sinope. Thence comes to shew it selfe that pleasant and plentifull countrey Campania. From this vale begin in the hills full of vineyards, and famous for drunkenesse, proceeding of strong wine and the liquor of the grape, commended so highly in all countries; and (as they were wont to say in old time) there was the exceeding strife between father *Liby* and damie *Ceres*. From hence the Setine and Cecubine countries spread forth: and to them ioine the Falerne and Caline. Then arise the mountaines, Massici, Gaurani and Surrentine. There the Laborium Champaine fields lye along vnder their feet, and the good wheat harvest to make fine frumentic for dainties at the table. The sea-coasts here are watered with hot fountaines, and among other commodities throughout all the sea, they beare the name for the rich purple shell fish, and other excellent fishes. In no place is there better or more kind oyle pressed out of the Oliue. And in this delightfull pleasure of mankind, the Ofcians, Grecians, Vmbrians, Tuscanes, and Campanes haue strined who could yeeld best. In the skirte and edge thereof is the riuier Sauro, Vulturum the town and riuier both, Liturnum, and Cumo inhabited by Chalcidians, Misenum, the hauen Bajæ, Baule, the pooles Lucrinus and Avernus, neer vnto which was sometime the towne Cimmerium. Then Puteoli, called also the Colonie Dicæarchia:

After

A After that, the plaines Phlegraei, and the meere or fenne Acherusia neere to Cumæ. And vpon the very frond by the sea side Naples, a citie also of the Chalcidians, the same that *Parthenope* so called of the tombe of a Sirene or Meeremaid: *Herculanum*, *Pompeij*: and where not farre off the mountaine *Vesuvius* ouerlooketh, and the riuier *Serms* runneth vnder the territory of *Nuceria*, and within nine miles of the sea, *Nuceria* it selfe. *Surrentum* with the promontory of *Minerva*, the seat sometime of the Meermayds. From the cape *Circeij* lies the sea open for faile 78 miles. This is counted the first region of Italy, next *Tibris*, according to the description of *Aulusius*. Within it are these Colonies, *Capua*, so called of the Champaine country, *Aquinum*, *Suessia*, *Venafrum*, *Sora*, *Teanum*, named withall *Sidicinum* and *Nola*: the Townes be, *Abellinum*, *Aricia*, *Alba Longa*, *Acerrani*, *Alifani*, *Arinatæ*, *Aletrinatæ*, *Anagnini*, *Atellani*, *Alulani*, *Arpinates*, *Auximates*, *Auellani*, *Alatarni*; and they who of the Latine, *Hernick*, and *Albicanæ* territories, are surnamed accordingly: *Bouillæ*, *Calatie*, *Casinum*, *Calenum*, *Capitulum*, *Cerretum*, *Cerretani*, who be called also *Mariani*. *Corani* descended from *Dardanus* the Trojan; *Cubulterini*, *Castrimoneses*, *Cingulani*, *Fabienenses*, and in the mount *Albane*, *Foro populienenses*. Out of the Falarne territory, *Fusinatæ*, *Ferentinatæ*, *Freginatæ*, *Faraterni* the old, *Fabraterni* the new, *Ficolenes*, *Fricolenes*, *Foro Appi*, *Forentani*, *Gabini*, *Interramatæ*, *Succasani*, called also *Lirinatæ*, *Ilionenses*, *Launiij*, *Norbani*, *Nementani*, *Preneftini*, whose citie was in times past named *Stephanus*, *Pruernatæ*, *Setini*, *Signini*, *Suessulani*, *Telini*, *Trebutini* surnamed *Balinienfes*, *Tribani*, *Tusculani*, *Verulani*, *Veliterni*, *Vulturnenses*, *Vulturnatæ*: and aboue also Rome her selfe: the * other name whereof to vtter, is counted in the secret mysteries of ceremonies an impious and vnlawfull thing: which after that it was abolished, and so faithfully obserued to right good purpose and for the safetie thereof, *Valerius Soranus* blurted out, and soone after abid the smart for it. I think it not amisse nor impertinent, to insert there in this very place an example of the ancient religion instituted especially for this Silence: for the goddess *Aggerona*, whose holiday is solemnly kept with sacrifices the 2 day before the Kalends of Ianuarius, is represented by an Image hauing her mouth fast closed and tied vp. This citie of Rome had 3 gates when *Romulus* left it, or rather foure (if we beleue the most men that write thereof) The wals thereof, when the two *Vespasianes*, Emperors and Censors both, to wit, the Father and *Titus* his son, took the measure, which was in the yeere after the foundation of it 828, were in circuit * 13 miles and almost a quarter. It containeth within it, seuen M. vntaines, and is diuided in 14 regions, and 265 crosse streets or carfours, called *Comita Larium*. The measure of the same equall space of ground, running from the gilden pillar *Milliarium*, erected at the head or top of the Rom. Forum, to euery gate which are at this day 37 in number, so ye reckon once the 12 gates alwaies open, and ouerpasse 7 of the old, which are no more extant, maketh 30 miles 3 quarters and better, by a straight line: but if the measure be taken from the same *Milliarium* before said, through the suburbs to the vntmost ends of the houses, and take withall the *Castra Prætoria*, and the pourprife of all the streets, it comes to somewhat about 70 miles: whereunto if a man put the height of the houses, hee may conceiue verily by it, a worthy estimate of the excellency thereof, and confesse that the flatlinesse of no citie in the world could be comparable to it. Enclosed it is and fenced on the East-side with the bank or rampier of *Tarquinius* the Proud: a wonderfull piece of worke as any other, and as excellent as the best: for he raised it full as high as the wals, in that side where the aduence to it was most open and plaine. In other parts, defended it was and fortified with exceeding high wals, or else steepe and craggy hills, but only whereas there are buildings lye out abroad, and make as it were many petty cities. In that first region of Italy there were besides, first for Latium these faire townes of marke, *Satricum*, *Pometia*, *Scaptia*, *Pitulum*, *Politorium*, *Tellene*, *Tifata*, *Cæmina*, *Ficana*, *Crustumium*, *Americola*, *Medullia*, *Corniculum*, *Saturnia*, where now Rome standeth. *Antipolis*, which now is *Iacniculum*, in one part of Rome: *Antemnae*, *Camerium*, *Collatie*: *Amitemum*, *Norbe*, *Sulmo*: and with these, the States that were wont to receiue a dole of flesh in mount *Albane*, to wit, *Albenses*, *Albani*, *Aesolani*, *Acienfes*, *Abolani*, *Bubetani*, *Bolani*, *Castetani*, *Coriolani*, *Fidenates*, *Fortetij*, *Hortenses*, *Latinenfes*, *Longulani*, *Manates*, *Maras*, *Mutucumenes*, *Munienfes*, *Numinienfes*, *Ostulanis*, *Ostulani*, *Pedani*, *Pollutini*, *Querquetulani*, *Sicani*, *Sistolenfes*, *Tolerienfes*, *Tutienfes*, *Vimirellarij*, *Velienfes*, *Venutani*, *Vicellenfes*. Thus yee see, how of the old Latium, there be 53 States perished and cleane gone, without any token left behinde. Moreover, in the Campaine country, the towne *Stabia* continued vnto the time that *Cn. Pompeius* and *L. Carbo* were

* Valentia

* Some read

10.

were

were Consuls, euen vntill the last day of Aprill; vpon which day, *L. Silla* a lieutenant in the Allies war, destroyed it vterly: which now at this day is turned into graunges and forme-houses. There is decayed also there and come to finall ruine, *Taurania*. There be also some little relikes left of *Casilinum*, lying at the point of the last gasse. Moreouer *Anias* writes, that *Apollonia* towne of the Latines, was woon by *L. Tarquinius* the King, with the Pillage whereof he began to found the *Capitol*. From *Surrentum*, to the river *Silarus*, the Picentine cuntry lay for the space of 30 miles, reowned for the *Tuscanes* goodly temple built by *Iafon* in the honor of *Iuno Argiva*. Within it, stood the townes *Salemum*, and *Picentia*. At *Silarus*, the third region of Italy, beginnes together with the *Lucane* and *Brutian* countries; and there also the inhabitants changed not a few times. For held and possessed it was by the *Pelasgi*, *Oenotri*, Italy, *Morgetes*, *Sicilians*, people all for the most part of great Greece; and last of all by the *Lucanes* defended from the *Sammites*, who had to their leader and gouernour, *Lucius*. In which standeth the town *Pellum*, called by the Greeks *Polidonia*; the Firth or creeke *Pellanus*, the town *Helia*, now *Velia*. The promontory *Palinurum*, from which creeke retired within-forth, there is a direct cut by water to the colume regia, 100 miles ouer. Next vnto this, the river *Melpes* runneth also there standeth the towne *Buxentum*, in Greeke, *Pyxus*, and hard by is the river *Lausa*; towne there was likewise of the same name. And from thence beginneth the sea coast of *Brutium*, where is to be seen the towne *Blanda*, the river *Batum*, the haueu *Parthenius* belonging to the *Phoceans*: the Firth *Vibonenfis*, the groue *Clampetia*. The towne *Temsa*, called of the Greeks *Temese*; and *Terina* held by the *Crotonians*, and the mighty arme of the sea, called the gulf. *Terinaus*; the towne *Consentia*. Within-forth in a demy Island, the river *Acheron*, whereof the townesmen are called *Acherontium*. *Hippo*, which now we call *Viboulentia*; the Port of *Hercules*, the river *Metaurus*, the towne *Tarentum*, the haueu of *Orestes*, and *Medua*; the towne *Scyllium*, the river *Cratais*, mother (as they say) to *Scylla*. Then after it, the colume *Rhegia*; the *Sicilian* freights or narrow seas, and two capes one ouer-against the other, namely, *Canis* from Italy side, and *Pelorum* from *Sicily*, hauing a mile and a halfe betwene them; from whence to *Rhegium* is 12 miles and a halfe; and so forward to a wood in the *Apennine*, called *Sila*; and the promontorie orcliffe called *Leucopetra*, 12 miles off. From which, *Locri* (carying the name also of the promontorie *Zephyrium*) is from *Silarus* distant 303 miles. Here is determined the first gulf of Europe, wherein be named these seas, *Firth*, *Atlanticum* (from which the Ocean sea breaketh in) called of some *Magnum*; the passage whereas it entreth, is of the Greeks called *Porthmos*; of vs, *Fretum Gaditanum*. [The freights of *Gebralter*] when it is once entred the Spanish sea, so farre as it beareth vpon the coasts of Spain: *Ofothers*, *Ibericum*, or *Balearicum*: and anon it taketh the name of *Gallicum*, or the French sea, right before the prouince *Narbonensis*; and after that, *Ligusticum*; from whence all the way to the Island *Sicilie*, it is called *Tuscum*; which some of the Grecians terme *Notium*, others *Tyrrenum*, put most of our countymen *Inferum*. [The nether sea.] Beyond *Sicily* as farre as to the *Salentines*. *Polybius* calleth it *Ausonium*; but *Eratothemus* nameth all the sea *Sardonium*, that is betwene the mouth of the Ocean and *Sardinia*; and from thence to *Sicilie*, *Tyrrenum*; and from it as far as to *Creta*, *Siculum*; from which it is high *Creticum*. The Islands discontinue along these seas, were these: The first of all, those which the Greeks named *Pityusa*, of the Pine shrub or plant; but now, *Ebusus*: they are both a State confederate, and a narrow arme of the sea runneth between them; they are 42 miles ouer. From *Dianicum*, they lie 70 stadia: and so many are there betwene *Dianicum* and *Carthage*, by the maine land: and as much distance from *Pityusa* into the maine Ocean, lie the two *Baleare* Islands; and toward *Sucro*, *Colubaria*. These *Baleares* in their warre-seruice vsd much the sling, and the Greeks name them *Gymnesia*. The bigger of them is an hundred miles in length, and in circuit 380. Townes it hath of *Romane* citizens, *Palma* and *Pollentia*; of *Latines*, *Cinium* and *Cunicia*; for *Bochri*, it was a towne confederate. From it, the lesser is thirtie miles off, taking in length 60 miles, and in compass 150. Cities in it, be *Iamno*, *Sanifera*, and *Magno*. From the bigger 12 miles into the sea, lieth the Isle *Capraria*, which lies in wait for all shipwrack: & ouer-against the city *Palma*, *Menaria*, and *Tiquadra*, and little *Amibalis*. The foile of *Ebusus* chafeth serpents away, but that of *Colubaria* breeds them: and therefore dangerous it is for all that come into it, vnlesse they bring with them some of the *Ebusian* earth. The Greeks call this Island, *Ophiusa*. Neither doth *Ebusus* breed any Conies; which are so common in the *Baleares*, that they ate vp their corne.

There

A There be as it were 20 more little ones among the shelues of the sea. Now in the maritime coast of *Gallia* in the very mouth of *Rhodanus*, there is *Metina*; and soone after, that which is called *Blascon*; and the three *Stoechades*, called so of their neighbors the *Maffilians*, for the order and ranke wherein they stand; and they giue them every one a seuerall name, to wit, *Protenice*, *Phila*, *Lero*, and *Lerina* ouer-against *Antipolis*; wherein also is a token or memoriall of the towne *Vergaonum*.

CHAP. VI.

¶ Of Corsica.

B IN the *Ligurian* sea is *Corsica* the Island, which the Greeks called *Cymros*, but nearer it is to the *Tuscan* sea; it lyeth out from the North into the South, and containeth in length an hundred and fiftie miles; in breadth for the most part it beareth fiftie; in circuit 323: distant it is from the *Wathes* or *Downes* of *Volaterra* 62 miles. Cities it hath 35: and these colonies, to wit, *Mariana*, planted there by *C. Marius*; *Aleriaby* *Diagor*; *Sylla*. On this side of it is *Oglasa*; but within 60 miles of *Corsica*, there is *Planaria*, so called of the forme thereof, so flat it is and leuell with the sea; and therefore deceiueh many a ship that runneth aground vpon it. Bigger than it are *Virgo* and *Capraria*, which the Greeks called *Ægilos*. In like manner *Ægilium* & *Dianium*, the same that *Artemisia*, both lying ouer-against the coast *Cosanum*. Other small ones also, as *Manaria*, *Columbaria*, *Venaria*, *Ilua*, with the yron mines, in circuit a hundred miles (ten miles from *Populonia*) called of the Greeks, *Ethalia*: from it is *Planasia* 39 miles off. After them, beyond the mouthes of *Tybre* in the *Antian* creeke, is *Astura*, and anon *Palmaria*, *Sinonia*, and iust against *Formia*, *Pontia*. But in the *Puteolan* gulf, *Pantadaria* and *Prochyta*, so called, not of *Aeneas* his nource, but because it was broken off by the gushing betwene of the sea from *Enaria*. *Enaria* it selfe tooke that name of *Aeneas* his ships that lay in rode there, called by *Homer* *Inarime*, of the Greeks *Pithecus*, not for the number of Alps there, as some haue thought, but of the worke houses and furnaces of potters that made earthen vessels, as tunnes and such like, to furnish Italy with. Betwene *Pausilypus* and *Naples*, *Megar*, and so on after, eight miles from *Surrentum*, *Caprae*, renowned for the castle there of *Prince Tyberine*; and it beareth in compass four hundred miles. Anon you shall see *Leucothea*: but without your kenning lyeth *Sardinia* fast vpon the *Africke* sea, but lesse than nine miles from the coast of *Corsica*; and still those freights are made more narrow by reason of small Islands, named *Cunicularie*. Likewise *Phintonis* and *Fossa*, whereof the very sea it selfe is named *Taphros*.

CHAP. VII.

¶ Of Sardinia.

E Sardinia on the East side beareth 188 miles, on the West, 170, Southward, 74, and Northward 122: so that in all, it taketh vp the compass of 560 miles. It is from the Cape of *Carales* to *Africke* 200 miles; from *Gades* it is distant 1400 miles. It hath two Islands on that side where the Promontorie *Gorditanum* standeth, which be called *Hercules* Islands: of *Sullessens* cape side, *Enosis*; of *Caralitanum*, *Ficaria*; some fer not far from it the Islands *Beletrides*, and *Collodes*: and another which they call *Heras* *Lutra*, *Iunoes* lauer, or *Hieraca*. The States of greatest name therein, be the *Ilienfes*, *Balari*, and *Corsi*: and of the four townes, the chiefe are inhabited by the *Sulcitans*, *Valentines*, *Neapolitans*, *Bosenfes*, and *Caralitani* who are *Roman* enfranchised citizens, and *Norenses*. One colonie there is in it and no more, which is called, *Ad Turrim* *Libysonis*. This island *Sardinia*, *Timus* called (of the fashion of a shoe or slipper) *Sandalioris*; but *Myrsilus*, for the resemblance of a foot-step, *Ichnusa*. Ouere-against the creek *Pellastum*, there is *Leucasia*, called so of a Mere-maid or *Sirene* there buried against *Vestia*, there lie *Pontia* and *Istia*, both jointly called by one name *Oenotrides*, a good presumption and Argument that *Italie* was possessed by the *Oenotrians*. And against *Vibo*, other little ones, called *Ithacefia*, the watch townes of *Phyliss*.

CHAP.

is there the town Bastia, and Hydruntum in the space of nineteen miles, to make a partition between the Ionian and Adriaticke seas, through which is the shortest cut into Greece over against the towne Apollonia, where the narrow sea running between, is not above fiftie miles ouer. This space between, *Pyrrhus* king of Epirus, was the first, that intending to haue a passage ouer on foot, thought to make bridges there: after him *M. Varro*, at what time as in the Pyrates warre he was Admiral of *Pompeius* fleet. But both of them were let and stopped with one care or other besides. Next to Hydrus there is Solecum, a citie not inhabited: then, Fratuertium: the haueu Tarentinus, the garriſon towne Lupia, Balesium, Caesium, Brundisium fiftene miles from Hydrus, as much renowned as any towne of Italy for the haueu, for the surer sailing, although it be the longer, and the citie of Illyricum Dyrragium is ready to receiue the ships: the passage ouer is 220 miles. Vpon Brundisium bordereth the territory of the Padiculii. Nine young men there were of them, and as many maids, descended from the Illyrians, who begat betweene them thirteen nations. The towne of these Padiculii, be Rhudia, Egnatia, Barion, beforetime Iapyx of *Dodalus* his sonne, who also gaue the name to Iapygia. Riuers, Paëtius, and Ausidius issuing out of the Hirpine mountains, and running by Canusium. Then follows Apulia of the Daunians, surnamed so of their leader, father in law to *Diomedes*. In which is the towne Salapia, famous for the loue of an harlot that *Amiball* cast a fancie vnto; then, Sipontum and Vria: also the riuier Cerbalus, where the Daunians take their end: the port Agafus, the cape of the mountaine Garganus, from Salentine or Iapygium 234 miles, fetching a compass about Garganus: the haueu Garinæ, the lake Pantanus. The riuier Frento, full of Baies and Hauens, and Teanum of the Apulians. In like manner also, Larinum, Aliturnia, and the riuier Tifernus. Then commeth in the region Fretana. So there be three kindes of nations, Teani, of their leader, from the Greekes: the Lucanes subdued by *Calchas*, which quarters now the Atinates hold and occupie. Colonies of the Daunians besides the abouenamed, Luceria, and Venusia: towne, Canusium, Arpi, sometime Argos Hippium, builded by *Diomedes*, but soon after called Argyrippa. There *Diomedes* vanquished and destroyed the whole generation of the Monadians and Dardians, together with two cities, which grew to a merry iest by way of a by-word, Apina and Trica. The rest be more inward in the second region, to wit, one Colonie of the Hirpines called Beneuentum, changed into a more luckie name, whereas in times past it was cleaped Maleuentum: the Æculanes, Aquilonians, and Abellinates, surnamed Protopri: the Campsanes, Caudines, and Ligurians, surnamed Cornelians: as also Bebianes, Vescellanes, Deculanes, and Aletrines: Abellinates surnamed Marci, the Atinates, Æcanes, Aellanes, Atinates, & Arpanes: the Borcanes, the Collatines, Corinenſes, and famous for the ouerthrow of the Romanes there, the Cannians: the Dirines, the Metintanes, the Genuſines, the Hardonians and Hyrines: the Larinates surnamed Fretanes, the Matrines, and out of Garganus the Matcolanes, the Neritines, and Natines, the Rubustines, the Syluines and Strapellines, the Turmentines, the Vibinates, Venusines, and Vlrutines. Now the Inlanders of the Calabrians, the Ægrines, Apantes and Argentines. The Butuntines and Brumbestines, the Decians, the Norbanes, the Patilions, Sturnines, and Tutines. Also of Salentine midlanders, the Aletrines, Baſterbines, Nere-tines, Valentines, and Veretines.

CHAP. XII.

¶ The fourth Canton or region of Italy.

Now followeth the fourth region, euen of the most hardie and valiant nations of all Italy. In the coast of the Fretanes, next to Tifernus, is the riuier Tirinum, full of good hauens and harbours. The towne there, be Histionum, Buca, and Ortona, with the riuier Aternus. More within the countrey, are the Anxanes surnamed Fretanes: the Carentines, both higher and lower, the Lanuſines of Marrucines, the Teatines: of Pelignians, the Corinſines, Super-Æquani and Sulmonſes: of Marcians, the Anxantines and Atinates, the Fucentes, Lucentes, and Maruij: of Albanſes, Alba vpon the lake Fucinus: of Æquiculanes, the Cliternines and Carcolanes: of Vestines, the Augulanes, Pinnenſes, Peluſinates, vnto whom are ioined the Aſinates on this side the mountaines of Samnites, whom the Greekes called Sabellians and Saur-nites, The Colonie Bouianum, the old, and another surnamed Vndecumanum, namely, inhabited by those of the eleuenth legion: the Ausidenates, Eſernines, Fagifulanj, Ficolenſes, Sepi-nates,

A nates, Treuentinates: of the Sabines, the Amiterines, Curenſes, Forum Decij, Forum Novum, the Fidenates, Interamnates, Nursines, Nomentanes, Reatines, Trebulanes, surnamed Mutuſcæ, as also Suffenates, the Tiburtes, and Tarinates. In this quarter of the Æquiculæ there be perished and gone the Comines, Tadianes, Acedikes, and Alfaterni. *Gellianus* writeth, that Acipie, a towne of the Marſians, built by *Marſus* a captain of the Lydians, was drowned and swallowed vp by the lake Fucinus. Also *Valerian* reporteth, that a towne of the Viducines in Picenum was vtterly ruined by the Romans. The Sabines as some haue thought were for their religion and deuout worshipping of the gods called Seuini: they dwell hard by the Veline lakes vpon moist and dewie hills. The riuier Nar draineth them dry with his hot waters of brimstone: which riuier running from thence toward Tyberis filleth it, and gliding from the hill Fissellus, neere the groues of Vacuna and Reate, is hidden in the same. But from another side, the riuier Anio, beginning in the mountain of the Trebanes, bringeth with it into Tiberis three lakes of great name for their delectable pleasantnes, which gaue the name to Sublaquenſis. In the Reatine territorie is the lake Cutilia, wherein floeth an Island; and this lake, as *M. Varro* saith, is in the very midst and centre of Italy. Beneath the Sabines lieth Latium; on the side Picenum; behinde, Vmbria; and the hills of the Apennine on either hand, do incloſe as with a rampier, the Sabines.

CHAP. XIII.

¶ The fifth Region.

C The fift region is Picene, a Nation in times past most populous, 360000 of the Picentes were reduced vnder the protection of the people of Rome. They are defended from the Sabines, vpon a vow that they made to hold and solemnise a sacred spring. They dwell by the riuier Aternus, where now is the territorie Adrianus, and the Colonie Adria, ſeven miles from the sea. There runneth the riuier Vomeranus, and there lieth the Prætorian and J Palmenſis territorie: also Castrum novum, the riuier Batium, Truentum with the riuier, the onely relique of the Liburnians remaining in Italy. More riuers there be, to wit, Alpulates, Suinum, and Heluinum, at which the Prætorian countrey endeth, and the Picentian beginneth. The towne Cupra, a caſtle of the Firmans, and aboue it the colony Alcum, of all Picenum the most renowned. Within standeth Nouana. In the edge or marches without are Cluana, Porcentia, and Numana, built by the Sicilians. Next to those is the colony Ancona, with the promontory Cume-rum lying hard vnto it, in the very elbow of the edge thereof as it bendeth, being from Garganus 183 miles. Within forth do inhabit the Auximates, Beregranes, Cingulanes, Cuprenſes, surnamed the Mountainers, Falariens, Paululanes, Pleninſes, Ricinenſes, Septempedani, Tol-leninates, Triacenſes, the city Saluia, and the Tollentinæ.

CHAP. XIII.

¶ The sixth Region.

E To these adioyneth the ſixt region, comprehending Vmbria and the French pale about A-rimimum. At Ancona begin the French marches, by the name of Togata Gallia. The Si-cilians and Liburnians possessed most part of that tract, and principally the territories, Palmenſis, Prætorianus, and Adrianus. Them the Vmbrians expelled: these againe Hertrua drave out: and lastly the Gaules diſſeised it. The people of Vmbria are supposed of all Italy to be of greatest antiquity, as whom men thinke to be of the Greeks named Ombri, for that in the general deluge of the countrey by raine they only remained alieue. The Tuscanes are knowne to haue by war forced and woon 300 towne of theirs. At this day in the frontier of it there are the riuier Æſus, and Senogallia; the riuier Metaurus, and the colonie Fanum Fortune. Pisaurum also with the riuier. In the parts within, Hipellum and Tuder. In the rest, the Amerines, Attidi-ates, Aſrinates, Arnates, and Æſinates, Camertes, Caſentillanes, and Carſulanes, Dolates, fir-named Salentines, Fulginates, Foro-flaminienſes, Foro-Iulienſes, named also Con cubicu-nes, Foro-Bremitianj, Foro-Sempronienſes, Iguini, Interamnates, surnamed Nartes, Meau-nates, Meuinienſes, and Matilicates, Narnienſes, whose towne before-time was called Ne-quinum. Nucernines, surnamed Fauonienſes, and Camelani. The Otriculanes, and Oſtranes.

The Piruallnes, with the addition of Pisuerts, as also others surnamed Mergentines, and the Pelestines, Sentinates, Sarfinates, Spoletines, Suaranes, Sestimates, and Suillates, Sadinates, Trebiates, Tufcanes, Tifermates, named withal Tribertines, as also other of them distinguished by the name of Metaurense. The Vesonicates, the Vrbinate, as well they that be surnamed Metaurense, as others Hortenses, the Vertionenses, Vindicates, and Vientanes. In this tract are extinct the Felignates and they who possessed Clusulum about Interama: also the Saranates, with the towns Aceræ, called besides Vafrie, and Turcolum, the same that Vetrilum. Semblably the Solinates, Suriates, Fallinates, Apennates. There are gon also and cleane lost the Aricnates with Crinoulum, also the Vfidicenes and Plangenses, the Pifinates, and Cælestines. As for Amica aboue written, *Cato* hath left in record, that it was built 964 yeres before the war against *Perseus*.

CHAP. XV.

¶ The eighth Region.

The eight region is bounded with Ariminum, Padus, and Apennine. In the borders thereof is the river Crustumium, the colony Ariminum, with the riuers Ariminum and Aprusa. Then the river Rubico, the vtmost limit sometime of Italy. After it Sapis the river, Vitus, and Anemo, Rauenna a towne of the Sabines, with the river Bedefes, 102 miles from Ancona. And not far from the Vmbrians sea, Butrium. Within-forth are these colonies, Bononie, vsually called Felsina when it was the head city of Hetruria, Brixillum, Mutina, Parma, Placentia. Towns, Cæfena, Claterni, Forum Clodij, Liuij, and Popilij, pertaining to the Truentines: also [Forum] the Cornelij, Laccini, Fautentini, Fidentini, Otesini, Padinates, Regienes a Lepido, Solonates: also the forfeits Galliani, surnamed Aquinates, Tanetani, Veliates surnamed Vecteri, Regiates and Vmbrantes. In this tract the Boij are consumed, who had 112 tribes or Kindreds, as *Cato* saith. Likewise the Senones, they that tooke Rome.

CHAP. XVI.

¶ Of the river Padus.

Padus, issuing out of the bosome of the mountaine Vesulus, bearing vp his head aloft into a mighty height, runs from a marvellous spring worth the seeing, in the marches of the Ligurian Vagienni, and hiding it selfe within a narrow trench as it were vnder the ground and rising vp again in the territorie of the Forovibians, is inferior to no other riuers for excellencie. Of the Greeks it was called Eridanus, and is much spoken of and well knowne, for the punishment of *Phaeton*. It swelleth about the rising of the Dog star, by reason the snow is then thawed: more vnruly and rough vnto the fields thereby, than to the vessels vpon it, howbeit it stealeth and carieth away nothing as his owne; but when he hath left the fields, his bountie is more seen by their plenty and fruitfulness: from his head he holdeth on his course 90 miles wanting twain aboue 300. In which his passage he taketh in vnto him not only the navigable riuers of the Apennine and the Alps, but huge main lakes also that discharge themselves into him: so as in all he carieth with him into the Adriaticke sea to the number of 30 riuers. The chiefe and most notorious of them all are these, sent out of the side of Apennine: Tanarus, Trebia, Placentine, Tarus, Nicea, Gabellus, Scultenna, Rhenus. But running out of the Alps, Stura, Morgus, Duria twaine, Sefites, Ticinus, Lambrus, Addua, Olius, and Mincius. And there is not a river againe that in so little a way groweth to a greater streame: for ouercharged it is and troubled with the quantitie of water, and therefore worketh it selfe a deepe channell heauie and hurtfull to the earth vnder it, although it be deriued and drawne into other riuers and goles, betwene Rauenna and Atium, for an hundred and twenty miles; yet because he bel- leth and casteth them out from him in so great abundance, he is said to make 7 seas. Drawn he is to Rauenna by a narrow channel, where he is called Badusa, and in times past Messanicus. But the next mouth that he maketh carieth the bigneffe of an hauen, which is named Vatreini: at the which *Claudius Caesar* as hee came triumphant out of Britaine entred into Adria with that huge Vessell more like a mighty great house than a Ship. This mouth of it was before- time called Eridanum: of others, Spineticum, of the city Spina neere by, built by *Diomedes*, (as

A (as some thinke) with the treasures of Delphie. There the river Vatreinus from out of the territorie of Forum Cornelij, encreaseth Padus. The next moneth that it hath, is Caprafia, then Sagis, and so forth Volane, which before-time was called Olane. All those riuers and trenches afore said, the Tuscans began to make first out of Sagis, carrying the forceable streame of the river across into the Atrian meeres, which are called the feuen seas, and made the famous hauen of Atria a towne of the Tuscans, of which the Adriaticke sea tooke the name afore-time, which now is called Adriaticum. From thence are the full mouthes there of Carponaria and the Fosse Phylifina which others call Tartarus, but all spring out of the ouerflowing of the Fosse Phylifina, holpen with Atheis coming out of the Tridentine Alpes, and Togionus out of the territorie of the Padouans: Part of them made also the next port Brundulum: like as the two Medoaci and the Fosse Clodia, make Edron. With these Padus mingleth it selfe, and by these he runneth ouer, and as it is said by most writers, like as in Egypt Nilus maketh that which they call Delta, so it shapeth a triangle figure between the Alpes and the sea coast, twomiles in compass. A shame it is to runne to the Greekes for to borrow of them the Etymologie and reason of any thing in Italy: howbeit *Metrodorus Scepius* saith, That forasmuch as about the spring and head of this river there grow many pitch trees, called in French Padus, therefore it tooke the name Padus. Also, that in the Ligurian language, the river it selfe is called Bodincus, which is as much to say, as bottomelesse. And to approue this reason and argument, there is a towne thereby called Industria, but by an old name Bodincomacum, where in very deed, beginneth the greatest deapth thereof.

CHAP. XVII.

¶ Italy beyond Padus, the eleuenth Region.

Next to it, is the region called Transpadana, and the eleuenth in number: all whole in the mid-land part of Italy, into which the seas bring in all things with fruitfull channel. The townes therein, be Vibi-Forum, and Segusta. The colonies at the foot of the Alpes, Augusta of the Taurines, an ancient descent from the Ligurians: from whence Padus is navigable: Then, Augusta Prætoria, of the Salafst, neer vnto the two-fold gullets or passages of the Alpes, to wit, Graia and Penina: for men say, that the Carthaginians came through the one, and *Hercules* in at the other, named Graia. There standeth the towne Eporedia, built by the people of Rome, by direction and commendement out of the bookes of *Sibylla*. Now the Gauls in their tongue call good horse-breakers Eporedia. Also, Vercella of the Lybici, descended from the Sallij: Nouaria, from the Vertacomacores: which euen at this very day is a village of the Vocontij, and not as *Cato* thinketh, of the Ligurians: of whom, the Leui and Marci built Ticinum, not far from Padus: like as the Boij coming ouer the Alpes, founded Laus Pompeia; and the Insobrians, Millaine. That Comus and Bergomus, yea and Licini-Forum, with other nations thereabout, were of the Orobrian race, *Cato* hath reported: but the first beginning, and original of that nation of Orobians, he confesseth that he knoweth not. Which notwithstanding *Cornelius Alexander* sheweth to haue descended from the Greekes; and this he guesseth by the interpretation of their name, which signifieth, Men liuing in mountaines. In this tract, Barra a towne of the Orobians is cleane destroyed, from whence, *Cato* saith, the Bergomates took their beginning; bewraying euen by their name, that they were seated more highly than happily. There are cleane gone and consumed also the Catuiriges, banished persons of the Insobrians: likewise Spina, before-named. In like sort, Melpum, a towne of speciall importance for wealth, which (as *Nepos Cornelius* hath written) was by the Insobrians, Doians, and Senones, rased on that very day, on which *Camillus* forced Veij.

CHAP. XVIII.

¶ Venice, the tenth Region.

Now followeth the tenth region of Italy, Venice, lying fast vpon the Adriaticke sea: the river whereof Silis, commeth forth of the mountaines Taurisani: wherein also is the Towne Altinum, the river Liguentia issuing from the mountaines Opitgergi, a hauen of the same name: the colonie Concordia. Riuers and hauens, to wit, Romatinum, Tilauentum, the

the greater and the lesse: *Anafsum*, whereunto *Varranus* runneth downe: *Alfa*, *Natifo*, with *Tur-*
rus, running fast by *Aquileia*, a colony situate 12 miles from the sea. This is the region of the
Carni, ioyning vnto that of the *Lapides*: the riuier *Timavus*, and the castle *Pucinum*, so famous
 for good wine. The vale and Firth *Tergestinus*, taking name of the Coloeie *Tergeste*, 2, 3 miles
 from *Aquileia*: beyond which six miles, is the riuier *Formio*, 189 miles from *Rauenna* the an-
 cient bound or limit of Italy enlarged: but at this day of *Istria*, which was so named of the riu-
 er *Ister*, flowing out of the riuier *Danubius* into *Adria*: and ouer against the same *Ister*, the
 gullet or mouth of *Padus* also entrencht thither by the contrary rushing streames of which two
 riuers, the sea between both beginneth to be more milde, as many Authors haue reported, but
 vntuly: and *Cornelius Nepos* also, although he dwelt iust by *Padus*: for there is no riuier that
 runneth out of *Danubius* into the *Adriaticke* sea. Deceiued (I suppose) they were because the
 ship *Argos* went downe a riuier into the *Adriaticke* sea, not far from *Tergeste*, but what riuier it
 was, is yet vnkowne. They that will seeme to be more curious than their fellows, say, That
 it was carried vpon mens shoulders ouer the *Alpes*: and that it was set into *Ister*, and so into
Saus, and then *Nauportus* (which vpon that occasion tooke his name) which ariseth betweene
Æmona and the *Alpes*.

CHAP. XIX.

¶ *Istria.*

Istria runneth out like a demie Island. Some haue deliuered in writing, that it is 40 miles
 broad, and 122 miles about. The like they say of *Liburnia* adioyning vnto it, and of the hol-
 low gulfe *Flanaticus*. But others say, that the compass of *Liburnia* is 180 miles. And some
 there be againe, who haue set out *Lapidia*, as far as to the said creeke *Flanaticus*, behind *Istria*
 130 miles, and so haue made *Liburnia* in circuit 150 miles. *Tuditanus*, who subdued the *Istri-*
ans, vpon his owne statue there set this inscription: That from *Aquileia* to the riuier *Titius*,
 were 200 stadia. The townes in *Istria* of *Romane* citizens, be *Ægida* and *Parentum*. A Colony
 there is besides, *Pola*, now called *Pietas Iulia*, built in old time by the *Colchians*. It is from
Tergeste 100 miles. Soone after, ye see the towne *Nesactium*, and the riuier *Arfia*, the vtmost
 bound now of Italy. From *Ancona* to *Pola* there is a cut ouer the sea of 120 miles. In the mid-
 land part of this tenth region, are these Colonies: *Cremona*, and *Brixia*, in the *Cenomanes*
 countrie: but in the *Venetians* countrie, *Ateste*. Also the townes, *Acelum*, *Patauium*, *Opitergi-*
um, *Belunum*, *Vicetia*: *Mantua* of the *Tuscanes* is only left beyond *Padus*. That the *Venetians*
 were the off-spring of the *Trojan*s, *Cato* hath set downe in writing: also, that the *Cenomanes*
 neere vnto *Maffies*, dwell in the *Volcians* countrie. *Fertines*, *Tridentines*, and *Parneses*, are
 townes of *Rhetia*. As for *Verona*, it is of *Rhetians*, and *Euganeans*; but *Iulienes* be of the *Carni-*
nians. Then follow these, whom we need to vse no curiositie in naming: *Alutruenses*, *Afferi-*
ates, *Flamonieses*, *Vannienes*, & others surnamed *Gulici*: *Foro Iulienes* surnamed *Transpa-*
dani: *Forelani*, *Venidates*, *Querqueni*, *Taurisani*, *Togienes*, *Varuani*. In this tract there be peri-
 shed in the borders, *Itaminum*, *Pellaon*, *Palscium*. Of the *Venetians*, *Atina*, and *Cælina*: of
 the *Carnians*, *Segeste* and *Ocra*: and of the *Taurisci*, *Noricia*. Also from *Aquileia* 12 miles, there
 was a towne quite destroyed by *M. Claudius Marcellus*, euen maugre the Senate, as *L. Priſto* hath
 recorded. In this region there be also ten notable lakes and riuers, either issuing forth of them
 as their children, or else fed and maintained by them, if so be they fend them out againe, when
 they haue once receiued them: as *Larius* doth *Æna*, *Verbanus* *Ticinus*, *Benacus* *Mincius*, *Se-*
binus *Ossius*, *Eupilius* *Lamber*, all inhabiting and seated in *Padus*. The *Alpes* reach in length
 ten miles from the vpper sea to the lower, as *Calpurnius* saith: *Timogenes*, two and twenty; but *Corne-*
lius Nepos draweth them out in breadth an hundred miles: *T. Linius* saith, three thousand stadia:
 both of them take measure in diuers places: for sometime they exceed a hundred miles, where
 they disioyne *Germany* from *Italy*, and in other parts they are so thin, that they make not full
 out three score and ten miles: and that by the providence as it were of Nature. The breadth of
 Italy from *Varus* under the foot of them, through the shallowes or plashes of *Sabatia*, the
Taurines, *Comus*, *Brixia*, *Verona*, *Vicetia*, *Opitergium*, *Aquileia*, *Tergeste*, *Pola*, and *Aristia*,
 maketh seuen hundred and two miles.

CHAP.

CHAP. XX.

¶ *Of the Alpes, and Alpine Nations.*

Many nations inhabit the *Alpes*, but those of speciall name from *Pola* to the tract of *Ter-*
gestis, are these, the *Secuffles*, *Subocrines*, *Catili*, *Menocaleni*: and neere to the *Carnians*
 those who in times past were called *Taurisci*, but now *Norici*. Vpon these there do con-
 fine the *Rhetians* and *Vindelici*, all diuided into many States. Men thinke that the *Rheti* are
 the *Tuscan*s progenie, driuen out by the *Gauls*, with their leader *Rhetus*. But leaving these
Rhoetians, turning our breast and visage to Italy, wee meet with the *Euganean* nations of the
Alpes, who inioyed the liberty and franchises of the *Latines*, and whose townes *Cato* reckoneth
 to the number of 34. Of them, the *Triumphilines*, both people and lands were sold. After them
 the *Camuni* and many such were annexed to the next townships, and did serue as homagers
 to them. The *Lepontians* and the *Salassians*, the same *Cato* thinketh to be of the *Tauric* race.
 But all others in manner suppose verily that the *Lepontians* were a residue left behinde of
Hercules his traine and company, grounding vpon the interpretation of the Greek name, as ha-
 uing the ir bodies seaged with the Alpine snowes as they passed through: that the *Graij* like-
 wise were of the same retinue, planted in the very passage, and inhabiting the *Alps Graia*: also
 that the *Euganei* were noblest of birth, whereupon they took their name. The head city of them
 is *Stonos*. Of those *Rhoetians* the *Vennonetes* and *Sarunetes*, inhabit neere the heads of the ri-
 uer *Rhenus*. And of the *Lepontians*, those who are called *Viberi*, dwell by the Spring of *Rhoda-*
rus, in the same quarter of the *Alpes*. There be also inhabitants within the *Alpes*, endowed with
 the liberty of *Latium*, namely, the *Otodurenses*, and their neighbor borderers the *Centrones*,
 as also the *Cortian* States. The *Caturiges*, and those from them descended, to wit, the *Vagi-*
enni, *Ligures*, and such as be called the *Mountainers*: and many kindes of the *Capillati*, con-
 sisting vpon the *Ligurian* sea. It seemeth not amisse in this place to set down an inscription out
 of a triumphant Trophee erected in the *Alpes*, which runneth in this forme: Vnto the Emperour
Cæsar, son of *Augustus* of famous memorie, Arch-Bishop, Generall foure times, and inuested in the sa-
 cred authoritie of the Tribunes: the Senate and people of Rome. For that by his conduct and happie for-
 tune, all the Alpine nations which reached from the vpper sea to the nether, were reduced and brought vnder
 the Empire of the people of Rome. The Alpine nations subdued, are these, *Triumphilini*, *Camuni*, *Venno-*
netes, *Iarci*, *Breuni*, *Naumes* & *Focnnales*. Of the *Vindelici* foure nations, to wit, the *Consuuantes*, *Virucina-*
tes, *Licates*, and *Catenates*. The *Abisones*, *Suanetes*, *Calucones*, *Brixemates*, and *Lepontij*. *Viberi*, *Nantuates*,
Seduni, *Veragri*, *Salaci*, *Acitanones*, *Medulli*, *Venci*, *Caturiges*, *Brigiani*, *Sugionij*, *Ebroduntij*, *Nemaleni*,
Edenates, *Esibiani*, *Ycamini*, *Gallite*, *Triulatti*, *Ædini*, *Yergunium*, *Egunturi*, *Nementuri*, *Oratelli*, *Nerufi-*
clauani, *Suctri*. Now there were not reckoned among these the twelve *Cottian* States which were not vpon
 in any hostility, neyer those which were assigned to the free owmes to enioy the burgeoisie of Rome, by vertue
 of the law *Pompeia*. Behold this is that Italy consecrated to the gods, these are her nations, and
 these be the townes of her seuerall States. And more than all this, that Italy, which when *L. Æ-*
mylius Paulus and *Caius Attilius Regulus* were Consul, vpon newes brought of a sudden rising
 and tumult of the *Gauls*, alone by it selfe, without any forrein aids, and euen them, without any
 nations beyond *Padus*, armed 80000 horsemen and 700000 foot. In plenty of all metall mines
 it giueth place to no land whatsoever. But forbidden it is to dig any by an old act of the Senat,
 giuing expresse order to make spare of Italy.

CHAP. XXI.

¶ *Illyricum.*

The Nation of the *Liburnians* ioineth vnto *Arfia*, euen as farre as the riuier *Titius*. A part
 thereof were the *Mentores*, *Hymani*, *Encheleæ*, *Dudini*, and those whom *Callimachus* na-
 meth *Pucetia*. Now, the whole in generall is called by one name, *Illyricum*. The names
 of the Nations are few of them either worthy or easie to be spoken. As for the iudiciall court of
 Assises at *Scordona*, the *Iapides* and fourteene States besides of the *Liburnians* resort vnto. Of
 which it grieueth me not to name the *Lacinians*, *Stulpinians*, *Burnistes* and *Albonenses*. And
 in that Court these Nations following haue the libertie of *Italians*, to wit, the *Alutæ* and
Flanates.

Flanates, of whom the sea or gulf beareth the name: Lopsi, Varubarini, and the Affesiates that are exempt from all tributes; also of Islands, the Fulfinates and Curiole. Moreover, along the borders and maritime coasts, beyond Nefactum, these townes; Aluona, Flauona, Tarfatica, Senia, Lopfica, Ortopula, Vegium, Argyrunum, Corinium, the city Aenona, the river Pausinus, and Tedanium, at which Iapida doth end. The islands lying in that gulf, together with the townes, besides those towns above noted, Absirtium, Arba, Tragurium, Issa, Pharos beforetime Paros, Crexa, Giffa, Fortunata, Again, within the continent, the colony Iaderon, which is from Pola 160 miles. From thence 30 miles off, the island Colentum; and 18, the mouth of the river Titius.

CHAP. XXII

¶ Liburnia.

The end of Liburnia and beginning of Dalmatia is Scordona, which frontier towne is 12 miles from the sea, situate vpon the said river Titius. Then followeth the ancient country of the Tariores, and the castle Tarioia, the Promontory Diomedis, or, as some would haue it the demy island Hyllis, taking in circuit a hundred miles: also Tragurium, inhabited by Roman citizens, well knowne for the marble there: Sicum, into which place, *Claudius* late *Cesar*, sent the old souldiers: the Colony Salona, 222 miles from Iadera. There repaire to it for law those that are described into Decuries or tithings 382: to wit, Dalmatians 22, Decunum 239, Ditiones, 69, and Mezæi 52, Sardiates: in this tract are Burnum, Mandetrium, and Tribulum, castles of name for the battels of the Romanes. There came also forth of the islands the Ifficans, Collettines, Separians, and Epetines. Besides them, certaine castles, Piguntia and Rataneum, and Narona a colonie pertaining to the third Countie-court, 72 miles from Salona, lying hard to a river of the same name, and 20 miles from the sea. *M. Varro* writeth, that 89 States vied to repaire thither for justice. Now, these only in a manner be knowne, to wit, Cerauni in 33 Tithings, Daorizi in 17, Desitiaties in 103, Doelates in 24, Deretines in 14, Deremistes in 30, Dindari in 33, Glinditiones in 44, Melcomani in 24, Naresij in 102, Scirtari in 72, Siculote in 24: and the Vardæi, who sometime waisted and forsaied Italy, in 20 decuries and no more. Besides these, there held and possessed this tract Oenei, Partheni, Hemafini, Arthia, and Armistæ. From the river Naron a hundred miles, is the colony Epidaurum. Townes of Roman citizens be these, Rhizinium, Aferinium, Butua, Olchinium, which beforetime was called Colchinum, built by the Colchi. The river Drilo, and the towne vpon it, Scodra, inhabited by Roman citizens, eighteen miles from the sea.ouer and besides, many other townes of Greece, yea & strong cities, out of all remembrance. For in that tract were the Labeates, Enderudines, Saffæi, Grabæi, and those who properly were called Illyrij, the Taulantij and Pyreæ. The Promontorie Nymphæum in the coast thereof, keepeth still the name: also Lysium a towne of Romane citizens, a hundred miles from Epidaurum.

C XXIII.

¶ Macedonie.

From Lissum is the prouince of Macedonie: the nations there, be the Partheni, and on their backe side the Dassaretas. Two townes of Candauia 79 miles from Dyrrhachium, but in the borders thereof, Denda, a towne of Roman citizens: also the Colonie Epidaurum, which for that vnluckie names sake was by the Romans called Dyrrhachium. The river Aous, named of some *Æas*, Apollonia, sometime a Colonie of the Corinthians, situate within the country, seuen miles from the sea, in the marches wherof is the famous Nymphæum. The borderers inhabiting thereby, are the Amantes and Buliones. But in the very edge thereof, the town Oricum built by the Colchi. Then beginneth Epirus, the mountaine Acroceraunia, at which we haue bounded this sea of Europe: as for Oricum, it is from Salentinum (a promontorie of Italy) 85 miles.

CHAP. XXIIII

¶ Noricum.

Behind the Carni and Iapides, whereas the great river Ister runneth, the Norici ioine to the Rhæti. Their townes be Virunum, Celsia, Teurnia, Aguntum, Viana, Amora, Claudia, Flavium,

A vium, Tolvense. Vpon the Norici there lie fast the Lake Peiso, the deserts of the Boij. Howbeit, now by the colonie of the late Emperor *Claudius* of famous memorie, Salaria and the towne Scarabantia Iulia, they be inhabited and peopled.

CHAP. XXV.

¶ Pannonia.

Hence beginneth Pannonia so fruitfull in Maist: whereas the hills of the Alps, waxing more mild and ciuill, turning through the midst of Illyricum from the North to the South, setteth lower by an easie descent both on the right hand and the left. That part which regardeth the Adriatick sea, is called Dalmatia, and Illyricum about named. Pannonia bendeth toward the North, and is bounded by the river Danubius. In it are these Colonies, Amonia, Siscia. And these rivers of specfall name, and nauigable, run into Danubius, Draus with more violence out of the Noricke Alps, and Saus out of the Carnicke Alpes more gently, 115 miles between. As for Draus, it passeth through the Serretes, Serripilles, Iasians, & Sandrozetes: but Saus through the Colapians and Bruci. And these be the chiefe States of that country. Moreover, the Arimates, Azali, Amantes, Belgites, Catari, Cornicates, Aravisci, Hercuniaties, Latovic, Ofseriaties, and Verciani. The mount *Claudius*, in the front whereof are the Scordisci, and vpon the backe, the Taurisci. The island in Saus, Metubarris, the biggest of all the river islands. Besides, notable good rivers, Calapis running into Saus neere Siscia, where with a double channel it maketh the island called Segestica: another river Bacuntius, running likewise into Saus, at the towne Sirmium: where is the State of the Sirmians and Amantines. Five & forty miles from thence Taurunum, where Saus is intermingled with Danubius. Higher about there run into it Valdanus and Vrapanus, and they ywis be no base and obscure rivers.

CHAP. XXVI.

¶ Mæsia.

Vnto Pannonia ioineth the Prouince called Mæsia, which extendeth along Danubius vnto Pontus. It beginneth at the confluent about named: in it are the Dardaniens, Celgeri, Triballi, Trimachi, Mæsi, Thranes, and the Seythians bordering vpon Pontus. Faire rivers, out of the Dardaniens countrey, Margis, Pingus, and Timachis. Out of Rhodope, Oessius: out of Hæmus, Vtus, Eflamus, and Ieterus. Illyricum where it is broadest, taketh vp 325 miles: it lieth out in length from the river Arsa to the river Drinius, 800 miles. From Drinium to the cape Acroceraunium, 182 miles. *M. Agrippa* hath set downe all the whole seas comprehending Italy and Illyricum, in the compasse of 1300 miles. In it are two smaller seas or gulfs bounded as I haue said: namely, The lower, otherwise called the Ionian, in the fore-part: the inner, called Adriaticum, which also they name the vpper: in the Aufonian sea there be no islands worth the speaking, but those about named: in the Ionian sea there are but few, to wit, vpon the Calabrian coast before Brundisium, by the obiect site whereof, the haven is made: and against the Apulian coast Diomede, famous for the tombe and monument of *Diomedes*: another also of that name, called by some Teutria. As for the coast of Illyricum, it is pestered with more than a thousand, such is the nature of the sea, full of shelles and washes, with narrow channells running between. But before the mouthes of Timavus, there be Islands famous for hot waters, which ebbe and flow with the sea: and neere vnto the territorie of the Iffrians, Cissa, Pullaria, and those which the Greekes name Absyrtides, of *Medæus* brother *Apsyrtis* there slaine. Neere vnto them, they called the Islands Eleatrides, wherein is ingendred Ambre, which they call Electrum, a most assured argument to proue the vanity of the Greeks; for that which of them they meant, was neuer known: against Iader, there is Lissa; and certain other ouer against the Liburnians, called Creter: and as many of the Liburnians, Celaduse: against Surium, there is Brattia, commended for neat and goats. Issa, inhabited by Roman citizens, and Pharia with the towne. Next to these, Corcyra, furnished Melæna, with the towne of the Gnidiens, distant 22 miles asunder: between which and Illyricum, is Melita; wherof (as *Callimachus* testifieth) the little dogs Melitæi tooke their name: and 12 miles from thence, the three Elaphites. In the Ionian sea from Oricum 1000 miles, is Salsotis, well knowne for the Pirats harbor there.



THE FOVRTH BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

From whence first arose all the fabulous lyes, and the excellent Learning of the Greekes.

The third Sea of Europe beginneth at the mountaines Acrocerania, and endeth in Hellespont: it containeth besides nineteene smaller gulfes or creekes, 25 thousand miles. Within it, are Epirus, Acarnania, Ætolia, Phocis, Locris, Achaia, Messania, Laconia, Argolis, Megaris, Attica, Bœotia. And againe from another sea the same Phocis and Locris, Doris, Phthiotis, Theſſalia, Magnesia, Macedonia, Thracia. All the fabulous veine, and learning of Greece, proceeded out of this quarter. And therefore we will therein stay somewhat the longer. The countrey Epirus, generally so called, beginneth at the mountaines Acrocerania. In it, are first the Chaones, of whom Chaonia taketh the name: then the Thesprotians, and Antigonenses: the place Aornus, and the aire arising out of it so noisome and pestiferous for birds. The Cestines, and Perrethians with their mountaine Pindus; the Cassiopæi, the Dryopes, Selli, Helopes, and Molossi, among whom is the temple of Iupiter Dodonæus, so famous for the Oracle there: the mountaine Tomarus, renowned by Theopompus for the hundred fountains about the foot thereof.

CHAP. I.

¶ Epirus.

Epirus it selfe reaching to Magnesia and Macedonia, hath behinde it the Dassaretians above named, a free nation, but anon the savage people of the Dardani-ans. On the left side of the Dardaniens, the Trebellians and nations of Mœsia lye ranged: afront there ioine vnto them, the Medi and Denthelates: vpon whom the Thracians border, who reach as farre as to Pontus. Thus enuironed it is and defended round, partly with the high hill Rhodope, and anon also with Hæmus. In the vtmost coast of Epirus among the Acrocerania, is the castlle Chimæra, vnder which is the spring of the kings water. The townes are, Mæandria and Cestria: the river of Thesprotia, Thyamis: the colonie Buthrotium: and the gulfes of Ambracia, aboue all others most famous, receiuing at his mouth the wide sea; 39 miles in length, and 15 in breadth. Into it runneth the river Achéron, flowing out of Acherusia, a lake of Thesprotia 36 miles from thence: and for the bridge ouer it 1000 foot long, admirable to those that admire and wonder at all things of their owne. In the very gulfes is the towne Ambracia. The rivers of the Molossians, Aphas and Aractus. The citie Anaclitoria, and the lake Pandosia. The townes of Acarnania, called before time Curetus, be Heraclæa and Echinus: and in the very entrance and mouth thereof, Artium a Colonie of Augustus, with the goodly temple of Apollo, and the free citie Nicopolis. When ye are gone out of the Ambracian gulfes into the Ionian sea, ye meet with the Leucadian sea coast, and the promontorie of Leucate. Then the creeke, and Leucadia it selfe, a demie Island, sometime called Neritis, but by the labour of the inhabitants thereby, cut quite from the Continent, but annexed to it again by means of the winds blowing together heapes

A of sand, which place is called Dioryctus, and is in length almost halfe a mile. A town in it there is called Leucas, sometime Neritum. Then the cities of the Acarnanians, Halysæa, Stratos, Argos (surnamed Amphichicium). The river Achelous running out of Pindus, & diuiding Acarnania from Ætolia, and by continuall bringing in of earth, annexing the island Artemita to the firme and maine land.

CHAP. II.

¶ Ætolia.

The Ætolian nations, be the Athamans, Tynphæi, Ephiri, Ænienſes, Perrethæi, Dolopes, Maraces and Atraces, from whom the river Atrax falleth into the Ionian sea. The Towne Calydon in Ætolia is seuen miles and an halfe from the sea, neere to the river Euenus: then followeth Macynia and Molychria, behind which Chalcis standeth, and the mountaine Taphiasſus. But in the very edge and borders thereof, the Promontorie Antirrhium, where is the mouth of the Corinthian gulfes, not a mile broad where it runneth in, & diuideth the Ætolians from Peloponnesus. The promontorie that shooteth out against it, is named Rhion: but vpon that Corinthian gulfes are the townes of Ætolia, Naupactum and Pylene: but in the mid-land parts, Pleucon, Halysarna. The mountaines of name: in Dodone, Tomarus: in Ambracia, Grania: in Acarnania, Aracynthus: in Ætolia, Acanthion, Panætolium and Macinium.

CHAP. III.

¶ Locri.

Next to the Ætolians are the Locri, surnamed Ozolæ, free States and exempt: the towne Oeanthe: the haue of Apollo Phæstus: the creeke Crissæus. Within forth are these townes Argyna, Eupalia, Phæstum, and Calamisſus. Beyond them are Citirhai, the plaines of Phocis, the towne Cirrha, the haue Chæalon: from which, seuen miles within the land, is the free citie Delphi, vnder the hill Parnassus, the most famous place vpon earth for the Oracle of Apollo. The fontaine Castalius, the river Cephisſus running before Delphos, which ariseth in a citie, sometime called Lilibœa. Moreouer, the towne Crissa, and together with the Bulenſes, D Anicurya, Naulochum, Pyrrha, Amphissa an exempt State, Trichone, Tritæa, Ambrysus, the region Drymæa, named Daulis. Then in the inmost nouke of the creeke, the very canton and angle of Bœotia is washed by the sea, with these townes Siphæ and Thebæ, which are surnamed Corſicæ neere to Helicon. The third towne of Bœotia from this sea is Page, from whence proceedeth and beareth forth the necke or cape of Peloponnesus.

CHAP. IV.

¶ Peloponnesus.

Peloponnesus, called before time Apia and Pelafgia, is a demy Island, worthie to come behinde no other land for excellency and name; lying betwene two seas, Ægeum and Ionium: like vnto the leafe of plane tree, in regard of the indented creekes and cornered nouks thereof: it beareth a circuit of 563 miles, according to Isidorus. The same, if you comprise the creekes and gulfes, addeth almost as much more. The streight where it beginneth to passe on and go forward, is called Isthmos. In which place the seas a bouenamed gushing and breaking from diuers waies, to wit, from the North and the East, do deuoure all the breadth of it there: vntill by the contrary running in of so great seas, the sides on both hands being eaten away, and leauing a space of land betwene, siue miles ouer, Hellas with a narrow necke doth meet with Peloponnesus. The one side thereof is called the Corinthian gulfes, the other, the Saronian. Lecheum of the one hand, and Cenchræa of the other, do bound out and limit the said streights where the ships are to fetch a great compass about with some danger, such vessels I meane as for their bignesse cannot be conueighed ouer vpon wains. For which cause, Demetrius the king, Cesar the Dictator, prince Caius, and Domitius Nero, assailed to cut through the narrow foreland, and make a channell nauigable with ease: but the attempt and enterprise was vnhappy, as appeared by the issue and end of them all. In the midst of this narrow streight which we

haue called Isthmos, the colonie Corinthus, beforetime called Ephyras, scituate hard to a little hill, is inhabited, some 60 stadia from both sea sides: which from the top of the high hill and castle there, which is named Acrocorinthus, wherein is the fountaine Pirene, hath a prospect into both those contrarie seas. At this Corinthian gulfe there is a passage or cut by sea from Leucas to Patræ of 87 miles. Patræ a Colonie, built vpon the promontorie of Peloponnesus, that shooteth farthest into the sea, ouer against Aetolia and the riuer Euenus, of lesse distance, as hath bin said, than fve miles in the very gullet and entrance, do fend out the Corinthian gulfe 85 miles in length, euen as far as Isthmos.

CHAP. V.

¶ Achaia.

Achaia, the name of a prouince, beginneth at Isthmus, aforetime called it was Ægialos, because of the cities, scituate so orderly vpon the strand. The principal and first there is Lecheæ abouenamed, a port towne of the Corinthians. Next to it Oluros, a castle of the Peleneans. The towne Helice, Bura, and (into which the inhabitants retired themselves, when these beforenamed were drowned in the sea) Sicyon, Ægira, Ægion, and Erineos. Within the country was Cleone and Hyfie. Also the haue Panormus, & Rhium described before: from which promontorie fve miles off standeth Patræ aboue mentioned, & the place called Phææ, of 9 hills in Achaia, Scioeila is most knowne, also the Spring Cymothoe. Beyond Patræ is the towne Olenum, the colonie Dymæ. Certain faire places called Buprasium and Hirmece: & the promontorie Araxum. The creeke of Cyllene, the cape Chelonates: from whence to Cyllene is two miles. The castle Phlius. The tract also by Homer named Arethya, and afterwards Aopphis. Then the country of the Elians, who before were called Epei. As for Elis the city it selfe, it is vp higher in the mid-land parts, 12 miles from Pylos. Within it standeth the Chappell of *Iupiter Olympius*, which for the fame of the games there, containeth the Greekes and Chaldeans account of yeares. Moreover, the towne sometime of the Piscans, before which the riuer Alpheus runneth. But in the borders and coast thereof the promontorie Iethys. Vpon the riuer Alpheus, there is passage by water in barges to the towne Aulos and Lepreon. The promontory Plataneus, all these lie Westward. But toward the South, the arme of the sea called Cyparissius, and the city Cyparissa, 72 miles in circuit. The towne vpon it, Pylos, Methone, a place and Forrest called Delos: the promontorie Acritas: the creeke Asineus of the towne Asinum, & Coroneus of Corone, and these are limited with Tenarus the promontorie. There also is the region Messenia with 22 mountains. The riuer Paomifus. But within, Messene it selfe, Ithome, Oechalia, Arene, Pteleon, Thryon, Dotion, Zanculum, famous towne all for many occurrents at sundry times. The compasse of this arme of the sea is 80 miles, the cut ouer-crosse 30 miles. Then from Tenarus, the Laconian land pertaining to a free people, and an arme of the sea there in circuit about 206 miles, but 39 miles ouer. The towne Tenarum, Amicla, Phææ, Leudra, and within-forth Sparta, Theranicum: and where stood Cardamyle, Pitane, and Anthane. The place Thyrea, and Gerania. The hill Taygetus: the riuer Eurotas, the creeke Ægylodes, and the towne Psammathus. The gulfe Gytheates, of a towne thereby (Gythium) from whence to the Island Crete, there is a most direct and sure cuttall these are inclosed within the promontorie Maleum. The arme of the sea next following is called Argolicus, and is 50 miles ouer, and 172 miles about. The towne about it Boea, Epidaurus, Limera, named also Zarax, Cypanta, the haue. Riuer, Inachus, Erasinus: betweene which standeth Argos furnished Hippium vpon the Lake Lerne, from the sea two miles, and nine miles farther Mycenæ also where they lay Tiryntha stood, and the place Mantinea. Hills, Artemius, Apefantus, Aterion, Parnarus, and eleuen others besides. Fountaines, Niobe, Amymon, Psamothoe. From Scyleum to Isthmus 177 miles. Towns, Hermione, Troezen, Coryphasium and Argos, called of some Inachium; of others, Dipsum. The haue Cenites, the creeke Saronicus, best round about in old time with woods of Oake, whereupon it had the name, for so old Greece called an Oake. Within it stood the towne Epidaurum, much resorted vnto for the temple of *Æsculapius*, the promontorie Spiræum, the haue Anthedon and Bucephalus: and likewise Cenchræ which we spake of before, being the other limit of Isthmus, together with the chappell of *Nephtue*, famous for the games there represented euery fve yeares. Thus many creekes doth scotch and cut Peloponnesus: thus many

A many seas I say do rore and dash against it. For on the North side the Ionian sea breaketh in: on the West it is beaten vpon with the Sicilian. From the South the Cretian sea driueth against it: Ægeum from the Southeast, and Myrtoum on the Northeast, which beginning at the Megarian gulfe, washeth all Attica.

CHAP. VI.

¶ Of Arcadia.

The midland parts thereof, Arcadia most of all taketh vp, being euery way far remote from the sea: at the beginning it was named Drymodis, but soone after Pelasgis. The towne in it be Psophis, Mantinea, Stympthalus, Tegea, Antegonea, Orchomenum, Pheneum, Palatium, from whence the mount Palatium at Rome tooke the name. Megalopolis, Catina, Bocallium, Carmon, Parthalia, Thelphusa, Melanæa, Heraæ, Pile, Pellana, Agræ, Epium, Cynætha, Lepreon of Arcadia, Parthenium, Alea, Mythrium, Enespe, Macitium, Lampe, Clitorium, Cleone: betweene which towne is the tract Nemea, usually called Berubadina. Mountains in Arcadia, Pholoe with a towne so named. Item, Hyllene, Lyceus, wherein was the chappell of *Iupiter Lyceus*, Mænalus, Artemisus, Parthenian, Lampus, and Nonacris: & eight besides of base account. Riuer, Ladon, issuing out of the meeres and fens of Pheneus, Erymanthus out of a mountaine of the same name, running both downe into Alpheus. The rest of the cities to be named in Achæa, Aliphirai, Abeatæ, Pyrgenes, Pareatæ, Paragenitia, Tortuni, Typanæ, Thryafis, Tritenises. All Achæa generally throughout, *Dominus Nero* endowed with freedom. Peloponnesus from the promontorie of Malea to the towne Lechaum vpon the Corinthian gulfe, lyeth in bredth 160 miles: but ouer crosse from Elis to Epidaurum 125 miles: from Olympia to Argos through Arcadia 63 miles. From the same place to Phlius is the said measure. And all throughout, as if Nature made recompence for the irruptions of the seas, it riseth vp in 76 hills.

CHAP. VII.

¶ Greece and Attica.

At the streights of Isthmus beginneth Hellas, of four countrymen called Græcia: the first tract thereof is Attica, in old time named Aegæ. It reacheth vnto Isthmus on that part thereof which is called Megaris of the colony Megara, or against Pagæ. These 2 towne as Peloponnesus lieth out in length, are seated on either hand, as it were vpon the shoulders of Hellas. The Pagæans, and more than so, the Ægosthenieses lie annexed to the Magarensians, and owe seruice to them. In the coast thereof is the haue Schœnus. Townes, Sidus, Cremenon, Scironia rocks for three miles long, Geranea, Megara, and Eleusin. There were besides, Oenoe and Probalinthus, which now are not to be seen, 52 myles from Isthmus. Pyraeus and Phalera, two haues joined to Athens by a wall, with in the land fve miles. A free citie this is, and needeth no more any mans praise: so noble and famous it is otherwise, beyond all measure. In Attica be these fountains, Cephissia, Larine, Callirhoe, and Enneacreunus. Mountains, Brilefius, Megalæus, Icarus, Hymettus, & Lyabetus: also the riuer Ilissos. From Pyraeus 42 miles off, is the promontorie Sunium, likewise the promontorie Doricum. Also Potamos and Brauron, towne in times past. The village Rhamnus, and the place Marathon, the plain Thralitis, the towne Melita and Oropus, in the confines or marches of Boeotia. Vnto which belong Anthedon, Onchestos, These a free towne Lebadea: and Thebes furnished Boeotia, not inferior in fame and renown to Athens, as being the native country, & as men would haue it, of two gods, *Liber* and *Hercules*. Also they attribute the birth of the Muses in the wood Helicon. To this Thebes, is assigned the forest Cithæron, and the riuer Ilmenus. Moreover fountains in Boeotia, Oedipodium, Psammate, Dirce, Epigranea, Arethusa, Hippocrene, Aganippe, and Gargaphia. Mountains ouer and besides the forenamed, Mycaleffus, Adylifus, Acontius. The rest of the towne betweene Megara & Thebes, Eleuthera, Haliartus, Plateæ, Phææ, Aspledon, Hyle, Thisbe, Erythræ, Glifias, and Copæ. Neere to the riuer Cephissus, Lamia, and Anichia: Medeon, Phligone, Grephis, Coronæa, Charonia. But in the outward borders, beneath Thebes, Ocaleon, Eleon, Scolos, Scænos, Pteleon, Hyrie, Mycaleffus, Hyrseon, Pteleon, Olyros, Tanagia, a free State; and in the

the very mouth of Euripus, which the Island Euboea maketh by the opposite site thereof. **A**ulis, so renowned for the large haven that it hath. The Boeotians in old time were named Hyantes. The Locrians also are named withall Epinemidij, in times past Letegetes, through whom the river Cepheissus runneth into the sea. Townes, Opus (whereof commeth the gulfe Opuntinus) and Cynus. Vpon the sea coast of Phocis, one & no more, to wit Daphnus. Within forth among the Locrians, Elatea, and vpon the bank of Cepheissus (as we haue said) Lilea: & toward Delphos, Cnecius and Hiampolis: againe, the marches of Locri, wherein stand Larymna and Thronium, neere vnto which the river Boagrius falleth into the sea. Townes, Narycion, Alope, Scarphia: after this, the vale called of the people there dwelling, Malicus Sinus, wherein bee these townes, Halcyone, Eeonia, and Phalara. Then Doris, wherein are Sperchios, Erineon, Boion, Pirfidus, Cytinium. On the backe-side of Doris is the mountain Oeta. Then followeth Æmonia that so often hath changed name. For one and the same hath bin called Pelasgicum, Argos, **H**ellas, Thessalia also, and Dryopis, and euermore toke name of the kings. In it was borne a king called *Græcus*, of whom Greece bare the name: there also was *Hellen* borne, from whence came the Hellenes. These being but one people, *Homer* hath giuen three names vnto, that is to say, Myrmidones, Hellenes, and Achæi. Of these, they be called Phthiote: who inhabit Doris. Their townes be Echinus, in the very gullet & entrance of the river Sperchius: and the streights of Thermopylae, so named by reason of the waters: and foure miles from thence Heraclea, was called Trachin. There is the hill Callidromus: and the famous townes, Hellas, Halos, Lamia, Phthia, and Arne.

CHAP. VIII.

¶ Thessalia.

Moreouer in Thessalie, Orchomenus, called before-time Minyeus; and the towne Almon, or after some Elmon; Atrax, Pelinna, and the fountaine Hyperia. Townes, Phæra, behind which Pierius stretcheth forth to Macedonia: Larissa, Gomphi, Thebes of Thessalie, the wood Pteleon, and the creeke Pagasicus. The towne Pagasa, the same named afterwards Demetrias; Tricca, the Pharsalian plains with a free city, Cranon and Ileria. Mountains of Phthiotis, Nymphæus, most faire and lightly for the naturall arbors and garden workes there: Buzigæus, Donacefa, Bermius, Daphissa, Chimieron, Athamas, Stephane. In Thessaly there be 34, where- **K** of the most famous are, Cerceti, Olympus, Pierus, Ossa: iust against which is Pyndus and Othrys, the seat and habitation of the Lapithæ; and those lie toward the West: but Eastward, Pelios, all of them bending in manner of a theatre: and before them stand ranged wedge-wise, 72 cities, Riuer of Thessalie, Apidanus, Phœnix, Enipeus, Onochomus, Pamilus: the fountain Meffis, the people Boebei: and about all the rest the most famous riuer Peneus, which arising neere Gomphi, runneth for 500 stadia in a wooddiendale between Ossa and Olympus, and halfe that way is nauigable. In this course of his, are the places called Tempe, 5 miles in length, and almost an acre and a halfe broad, where on both hands the hills arise by a gentle ascent about the reach of mans sight. Within forth glieth Peneus by, in a fresh green groue, cleare as chrystall glasse ouer the grauellly stones, pleasant to behold for the grasse vpon the banks, and resounding again with the melodious consent of the birds. It taketh in the riuer Eurotus, but entertaineth **L** him not, but as he floweth ouer the top of him like oile (as *Homer* saith:) within a while after that he hath carried him a small way, letteth him goe againe and rejecteth him, as refusing to mingle with his owne siluer streams, those poenall and cursed waters engendred for the infernall Furies of hell.

CHAP. IX.

¶ Magnesia.

TO Thessaly, Magnesia is annexed: the fountaine there is Libethra. The townes, Iolchos, Hirmenium, Pyrrha, Methone, Olizon. The promontorie Sepias. Townes moreover, Cassana, Sphalatra, and the promontory Ænantium. Towns besides, Melibœa, Rhifus, Erymne. The mouth of Peneus. Towns, Homolium, Orthe, Thespie, Phalanna, Thaumacie, Gyrtion, Cranon, Acarne, Dorion, Melitæa, Phylace, Potinæ. The length of Epirus, Achaia, Attica and Thessalie, lying straight out, is by report 480 miles; the breadth 287.

CHAP.

CHAP. X.

¶ Macedonia.

Macedonie, so called afterwards (for before-time it was named Emathia) is a kingdome consisting of 150 severall States, renowned for two kings above the rest, and ennobled sometime for the Monarchie and Empire of the world. This countrey lying farre in behind Magnesia and Thessaly toward the nations of Epirus Westward, is much troubled and infested with the Dardanians. The North parts therof are defended by Pœonia and Pelagonia, **B** against the Triballi. The townes be these, Aegæ, wherein the manner was to interre their kings: Berœa, and Æginium, in that quarter which of the Wood is called Pieria. In the outward borders Heraclea, and the riuer Apilas: more townes, Phina, and Oloros: the riuer Haliacmon. Within forth are the Haloritzæ, the Valleij, Phylaceij, Cyrrestæ, Tyriffæij: Pella the Colonie: the town Stobi of Romane citizens. Anon, Antigonja, Europus vpon the riuer Axios, and another of the same name through which Rhædas runneth: Heordeæ, Scydra, Mieza, Gordiniæ. Soone after in the borders, Ichnæ, and the riuer Axios. To this bound the Dardani: Treres, and Pieres border vpon Macedony. From this riuer, are the nations of Pœonia, Paroreij, Heordenes, Almopij, Pelagones, and Mygdones. The mountains Rhodope, Scopus, and Orbelus. The rest is a plaine countrey, wherein Nature seemes to set out her riches: in the lap whereof are the Arethusif, Antiochieneses, Idomenieneses, Doberieneses, Tricienes, Allantieneses, Andaritieses, **C** Moryllij, Garefij, Lyncestæ, Othriones, and the free states of the Amanines and Orestæ. Colonies, Bulledenfis & Dienfis. Xilopolitæ, Scoutafæij free, Heraclea, Sintica, Timphæi, and Coronæ. In the coast of the Macedonian sea, the towne Calastra, and within forth, Phileros, and Lete: and in the middle bending of the coast, Thessalonica, of free estate and condition. To it from Dyrrachium, it is 114 miles, Thermæ. Vpon the gulfe Thermaicus, be these townes, Dicæa, Pydna, Derrha, Scione: the promontory Canastæum. Townes, Pallene, Phera. In which region these mountains, Hypfizorus, Epitus, Alchione, Leuomne. Townes, Nifos, Brygion, Eleon, Mendæ, and in the Isthmos of Pallene, the Colinie sometime called Potidæa, and now Castandria, Anthemus, Holophyxus the creeke, and Mecyberna. Townes, Phiscella, Ampelos, Torone, and Singos: the Frith (where *Xerxes* king of the Persians cut the hill Athos from the Continent) in length a mile and a halfe. The mountaine it selfe shooteth out from the plaine into the sea, 75 miles. The compass of the foot thereof takes 150 miles. A towne there was in the pitch of it, Acroton. Now there be Vranopolis, Palæotrium, Thyffus, Cleone, Apollonia, the inhabitants whereof be named Macrobij. The towne Cassera, and a second gullet or creeke of the Isthmus, Acanthus, Stagira, Sitone, Heraclea, and the region lying vnder Mygdonia, wherein are seated farre out from the sea, Apollonia and Arethusa, Again in the coast, Possidium, and a creeke with the towne Cernorus: Amphipolis a free state, and the people Bisaltæ. Then the riuer Strimon, which is the bound of Macedonia, which springeth in Hæmus: of which this is worthy to be remembered, that it runneth into seuen lakes before it keepeth a direct course. This is that Macedonie, which sometime conquered the dominion ouer all the **E** earth: this ouer-ran Asia, Armenia, Iberia, Albania, Cappadocia, Syria and Ægypt; yea and passed ouer Taurus and Caucasus: this ruled ouer the Bactrians, Medians, and Persians, and possessed all the East: this hauing the conquest of India, ranged after the traicts of Father *Liber* and *Hercules*. This is the very same Macedonie, of which in one day *Paulus Æmilius* our Generall, sacked and sold 72 cities. See the difference of fortune in two men.

CHAP. XI.

¶ Thracia.

Now followeth Thracia, among the most valiant nations of Europe, diuided into 52 regiments of souldiers. Of those States in it, the Denesletes and Medi, whom it grieues me not to name, doe inhabit neere to the riuer Strymon on the right side, as farre as to the Bisaltæ aboute-named: on the left, the Digeri, and many townes of the Bessi, euen to the riuer Nestus, which inuirotheth the bottome of the hill Pangæus, between the Eleti, Diobesi, and Carbilesi, and so forward to the Bryse and Capæi. Odomanta a towne of the Odyrians, sendeth

deth out the riuer Hebrus to the neighbour-borderers, the Caribiles, Pyrogeris, Drugeris, Cagnicks, Hypsalts, Beni, Corpilli, Bortai, and Edons. In the same tract the Selletæ, Priantæ, Dioloneæ, Thyni, Celæta, the greater vnder Hæmus, the lesse vnder Rhodope between whom, runneth the riuer Hebrus. The towne scituate beneath Rhodope, was before time named Ponopolis; some after by the founder, Philippopolis: but now of the site thereof Trimontium. The ascent of Hæmus vnder the top, taketh six miles: the backe-side and hanging thereof downe to Ister, the Mœsians, Getes, Aori, Gaudæ, and Clarix; and vnder them the Arræi, Sarmata whom they call Areatæ, and Scythians: and about the sea coast of Pontus, the Morifenes and Sithonians, from whom the Poet *Orpheus* descended, doe inhabit. Thus Ister boundeth it on the North: in the East, Pontus and Propontis: Southward, the sea Ægeum, in the coast whereof from Strimon, stand Apollonia, Oestima, Neapolis, and Polis. Within-forth, the Colonie of *Philip*, and 325 miles from Dyrhachium, Scoutia, Topiris, and the mouth of the riuer Nestus. The hill Pangæus, Heraclea, Olynthos, Abdera a free citie, the meeke and nation of the Bifons. There, stood the town Tinda, terrible for the horses of *Diomedes* that stabled there. Now at this day, Diceæ, Ismaron, the place Parthenion, Phalefina, Maronea called Ortageura before time. The mountaine Scerium and Zonæ: then, the plaine Dorifcus able to receiue * 10000 men: for *Xerxes* took a iust account of his armie and numbred it. The mouth of Hebrus: the haue of Stentor: the free towne Anea, together with the tombe of *Polydorus*, the region sometime of the Cicones. From Dorifcus, the coast bendeth crookedly to Macron-Tichos, for 122 miles. About which place the riuer Melas, whereof the creeke beareth name. Townes, Cypfella, Bisanthe, and that which is called Macron-Tichos, what way as stretching forth the walls along from Propontis to the Creeke Melanes betweene two seas, it excludes Cherfoneus as it runneth out. For, Thracia of one side beginning at the sea coast of Pontus, where the riuer Ister is discharged & swallowed vp, hath in that quarter passing faire and beautifull cities, to wit, Istropolis of the Milesians, Tomi, and Calatis which before was called Acernitis. It had sometime Heraclea and Bizon, which funke and was lost in a gaping chinke of the earth; but now in stead thereof Dionysopolis, called before Crunos. The riuer Ziras runneth hard by it. All that tract, the Scythians name besides Aroteres, possessed. These townes were, Aphrodisius, Libistis, Zigere, Borebe, Eumenia, Parthenopolis, Gerania, where it is reported that the nation of the Pygmæans kept, whom the barbarous people call Catizi, and they are of beliefe that they were chased away and put to flight by cranes. In the edge thereof next to Dionysopolis, there is Odeffus of the Milesians, the riuer Pomiscus, the towne Tetranulocos: the mountaine Hæmus bearing forth with a huge top into Pontus had in the pitch thereof the towne Aristum. Now in the coast is Mesembria and Anchialum, where Messia was. The region Afice. There was the towne Anthium, now there is Apollonia. The riuers Panissa, Rira, Tearus, Orofines. Townes, Thynnias, Almadedfous, Deuelton with the poole which now is called Deultum, belonging to the old fouldiers. Phinopolis, neere vnto which is Bosphorus. From the mouth of Ister to the entrance of Pontus, some haue made it 555 miles. *Agrippa* hath set it 40 miles more. And from thence to the wall aboue named 150; and so from it to Cherfoneus 126. But neere to Bosphorus is the arme of the sea Gallicenes. The haue furnished of old men, and an other likewise of women. The promontory Chryloceras, whereupon standeth the town Bizantium of free estate, called before time Lygos. From Dyrhachium it is 711 miles. Thus much lies out the main in length between the Adriatick sea and Propontis. Riuers, Bathynias, Pydaras, or Atyras, Towns, Selymbria, Perinthus, annexed to the Continent 200 pases broad. Within-forth, Byzia, the castle of Thracian kings, hated of Swallowes, vpon the horrible and cursed fall of *Tereus*. The region Camica: the colonie Flautiopolis, where before time the town was called Zela. And 50 miles from Byria the Colony Apros, which is from Philippi 188 miles. But in the borders, the riuer Erginus, where was the town Gonos. And there you leaue the citie Lyfimachia, also now in Cherfoneus. For another land passage or Isthmus there is of like streights, al one in name, and of equall breadth with that of Corinth. Likewise on both sides two cities do beautifie and set out the stronds, which they take vp not vnlike to the other, to wit, Padia: from Propontis and Cardia from the gulfes Melaneas for this, it taketh the name of the forme and proportion of the place made like a heart; and both, afterwards, where inclosed within Lyfimachia 3 miles from the long walls aboue said. Cherfoneus from Propontis side, had Tiristafis & Crithotes, also Ciffa fast vpon the riuer Ægos: now it hath from the colony Apros 32 miles Restus, over-against

* Or 10000.

* Macron-Tichos.

- A against the colony Pariana. And Hellefpontus, diuiding Europe from Asia, seuē stadia afunder (as we haue said) hath foure cities there opposite one against another, to wit, in Europe, Calippidis and Seftos; in Asia, Lampficum and Abydos. Then, is the promontory of Cherfoneus Mastisia, iust contrary to Sigeum, in the crooked front whereof is Cynossema: for so is *Hecubæ* tombe named, the very rode of the Athenians nauie. The towne and chappell of *Proteflaus*: and in the very vmoft forefront of Cheroneus, which is called Æolium, the towne Elæus. After it, as a man goeth to the gulfes Melane, the hauens Cælos, Panormus, and the aboue named Cardia. The third sea of Europe, is in this manner bounded and limited. Mountaines of Thracia ouer and aboute those afore rehearsed, Edonus, Gigemorus, Meritus, and Melamphyllon. Riuers falling into Hebrus, be Bargas, and Suenus. The length of Macedonia, Thracia and Hellefpontus, is set downe before. Some make it seuē hundred and twenty miles.
- B The breadth is three hundred and eighty miles. The sea Ægium tooke that name of a rocke, betweene Tenedos and Chios, more truly than of an Island named Aex, resembling a goat, and therefore so called of the Greekes; which all at once appeareth to rise out of the mids of the sea. The sea-men that saile from out of Achaia to Andros, discouer it on the right hand, and to them it presageth some dreadfull and mischievous accident. Part of the Ægean sea is laid to the Myrtum, and so called it is of a little Island, which sheweth it selfe to them that set saile from Gereftus to Macedonia, not farre from Charitilos in Eubœa. The Romanes comprehend all these seas in two names: namely, Macedonicum, all that which toucheth Macedonia and Thracia: and Græcienfum where it beatech vpon Greece. As for the Greekes, they diuide euen the Ionian sea into Siculum and Creticum, of the Islands. Also Icarus they call that between Samos and Mycone. All the other names are giuen by gulfes and creekes, whereof we haue spoken. And thus much verily as touching the seas and nations contained in this manner within the third section or gulfes of Europe.

CHAP. XII.

¶ The Islands betweene those lands, among which, Creta, Eubœa, Cyclades, and Sporades: also of Hellefpont, Pontus, Maotis, Dacia, Sarmatia and Scythia.

- D Islands ouer against Threepotia, Corcyra: 12 miles from Buthrotus, and the same from the cliffes Acrocerania 50 miles, with a citie of the same name, Corcyra of free condition, also the towne Cassiope, and the temple of *Iupiter Cassiopeus*: it lieth out in length 97 miles. Homer called it Scheria and Phæacia: *Callimachus* also, Drepane. About it are some others: but bending toward Italy, Thoronos: and toward Leucadia the two Paxæ, fūe miles diuided from Corcyra. And not farre from them before Corcyra, Ericula, Marate, Elaphusa, Malthace, Trachia, Pytionia, Prychia, Tarachie. And from Pholachrum a promontory of Corcyra, the rocke into which they goeth a tale, that the ship of *Ulysses* was turned, for the resemblance it hath of such a thing. Before Leucadia, Sybota. But between it & Achaia there be very many of which Teleboides the fame that Taphia: but of the inhabitants before Leucadia, they be called Taphias, Oxie, and Prinoefla: and before Ætolia, the Echinas, Egialia, Coronis, Thyatira, Geoparis, Dionysia, Cymus, Chalcis, Pinara & Myftus. Before them in the deep sea, Cephalenia and Zacynthus, both free states: Ithaca, Dulichium, Same, Corcyra, and Paxos. Cephalenia sometime called Melana, is 11 miles off, and 44 miles about. As for Same, it was destroyed by the Romanes: howbeit, still it hath three townes between it and Achaia is Zacynthus with a town, a stately Island, & passing fertile. In times past it was called Hyrie, and is 22 miles distant from the South coast of Cephalenia. The famous hill Elarus is there. The Isle it selfe is in circuit 25 miles. Twelve miles from it is Ithaca, wherein standeth the mountain Neritus. And in the whole it takes vp the compasse of 25 miles. From it 12 miles off is Araxum a cape of Peloponnesus. Before this Island in the main sea there appeare Ateris and Prote. Before Zacynthus 35 miles full East, are the two Strophades, called by others Plotæ: and before Cephalenia, Lerœia. Before Pylos three Sphagis, and as many before Messene, called, Oenusse. In the gulfes Asineus three Thyrides in the Laconian gulfes, Teganusa, Cothon, Cythera with the towne named before time Porphyrus. This lies fūe miles from the promontorie Malea, dangerous for ships to come about it, by reason of the streights there, in the Argolick sea are Pirysia, Irine & Ephyre and

and against the territory Hermonium, Typareus, Epiroia, Colonis, Aristera: ouer against Troezenium Calauria, halfe a mile from Platea: also, Belbina, Lacia and Baucidas. Against Epidaurus, Ceryphalos, and Pytioneos, six miles from the Continent. Next to it is Aginae free state, 17 miles off, and for 20 miles they saile by it. The same is distant from Pyraeum the port of the Athenians, 12 miles, and before time was vually called Oenone. Against the promontory Spiraum, there lie onposite Eleusa, Dendros, two Craugia, two Cacia, Selachusa, Cencreis and Aspis. Also in the Megarian gulf, there be foure Methurides. As for Agilia, it is 15 miles from Cythera, and the same is from Phalaerna a towne in Crete 25 miles. And Crete it selfe, lying of one side to the South, and the other to the North, stretcheth forth in length East and West; a famous and noble Island for a hundred cities in it. *Dosiades* saith it tooke that name of the nymph *Creta* daughter of *Heperis*: but according to *Anaximander*, of a king of the Curetes, *Philistides*, *Mallotes*, *Crates*, haue thought it was called first *Aria*, and afterwards *Curetis*: and some haue thought it was named *Macaros* for the blessed temperature of the aire. In bredth it exceedeth in no place 50 miles, and in the middle part broadest it is: but in length it is full 270 miles: in circuit 580 miles: and winding it selfe into the Creticke sea, so called of it, where it stretcheth out farthest Eastward, it puts forth of it the promontory Samonium iust against Rhodos, and Westward Criu-Metopon, toward Cyrena. The principall townes of marke, be Phalaerne, Elaea, Cysamum, Pergamum, Cydon, Minoum, Apteron, Pantomatrium, Amphymalla, Rhythimna, Panhormum, Cyteum, Apollonia, Matium, Heraclea, Miletos, Ampelos, Hyera-pytia, Lebena, Hierapolis. And in the midland parts, Cortyna, Phaestum, Gnoffus, Potyrhenium, Myrina, Lycastus, Rhamus, Lycus, Diom, Afum, Pyloros, Rhyetion, Clatos, Pharae. Holopyxos, Lafos, Eleutherna, Therapne, Marathusa, Mytinos. And other townes about the number of 60, stand yet vpon record. The hills be Cadifus, Idæus, Didæus, and Morycus. The Isle it selfe, from the promontory in it called Criu-Metopon, as *Agrippa* reports, is distant from Phycus, a promontory of the Cyrene 225 miles. Likewise from Capeleum point, it is from Malca in Peloponnesus 80 miles. From the Island Carpathus, which lies Westward from the cape Sammonia, 60 miles. This Island afore said lyeth between it and Rhodos. The rest about it be these: before Peloponnesus two Corica, and as many Mylae: and on the North side, when a man hath Crete on the right hand, there appears Leuce iust against Cydonia, together with the two Budore, against Matium, Cia: against the promontory Itanum Onisa and Leuce: against Hierapytna, Chrysa, and Caudos. In the same coast are Ophiussa, Buroa, and Rhamus: and when men haue fetched about and doubled the point Criu-Metopon, K appear the Isles called Musagores. Before the promontory Sammonium, Phocæ, Platia, Sironides, Naulochos, Armodon and Zephire. But in Hellas, yet still in Ægium, Lichades, Scarphia, Marefa, Phocaria, and very many more ouer against Attica, but townelesse, and therefore obscure and of no reckoning: but against Eleusin, the noble Salamis, and before it Pysytalia: and from Sunium, Helene fise miles off: and Ceos from thence as many, which our countymen haue named Cæa: but the Greekes Hydrussa, cutt off and dismembred from Euboea. In times past it was 500 stadia long: but soone after, foure parts almost, namely those that butted vpon Boeotia, eaten vp by the same sea: so as now the towne remaining that it hath, be Iulis and Carthæra. For Corceus and Pæceffa are perished & gone. From hence as *Varro* saith, came the fine linnen cloath that women vse: yea, and Euboea it selfe hath been plucked from Boeotia, and diuided with so little an arme running betwene, that a dridge ioyneth the one to the other: euident it is to the eie, and well seen, by reason of two promontories in the South side, to wit, Genestum, bending toward Attica, and Capharens to Hellepontus: and one vpon the North-side, to wit, Cæneus. In no part thereof doth it extend broader than 40 miles: and no where doth it gather in narrower than 20. But in length from Attica as far as Thessalie, it lies along Boeotia 150 miles: and containeth in circuit 365. From Hellepont, on Caphareus side, it is 225 miles. In times past renowned it was for these cities, Pyrrha, Porthmos, Nesos, Cerinthus, Oreum, Diom, Ædephum, Ocha, Oechalia, now Chalcis, ouer against which stands Aulis in the main: but now, for Geresum, Eretia, Carystus, Oritanum, Artemisium, the fountain Arethusa, the river Lelantum, the hot waters called Hellopia, it is of great name: but yet in more request for the marble of Carystus. In former time it was called commonly Chalchodontis or Macris, as *Dioscoridus* and *Ephorus* doe say: but Macra, according to *Aristides*: and as *Callidemus* would haue it, Chalcis, for the brasse there first found: and as *Atenacmus* saith, Abantias: and last of all Afo-

pis,

- A pis, as the Poets commonly name it. Without in the Myrtoan sea be many Isles, but of greatest marke be Glauconneffis and Agilia: and neere to the promontory Geresum about Delos certain lying round together, whereupon they tooke their name Cyclades. The first and chiefe of them, Andrus with a towne, is from Geresum 10 miles, and from Ceum 39. *Myrsilus* saith it was called Cauros, and afterwards Antandros. *Callimachus* nameth it Lafia: others Nonagria, Hydrussa and Epagris: it takes in compass 93 miles. A mile from the same Andros, and 15 from Delos, lieth Tenos, with a town fifteen miles in length: which for the plenty of water *Aristotle* saith was called Hydrussa, but others name it Ophiussa. The rest be these, Myconos with the hill Dimastus, 15 miles from Delos. Seyros Syphnus, before time named Heropia and Acis, in circuit 28 miles about: Seriphus 13 miles, Præpesinthus, Cythrus, and Delos it selfe, of all others most excellent by far, as being the midst of all the Cyclades, much frequented for the temple of *Apollo*, and for merchandise and traffique. Which hauing a long time flooded vp and downe, as it is reported, was the only Island that neuer felt earthquake vnto the time of *M. Varro*. *Mutianus* hath recorded that it was twice shaken. *Aristotle* giueth a reason of the name in this sort, because it was discovered and appeared on a sudden. *Aglossphenes* termeth it Cynthia: others Ortygia, Asteria, Lagia, Chlamydia, Cynethus, and Pyrphe, for that in it fire was first found out. It is but 5 miles about, and riseth vp by the ascent of the hill Cinthus. Next it is Rhene, which *Aniclidus* called Celadussa, and *Heladius* Artemite. Moreover, Syros, which ancient writers haue said to be in circuit 20 miles, and Mutians 160. Oliaros, Paros, with a towne, 38 miles from Delos, of great name for the white marble there, which at first men called Pæcia, but afterwards Minois. From it seuen miles and a halfe is Naxus (18 miles from Delos) with a towne which they called Strongyle, afterwards Dia, within a while Dionysias, of the plentifull vines, and others, Sicily the lesse, and Callipolis. It reacheth in circuit 75 miles, and is halfe as long again as Paros. And thus far verily they obserue & note for the Cyclades; the rest that follow for the Sporades. And these they be, Helenum, Phocussa, Phæcalia, Schinussa, Phalegandros, and 17 miles from Naxos, Icaros: which gaue name to the sea, lying out as far in length with two towne, for the third is lost: before time it was called Dolichum, Macris, and Ichthyocssa. It is situate Northeast from Delos 50 miles: and from Samos it is distant 35 miles. Between Euboea and Andros there is a strith 12 miles ouer. From it to Geresum is 112 miles and a halfe: and then no order forward can be kept: the rest therefore shall be set downe huddle by heapes. Ios from Naxus 24 miles, venerable for the sepulchre of *Homer*: it is in length 25 miles, and in former time called Phanice. Odia, Letandros, Gyarus with a towne, 12 miles about. It is from Aneros 62 miles. From thence to Syrnus 80 miles. Cynethussa, Telos, famous for costly ointment. *Callimachus* calls it Agathussa. Donyfa, Pathmos, in circuit 30 miles. Corasæ, Lebinthus, Leroc, Cynara, Syrcinus, which before time was Oenæ, Heratia the same that Onus, Calvus otherwise Astræbe, Cimolus, alias Echinussa, Delos with a towne, which *Aristides* nameth Byblis, *Aristotle* Zephyria, *Callimachus* Himallis, *Heracleides* Syphnus and Acyros, and this of all the Islands is the roundest. After it Machia, Hyperc sometime Patage, or after some Platage, now Amorgos, Potyægos, Phyle, Thera; when it first appeared it was called Calliste. From it afterwards was Therafa plucked: and between those twain soone after arose Automate, the same that Hiera: and Thia, which in our daies appeared new out of the water neere Hiera. Ios is from Thera 25 miles. Then follow Lea, Afcania, Anaphe, Hippuris, Hippurifussa, Astipalea, of free estate, in compass 88 miles: it is from Cadifus a promontory of Creta, 125 miles. From it is Platea, distant 60 miles. And from thence Camina, 38 miles: then Azinitha, Lanise, Tragia, Pharmacusa, Techidia, Chalcia, Calydia, in which are the townes Coos and Olymna. From which to Carpathus, which gaue the name to the Carpathian sea is 25 miles, and so to Rhodos with a Southerne winde. From Carpathus to Cafos 7 miles: from Cafos to Samonium a promontorie of Crete, 30 miles. Moreover, in the Euboike Euripe, at the first entrance wel neere of it are the foure Islands Petalia, and at the end thereof, Aralante, Cyclades, and Sporades: confined and enclosed on the East with the Icarian sea coasts of Asia: on the West with the Myrtoan coasts of Attica. Northward with the Ægean sea: and South with the Creticke and Carthaginian seas; and take vp in length two hundred myles. The gulfe Pegaseus hath before it, Eutychia, Cicyneuthus, and Seyrus above said: but the vnto of all the Cyclades and Sporades, Gerontia, Scadaria, Thermeus, Irthesia, Solinia, Eudemia, Nea, which is consecrate vnto *Minerva*. Athos before it hath foure, Peparus

thus with a town sometime called Eunos, 9 miles off, Scythas 5 miles, and Iulios with a town 88 miles off. The same is from Mastusia in Corinthos 75 miles, & is it self in circuit 72 miles. Watered it is with the river Ilissus, from thence to Lemnos 22, and is from Athos 87. in compass it containeth 22 miles and a halfe. Townes it hath, Hephæstia and Marina, into the Market place whereof the mountain Athos casteth a shadow in the hottest season of summer. Thasos a free State is from it five miles: in times past it was called *Aria* or *Æthria*. From thence Abdera in the continent is 20 miles: Athos 62: the Isle Samo-Thrace as much, being a free privileged state, and lying before Hebrus. From Imbrus 32 miles: from Lemnus 22 miles and a halfe: from the coast of Thracia 28 miles: in circuit it is 32 miles, and hath the rising of the hill Saoces for the space of ten miles, and of all the rest is fullest of haues and harbors. *Callimachus* calleth it by the old name Dardania. Betwixt Cherrhonesus and Samo-Thrace is Halomessus, about 15 miles from either of them: beyond lieth Gethrone, Lamponia, Alopeconeus not farre from Coelos, an haue of Cherrhonesus: and some other of no name or regard. In this sea let vs rehearse also the desert and vnpeopled Isles, such as we can finde names for, to wit, Desficos, Larnos, Cyfficos, Carbusa, Celathusa, Scylla, Draconon, Arconesus, Dithusa, Scapos, Capheris, Mesate, Æantion, Phaterunefos, Pateria, Calete, Neriphus and Poldenus.

The fourth of those great seas in Europe, beginning at Hellepont, endeth in the mouth of Mæotis. But briefly we are to describe the forme of the whole sea, to the end the parts may be sooner and more easily known. The vast and wide Ocean lying before Asia, and driuen out from Europe in that long coast of Cherrhonesus, breaketh into the maine with a small and narrow issue, and by a Firth of 5 stadia, as hath been said, diuideth Europe from Asia. The first streights they call Hellepontus: this way *Xerxes* the King made a bridge vpon ships, and so led his armie ouer. From thence there is extended a small Euripus or arme of the sea for 86 miles space to Priapus a city of Asia, whereas *Alexander* the great passed ouer. From that place the sea grows wide and broad, and again gathereth into a streight: the largenesse thereof is called Propontis, the streights Bosphorus, halfe a mile ouer; and that way *Darius* the father of *Xerxes* made a bridge ouer and transported his forces. The whole length of this from Hellepont is 239 miles. From thence the huge main sea called Pontus Euxinus, and in times past Axenus, takes vp the space between lands far distant and remote asunder, and with a great winding and turning of the shores bendeth back into certain horns, and lieth out stretched from them on both sides, resembling evidently a Scythian bow. In the very mids of this bending it ioincth close to the mouth of the lake Mæotis, and that mouth is called Cimmericus Bosphorus, 2 miles and a halfe broad. But between the two Bosphori, Thracius and Cimmericus, there is a direct strait course between, as *Polybius* saith, of 500 miles. Now the whole circuit of all this sea, as *Varro* and all the old writers for the most part do witness, is 2150 miles. *Nepos* *Cornelius* adds there to 350 miles more. *Artemidorus* maketh it 2919 miles. *Agrippa*, 2360 miles. *Matianus*, 2865 miles. In like sort some haue determined and defined the measure on Europe side to be 4078 miles and a halfe: others, 1172 miles. *M. Varro* taketh his measure in this manner: from the mouth of Pontus to Apollonia 188 miles and a halfe: to Calatis as much. Then to the mouth of Ister 125: to Borythènes 250: to Cherrhonesus a towne of the Heracleates, 375 miles. To Panticapæus, which some call Bosphorus, the utmost coast of Europe, 222 miles and a halfe, which in all makes 1336 miles and a halfe. *Agrippa* measureth thus: from Byzantium to the river Ister 560 miles: then to Panticapæum 630: from thence the very lake Mæotis taking into it the river Tanais, running out of the Rhiphæan hills, is supposed to beare the compass of 1306 miles, being the farthest bound between Europe and Asia. Others again make 11025 miles. But surely from his mouth to the mouth of Tanais, and take a streight course, it is 375 miles without question. The inhabitants of that coast haue bene named in the description and mention of Thrace, as farre as to Istropolis: now from thence the mouthes of Ister. This river arising among the hills of Abnoba a mountaine of Germanie, ouer against Raucium a towne in Gaule, passing many a mile beyond the Alpes, and through innumerable Nations vnder the name of Danubius, with a mightie increase of waters, and where hee first beginneth to wash Illyricum, taking the name of Ister after he hath receiued three score rivers, and the one halfe of them well neere nauigable, rolleth into Pontus with six huge streames. The first mouth of it is Peuce, some after the Island it selfe Peuce, of which the next Channell

tooke

A tooke name, and is swallowed up of a great meere of 19 miles. Out of the same channell and about Astropolis, a poole is bred of 63 miles compass, which they call Halmiris. The second mouth is called Naracutoma: the third Calostoma, neere the Island Sarmatica: the fourth Pseudotoma, and the Island Conopon Diabasis. After that, Boreotoma, and Spireotoma. Each of these are so great, that by report the sea for 40 miles length within it is ouer-marched with the same, and the fresh water may so far be euidently tasted. From it, into the inland parts of the country, the people verily be all Scythians: but diuers other nations there be that inhabit the coasts next to the sea: in some places the Getæ, called of the Romanes Daci: in others Sarmatæ, of the Greekes Sauromatæ; and among them, the Hamaxobij or Aorli. Elsewhere, the bastard and degenerate Scythians, who are come from base slaves, or else the Troglodites, and anon the Alani and Rhoxalani. But the higher parts betweene Danubius and the forrest Hercynius, as farre as to the Pannonian wintering harbours of Carnuntum, and the confines there of the Germans, the felds countie also & plains of Iazegæ, the Sarmatians possesse. But the hills and forrests, the Dakes who were expelled by them, do inhabit as farre as to the river Pythylus from Marus; or peraduenture it is Duriæ, diuiding them from the Sueuians & kingdom of Vannians. The parts against these, the Bastarnæ doe keepe; and from thence, other Germans. *Agrippa* hath let downe that whole tract from Ister to the Ocean, to mount vnto 2000 miles, and 400 leste in bredth, to wit, from the desarts of Sarmatia to the river Vistula. The name of Scythians euery where continually runs into Sarmatians and Germans. Neither bath that old denomination remained in any others but those, who (as I haue said) liue farthest off, and in the edge of these nations, unknowne in manner to all men besides. But the townes next to Ister are Crenniscos, and Æpollum: the mountaines Macrorenij: the noble river Tyra, giuing name to the towne, whereas before-time it was called Ophiusa. Within the same there is a spacious Island, inhabited by the Tyragetæ. And it is from Pseudotomum, a mouth of Ister, 130 miles. Soone after be the Axiacæ, bearing the name after the river: beyond whom are the Crobzyi: the river Rhodæ: the creeke Sagarius, and the haue Ordesus. And 120 miles from Tyra, is the great river Borythènes; also a lake and people of that name: yea and a towne 15 miles within from the sea, called by ancient names Olbropolis, and Miletopolis. Again, in the sea side, the haue or harbour of the Achæans: the Island of *Achilles*, famous for the tombe of that worthy wight. And from it 135 miles, there is a demy Island lying out across in fashion of a sword, called Dromos Achilleos, vpon occasion of his exercise there of running: the length whereof *Agrippa* hath declared to be 80 miles. All that tract throughout, the Taurisci, Scythians, and Sarmatians do inhabit. Then the wilde woodland countie gaue the name vnto the sea Hylæum, which beates hard vpon it: the inhabitants are called Enæadlæ. Beyond, is the river Panticapæ, which diuideth the Nomades and Georgians asunder: and soone after Accinus. Some writers doe shew, that Panticapæ together with Borythènes, runne together in one confluent beneath Olbia, but they that write more exactly, doe name Hypanis. See how much they erred, who haue described it in a part of Asia. It entereth into the sea with a mighty great ebbe and returne of the water, vntill it be within five miles of Mæotis, compassing as it goeth a mighty deale of ground, and many nations. Then there is a gulf or arme of the sea called Corcinites, and a river Pacyris. Towns, Naubarium and Carcine. Behind, is the lake Buges, let out into the sea by a great ditch. And Buges is self from Coretus (an arme or branch of the lake Mæotis) is disioyned, with a backe part full of crags and rocks. Riues it receiueth, Buges, Gerhus, Hypanis, coming all from diuers quarters: for Gerhus parteth the Bassildes and Nomades. Hypanis, through the Nomades and the Hyleans, falleth into Buges by a channell made by mans hand, but in his owne natural channell into Coretus. The region of Scythia is named Sencica. But in Carcinites, Taurica beginneth: which also in times past was enuironed all about with the sea, wherefoeuer now there lie plains and flat fields. But afterwards it mounteth vp with huge hills. Thirtie nations there be in it: and of them 24 be Inlanders. Six townes, Orgocyni, Caraceni, Assyriani, Traçari, Archilachitæ, and Caliori. The very pitch and crest of the hill, the Scytotauri do hold. Bounded they are Westward, with Cherronessus; Eastward with the Scythian Satarchi. In the coast next to Carcinites are these townes, Taphræ, in the very streights of the demy Island: then, Heraclea, Cherronessus, endowed with franchises by the Romans. Aforetime it was called Megarice, and is the most ciuel & surest of all the rest of that tract, as retaining still the names and fashions of the Greekes, and is besides compassed with a

wall!

wall of five miles about. Then, the promontory Parthenium. A citie of the Tauri, Placia. The haue Symbolon: the promontory Criu-metopon, ouer against Charambes a promontorie of Asia, running through the middle of Euxinus, for the space of 170 miles: which is the cause especially that maketh the forme aboue said of a Scythian bow. Neere to it, are many hauens and lakes of the Tauri. The towne Theodofia, distant from Criu-Metopon 122 miles, and from Cheronefus 165 miles. Beyond, there haue been towne, Cyte, Cephyrium, Acree, Nymphum, and Dia. And the strongest of them all by many degrees, standeth yet still in the very entry of Bosphorus, namely, Pantecapum, of the Milesians, from Theodofia 1035 miles: but from Cimicrum a town situate beyond the Firth, a mile and a halfe as we haue said. And this is all the bredth there that diuideth Asia from Europe: which sometime is passable ouer most what on foot, namely, when the Firth is frozen and all on yce. The breadth of Bosphorus Cimierius is 12 miles and a halfe. It hath vpon it these towne, Hermifum, Myrmecium; and within it, an Island Alopecce. But along Mæotis, from the farthest narrow land passage, which place is called Taphra, vnto the mouth of Bosphorus, it contains 260 miles. On Taphra side, the Continent within, forth is inhabited by the Ancheta, among whom Hyanis springeth: and Neuri, where Borythenes hath his head. Morcouer, the Geloni, Thussageta, Budini, Basilida, and the Agathyrsi, with blew haire on their heads. About them, the Momades, and the Anthropophagi. On Buges side about Mæotis, the Sauromates and Esifedones dwell, but along the borders eten as far as Tanais, the Mæotæ, of whom the lake was so called, and the vtmost on their backs the Arimaspi. Within a little appeare the Rhiphæan hills, and a country called Prephoros, for the resemblance of certain wings or feathers, occasioned by the continuall fall of snow. A part of the world thus is condemned to dame Nature, and drowned in deepe and thick darkenes, dwelling within no other houses than the workes of frozen cold, and the ycie harbors of the chilling Northerne wind. Behind those hills and beyond the North pole, there is a blessed and happy people (if we may beleue it) whom they call Hyperborei, who liue exceeding long, and many fabulous and strange wonders are reported of them. In this tract are supposed to be the two points or poles about which the world turns about, and the very ends of the heauens reuolution. For 6 moneths together they haue one entire day, and night as long, when the Sunne is cleane turned from them: but their day beginneth not at the spring Equinoctiall (as the laud and ignorant common people do imagine) and so continueth to the Autumne: for once in the yeere, and namely at our mid-summer when the Sun entrench into Cancer, the Sun riseth with them: and once likewise it setteth, euen in the mid-winter with vs, when the Sun entrench Capricorne. The countrie is open vpon the Sunne, of a blissefull and pleasant temperate, void of all noisome wind & hurtfull aire. Their habitations be in woods and groues, where they worship the gods both by themselves, and in companies and congregations: no discord know they, no sickness are they acquainted with. They neuer die, but when they haue liued long enough: for when the aged men haue made good cheere, and annointed their bodies with sweet ointments, they leape from off a certain rocke into the sea. This kind of sepulture, of all others is most happy. Some Writers haue feared them in the first part of the sea coasts in Asia, and not in Europe, for that indeed some have there resembling the like manners and customes, and euen so situate, named Atrocoti. Some haue set them iust in the mids between both Sunnes to wit, the setting off it with the Antipodes, and the rising of it with vs, which cannot possibly be, considering so vast and huge a sea comming betwene. As for those that haue placed them no where but in the six moneths day-light, haue written thus much of them, That they sow in the morning, reape at noone, at sun-setting gather the fruits from the trees, and in the nights lie close shut vp within caues. Neither may we make doubt of that nation, since that so many Authors doe testifie, That they were wont to send the first fruits of their corne, as far as Delos to *Apollo*, whom about all others they honour. And virgins they were that had the carriage of this present, who for certain yeeres were venerable, and courteously entertained of all nations, vntill such time as vpon breach of faithfull hospitalitie, they took vp an order to bestow those sacred oblations in the next marches of their neighbour borderers: and they againe to conueigh the same to their neighbours that confined vpon them, and so forward as far as to Delos. But soone after, this custome was for-let and cleane giuen ouer. The length of Samaria, Scythia, and Taurica, and of all that tract from the riuier Borythenes, is 980 miles, the breadth 717, as *M. Agrippa* hath cast it. But I for my part suppose, that the measure of this part of the earth is vncertaine,

A vncertaine: but after the order which we haue begun, let vs go forward with the rest behind of all this diuision: as for the petty seas thereof we haue truly shewed them already.

CHAP. XIII.

¶ The Islands Pontus.

HELLESPONT hath no Islands to be spoken of, in Europe. In Pontus are two, a mile and halfe from Europ, and 14 miles from the mouth of the riuier, to wit, Cyaneæ, of others called Symplegades; and by report of fables they ran one into another: the reason was, because they being seuered by a small space betweene, to them that enter the sea full vpon them, they seemed twaine: but if they turned their eye a little aside from them, they made a shew as if they met together. On this side Ifter there is one, pertaining to the Apolloniates, 80 miles from Bosphorus Thracius, out of which *M. Lucullus* brought *Apollo Capitoli: us*. What are within the mouths of Ifter we haue declared already. Before Borythenes is the aboue named Achillea, called Leuce and Macaron. This, our moderne Cosmographers in these daies doe set 140 miles from Borythenes, from Tyra 120: from the Island Peuce 50. It is in compasse about ten miles. The rest be in the gulfe Carcinites, namely Cephalonnesos, Rhosphodusa, and Macra. I cannot passe by the opinion of many writers, before we depart from Pontus, who suppose all the inland seas or Mediterranean arise from that head, and not from the streights of Gades: and they lay for their ground an argument not without some good probability, because out of Pontus the sea alwaies floweth, and neuer ebbeth againe.

C But now we are to depart from thence, that other parts of Europ may be spoken of: & where we are gone ouer the Rhiphæan hills, we must passe along close by the North Ocean, and keepe the left hand vntill we come to Gades. In which tract there are reported to be very many Isles without name: of which, as *Tymæus* reporteth, there is one before Scythia called Bannomanna, distant from Scythia one daies sailing: into which, in the temperate season of the spring, Amber is cast vp to the shore by the waues of the sea. All the other coasts are no otherwise marked and known but by vncertain heere-say. The North Ocean from the riuier Paropamisus, where-as it dasheth vpon Scythia, *Hecataeus* nameth Amarechium, which word in the language of that nation signifieth, Frozen. *Philemon* writeth, that the Cymbrians call it Morimarula, i. mortuum Mare, the dead sea, euen as far as to the promontorie of Rubee: but all beyond forward, *Cronium*. *Xenophon Lampiscenus* saith, That three daies sailing from the Scythian coast there is the Island Baltia, of exceeding greatnesse. The same doth *Pythias* name Basylia. There be also named the Isles Oonæ, wherein the Inhabitants liue of birds egges and otes. Others also, wherein men are born with horse feet, called thereupon Hippopodes. Others againe of the Panoti, who being otherwise naked, haue mighty great eares that couer their whole bodies. And now forward we begin at the nation of the Ingeuoni, the first of all the Germanes in those parts, to discover all vpon more sure and euident report. There is the exceeding great mountain Sevo, not inferior to the high hills Rhiphæi, which maketh a mighty huge gulfe, euen as far as the Cimbrians promontory, called Codanus: it is full of Islands, of which the goodliest of all is Scandinavia, the biggesse whereof is not yet discovered. A part only thereof, as much as is knowne, the nation of Heleuones doth inhabit in 500 villages, who call it a second world. And as it is thought, Enigia is no whit lesse. Some say that these parts, as far as to the riuier Vistula, is inhabited by the Sarmatians, Venetians, Scyrians, and Hirrians: also that the gulfe of the sea is called Clylipenus: and that in the mouth or entrance of it is the Island Latris. Also that not far from it there is another arme of the sea bounding vpon the Cimbrians. The promontory of the Cimbrians shooting far into the seas, maketh a demy Island, which is called Cartris: from which coast 23 Islands haue been discovered and known by the Roman armies; the noblest of them are Burchana, called of our country men Fabaria, of the plenty of a pulse called Beans, growne there of it selfe vnflowne. Likewise Glessaria, so called by the soldiers, of Amber: but of the barbarous people Austrania; and besides them Adania. Along this sea coast, vntill you come to the riuier Scaldis, the German nations do inhabit, but the measure of that tract canot easily be declared, such vnmeasurable discord and difference there is amongst Writers. The Greeks and some of our owne country haue deliuered the coast of Germanie to be 2500 miles about. *Agrippa* again ioyning with it Rhetia and Noricum, saith that it is in length 886 miles,

and in bredth 268. And verily of Rheetia alone, the bredth well-neere is greater, at leastwise at the time that it was subdued, and the people departed out of Germanie: for Germany many yeares after was discovered, and yet not all of it known thoroughly. But if it be lawful to gesse, there wil not be much wanting in the coasts & compasse, according the opinion of the Greeks; nor in the length set down by *Agrippa*.

CHAP. XIV.

¶ *Germanie.*

OF Germanes there be five kindes: the Vindili, part of whom be the Burgundians, Varini, Carini, and Gurtones. A second sort, the Ingævones, part of whom be the Cimbri, Teutoni, and people of the Cauchi. The next to them be the Istævones, and part of them be the Cimbri. Then the midlanders, the Hermiones, among whom are the Suevi, Hermunduri, Chatti, and Cherusci. The fifth are the Peucini, the Basternæ, bordering vpon the above-named Dacæ. Faire rivers that run into the Ocean, to wit, Guttalus, Vistillus, or Vistula, Albis, Vifurgis, Amisus, Rhenus, Mosa. And within-forth the Hircynium hill, inferiour to none in estimation, standeth to gard and inclose them.

CHAP. XV.

¶ *Islands in the Gaules Ocean.*

Vpon the very Rhene it selfe, for 100 miles almost in length, lieth the most noble Island of the Batavi and Cannenafates: as also others of the Frissians, Cauchians, Frisabones, Sturij, and Marsalij, spread within Helius and Flevus, for so be the mouthes into which Rhenus gushing, diuideth it selfe; and is discharged from the North into certain lakes: from the West into the riuier Mosa. But in the middle mouth between, hee beareth a small current and channell, and keepeth his owne name.

CHAP. XVI.

¶ *England and Ireland.*

OVER against this tract lieth Britannia, betweene the North and West, being an Island renowned both in Greeke and Roman records: opposite it is vnto Germanie, Gaule, and Spaine, the greatest parts by far of all Europe, and no small sea betweene. It was sometime named Albion, when all the Isles were called Britannia, of which anon we wil speak. This Island is from Gessoriacum, a coast towne of Morini, fifty miles, taking the next and shortest cut. In circuit, as *M. Pitheas* and *Isidor* report, it containeth 3825 miles. And now for these thirtie yeares well-neere, the Romane Captaines grow into farther knowledge thereof, and yet not beyond the Forrest of Caledonia, as neere as it is. *Agrippa* supposeth that it is in length 800 miles, and in bredth 300. Also that Ireland is as broad, but not so long by 200 miles. This Isle is seated aboue it, and but a very short cut or passage distant from it, to wit, 30 miles from the people Silures. Of other Islands in this Ocean there is none by report in circuit more than 125 miles. Now there be Orades 40, diuided asunder by small spaces betweene: *Acmodæ* 7, and 30 *Hæbudes*. Also betweene Britaine and Hibernia, *Mona*, *Monapia*, *Ricea*, *Veëtis*, *Silimnus*, and *Andros*: but beneath them, *Siambis* and *Axantos*: and on the contrary side towards the Germanie Sea there lie scattering the *Glessariæ*, which the later Greeke Writers haue named *Elegrides*, for that Amber was there ingendered or bred. The farthest of all knowne or spoken of, is *Thule*, in which there be no nights at all, as we haue declared, about Midsummer, namely when the Sun passeth through Cancer: and contrariwise no daies in mid-winter: and each of these times they suppose do last six moneths, all day or all night. *Timæus* the Historiographer saith, that farther within-forth, and six daies sailing from Britain, there lieth the Island *Midis*, in which white lead groweth; and that the Britans do saile thither in winter vessels, covered with leather round about, and well fowed. There be that make mention of others beside, to wit, *Scandia*, *Dunna*, *Bergos*, and *Nerigos* the biggest of all the rest, from the which men saile to *Thule*. Within one daies sailing from *Thule* is the frozen sea, named of some *Cronium*.

CHAP.

CHAP. XVII.

¶ *Gallia.*

ALL Gallia, by one name called *Comata*, is diuided into three kindes of people, and those seuered one from the other by riuers especially: to wit, Belgica, from *Scaldis* to *Sequana*: Celtica, from it to *Garumia*; and this part of Gallia is named *Lugdunensis*. From thence to the lying out of the mountaine *Pyreneus*, *Aquitania*, formerly called *Aremorica*, *Agrippa* hath made this reckoning and computation of all Gaul generally, to wit, lying between *Rhene*, *Pyreneus*, the Ocean, and the hills *Gebenna* and *Iura*; whereby hee excludeth *Narbonensis* Gallia, that is in length 420 miles, and in bredth 313. Next to *Scaldis* there inhabited the vtmost borders, the *Toxandri*, vnder many names: then the *Menapij*, *Morini*, and *Oromancij*, ioyning vpon the tract or territoric called *Gessoriacus*: the *Brinnani*, *Ambiani*, *Bellonici*, and *Hassi*. But farther within-forth, the *Castologi*, *Atrebatis*, and *Neruij*, free states: the *Veromandi*, *Sueroni*, and *Suessiones*, likewise free: the *Treviri* free before-time: the *Lingones* confederates, the *Remi* confederats also: the *Mediomatrici*, the *Sequani*, the *Raurici*, & *Helvetij*. Colonies two, *Equestris* and *Rauriaca*. Moreouer, of Germane nations in the same Province that dwell neere *Rhene*, the *Nemetes*, *Trivochi*, and *Vangiones*: then the *Vbij*, *Colonia*, *Agrippensis*, *Gugerni*, *Batavi*, and those whom we spake of in the Islands of *Rhene*.

CHAP. XVIII.

¶ *Lugdunensis Gallia.*

Lugdunensis Gallia containeth the *Luxovij*, *Velocasses*, *Galleti*, *Veneti*, *Abricatui*, *Osismij*, and the noble riuier *Ligeris*: but a more faire and goodly demy Island, running forth into the Ocean, from the very marches of the *Osismij*, hauing in circuit 625 miles, with the necke thereof 125 miles broad. Beyond it dwell the *Nannites*. Within-forth, the *Hædini* confederats, the *Carnuti* likewise confederats, the *Boij*, the *Senones*, the *Aulerici*, surnamed *Eburouices*, and the *Cenomannes* and *Meldi*, free States. *Parthij*, *Trecasses*, *Andegani*, *Viducasses*, *Vadicasses*, *Vnelli*, *Cariofvelites*, *Drabhudi*, *Rhedones*, *Turones*, *Itefui*, and *Secufiani*, free States, in whose countrey standeth the Colonie *Lugdunum*.

CHAP. XIX.

¶ *Aquitania.*

THAT province of Gaule which is called *Aquitania*, belong the *Ambilatri*, *Anagnutes*, *Pictones*, the *Santones*, *Bituriges*, named also *Vibisci* *Aquitani*, whereof the Province tooke name, and the *Sediboniatæ*. Then such as were enrolled into towneships from diuers parts, to wit, *Begerri*, *Tarbely*, who came vnder foure ensignes, *Cocossati* vnder 6 ensignes, *Venami*, *Onobristes*, *Belendi*, and the forest *Pyreneus*. Beneath them, *Monefi*, *Ofquidiales*, *Mountainers*, *Sibillates*, *Camponi*, *Bercorates*, *Bipedimui*, *Sassumini*, *Vellates*, *Vornates*, *Conforanni*, *Aufci*, *Elufates*, *Sotriates*, *Ofquidates* in the champion and plaine country, *Succasses*, *Iatulsates*, *Babacates*, *Vassei*, *Sennates*, *Cambolæstri*, *Agefinales*, ioyning to the *Pictones*. Then the *Bituriges* free, called also *Cubi*. Next to them, *Lemovites*, *Arverni* free, and *Gabales*. Again, those that confine and border vpon the province *Narbonensis*, the *Ruthenes*, *Caduni*, *Autobroges*, & the *Petrogoti*, diuided from the *Tolosanes* by the riuier *Tarne*. Seas about the coasts, vpon *Rhene* the North Ocean: between it and *Sequana* the Britan ocean: between it and *Pyreneus*, the Gaule Ocean. Islands many, to wit of the *Veneti*, called also *Veneticiæ*; and in the gulfe of *Aquitane*, *Vliarus*.

CHAP. XX.

¶ *The hither Provinces of Spaine.*

AT the Promontorie of *Pyreneus* beginneth *Spain*, narrower not only than *Gaule*, but also than it selfe (naturally) so huge a quantitie is wrought into it, while the Ocean of one coast, the Iberian sea on the other, do cling and presse the sides together. The very hills

of Pyrenæus, which from the East spread all the way to the Southwest, make Spaine shorter on the North side than the South. The next marches of this higher province is the same that the tract of Tarracon, namely from Pyrenæus along the Ocean, the Forrest and mountains of Vascones. And first in this part you finde these townes : namely in the country of the Varduli, O-larfo, Morosgi, Menofca, Velperies, the port towne Amanum, where now is Flaviobriga, and a colony of nine cities. The region of the Cantabri, the tiuer Sada, the port town of Victoria, inhabited by the Iuliobrigenses. From that place the fountaines of Iberus, 40 miles. The haueu Biendum, the Origeni entermingled with the Cantabri. Their haueus Vefei and Veca : the country of the Astures, the towne Noga, in the demy Island Peficus. And then the countie Lucensis, and so from the riuier Navilubio, the Cibarci, Egoarri, fymamed Namarini, Iadoni, Arrotreba, the promontorie Celticum. Riuer, Florius and Nelo. Celtici fymamed Nerix : and about them the Tamarici, in whose demy Island are 3 Altars called Seftianæ, dedicated to *Augustus*, Coepori, and the towne Noela. The Celtici, fymamed Prafamarci, and Cileni. Of Illes worth the naming, Corticata and Aunios. From the Cileni, the county town of the Bracæ, Heleni, Gravij, the castle Tyde, all descended from the Greeces : the Islands Cixæ, the faire towne Abobrica, the riuier Minius, with a broad mouth 4 miles ouer, the Leuni, Scurbi, Augusta a town of the Bracæ : and about them also, Gallæcia, the riuier Limia. Also the riuier Durius, one of the greatest in Spaine, springing in the Pelendones country, & running hard by Numan-tia, and so on, through the Arevaci and Vaccaï, diuiding the Vetones from Asturia, and the Gallæcians from Lusitania : and there also it keepeth off the Turduli from the Bracari. All this region aboute said from Pyrenæus, is full of metall mines, to wit, gold, filuer, iron, lead, as well blacke as white, *i. tinne*.

CHAP. XXI.

¶ *Lusitania.*

AT the riuier Durius begins Lusitania, wherein are Turduli the old, Pefuri, the riuier Vacca, the towne Talabrica, the towne and riuier Minium. Townes, Conimbrica, Olisippo, Ebu-ro, Britium : from whence there runs out into the sea with a mighty cape, the promontorie which some haue called Artabrum ; others, the Great ; and many, Olisipponense, of the towne, making a diuision of land, sea, and aire aboute. In it is the side of Spaine determined and bounded, and from the compass of it beginneth the forefront thereof.

CHAP. XXII.

¶ *Islands in the Ocean.*

ON the one hand is the North and the Gauls Ocean : on the other, the West and the Atlantick Ocean. The shooting forth of the promontorie aforesaid some haue reported to be 60 miles, others 90. From thence to Pyrenæus there be writers not a few, who say it is 1250 miles, and that there is a nation of the Atabri, which neuer was, with a manifest error. For they haue set in this place by exchanging some letters, the Artotreba, whome we named before the promontorie Celticum. They haue erred also and misied in certain famous riuer. From Minius aboute named, as *Varro* saith, *Aminius* is 200 miles distant (which some men take to be elsewhere, and call it Limæa) named of men in old time Oblivions, and wherof goeth many a tale. From Durius to Tagus is 200 miles, and comes between. This Tagus is a riuier much renowned for the sand that yeelds gold. 160 miles from it the promontorie Sacrum runs out from the middle front in maner of Spaine and 14 miles *Varro* saith it is from it to the mids of Pyrenæus. But from Ana, by which we haue separated Lusitania from Bætica, 126 miles, adding therto from Gades 102 miles. Nations, Celtici, Varduli, and about Tagus, the Vettones. From Ana to Sacrum the Lusitanes. Memorable townes, from Tagus in the coast side, Olisippo, of good note for the Mares that conceiue there by the West wind. Salatia, with addition of Vrs Imperatoria, and Merobrica : the promontorie Sacrum, & another called Cæneus, towns, Ofonoba, Balsa, and Myrtius. The whole province is diuided into three counties or iudiciall courts of Affises, Emeritenfis, Pacensis, and Scalabitanus. It containeth in all fixe and forty States, wherein be fixe Colonies, one Borough Towne of Romane Citizens, three enfran-

A chified with the liberties of fold Latium. Stipendiaries or Tributaries 36. Moreover, the Colonies be thus named, Augusta Emerita : and vpon the riuier Ana, Metallinenfis, Pacensis, Nor-bensis, named also Caesariana. To it are layed and inrolled Caltra Iulia and Castra Cæcilia. The fift is Scalabis, called Præsidium Iulium. The free borough of Roman citifens, Olyssippo, named also Felicitas Iulia. Townes of the old Latium liberty, Eboræ, which likewise was called Liberalitas Iulia : Myrtis also and Salatia, which we haue spoken. Of Tributaries, such as I am not loth to name, beside the aboue said in the additions of Bætica, Augustobrigenses, Ammianis, Araditani, Axatrigenses, Balenses, Caesarobrigenses, Caperenfes, Caurenfes, Colarni, Cibilitani, Concordienfes, the same that Bonori, Intertraufenses, Lancienfes, Mirobri-genses, fymamed Celtici, Medubrigenses, the same that Plumbarij, Ocellenses, who also are Lancienfes, Turduli, named Barduli and Tapori. *M. Agrippa* hath written, that Lusitania, toge-ther with Asturia and Gallæcia, is in length 540 miles, and in bredth 526. But all Spaine from the two promontories of Pyrenæus, along the seas, takes vp in circuit of the whole coast, 2900 miles, and by others 2700. Over against Celtiberia be very many Illes, called of the Greekes Cassiterides, for the plenty of lead which they yeeld : and iust against the promontorie of the Arrotreba, six named Deorum [*i. of the gods*] which some haue called Fortunatæ. But in the very point or cape of Bætica, from the mouth of the firth 75 miles, lieth the Island Gades, 12 miles long, as *Polybius* write th, and three miles broad. It is from the maine, where it is nearest, lesse than * 700 paces, in other places aboute seven miles. The whole Ile it selfe contains the space of 15 miles in circuit. It hath within it a towne of Roman citifens named Augusta, Vrs Iulia Gaditania. On that side that regards Spaine, within 100 paces lieth another Island three miles long and one broad, wherein formerly was the towne Gades. The name of this Island, after *Ephorus* and *Thiilides*, is Erythia : but according to *Tymæus* and *Silenus*, *Apodias* : the natural home-bred inhabitants call it Iononis. The bigger of these two Gades, as *sith Tymæus*, was by them called Cotinusa, our countrymen name it Tartessos, the Carthaginians * *Gadir*, which in the Punicke language signifieth the * number of seven. Erithia the other was called, because the Tirians, who were the first inhabitants, were reported to haue had their first beginning out of the red sea Erythraum. Some thinke that *Geryon* here dwelt, he whose droues of cattell *Hercules* had away. Some againe thinke it is another, ouer against Lusitania, and there sometime so called.

* *Edithia's* quarters of a miles.

* Or *Gadir*.
* *Septem*, or ad
Some ad, *Septem*,
sum, is a port
or capitolium.

CHAP. XXIII.

¶ *The measure of all Europe.*

HAuing finished our circuit about Europ, we must now yeeld the totall summe and complete measure of it in the whole, that such as are desirous of knowledge be not to seek in any one thing. *Artemidorus* and *Isidore* haue fet downe the length thereof from Tanais to Gades, 840 14 miles. *Polybius* hath put down the bredth thereof, from Italy to the Ocean 1150 miles, for as then the largeness thereof was not knowne. Now the very bredth of Italy alone by it selfe (as we haue shewed) is 1220 miles to the Alps : from whence by Lyons to the Brittain part of the Morini (which way *Polybius* seemeth to take his measure) is 1168 miles. But the more certaine measure and the longer is directed from the said Alps to the West, and the mouth of the Rhine, through the place called Castra Legionum Germaniæ, 1243 miles. Now from henceforward we will describe Africke and Asia.



THE FIFTH BOOKE OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

The description of Affricke.

A Fricke the Greekes haue called Lybia, even all that tract from whence the Lybian sea before it beginneth, and endeth in the Egyptian. No part of the earth receiveth fewer gulfes and armes of the sea, in that long compasse of crooked coasts from the West. The names as well of the Nations as towns there be of all others most hard to be pronounced, unless it be in their owne tongues, and against they be castles and forts for the most part that they dwell in.

CHAP. I.

¶ Mauritania.

AT the beginning, the lands of Mauritania vntill the time of C. Caesar, [i. Caligula] sonne of Germanicus, were called kingdomes: but by his cruelty diuided it was into two prouinces. The vtmost promontorie of the Ocean is named of the Greekes Ampelusia: the townes therein were Lissa and Cotes, beyond Hercules pillars. Now in it is Tingi, sometime built by Antaeus: and afterward by Claudius Caesar when he made a Colonie of it, it was called Traducta Iulia. It is from Be-

lone a towne in Batrica by the next and nearest passage ouer sea thirty miles. Five and twenty miles from it in the Ocean coast standeth a Colonie erected by Augustus, now Iulia Constantia, exempt from the dominion and iurisdiction of the Kings of Zilis, and commanded to go for law and iustice as far as Batrica. And two and thirty miles from it, Lixos, made a Colony by Claudius Caesar; whereof in old time there went many fabulous and loud lying tales. For there stood, they say, the royall pallace of Antaeus: there was the combat between him and Hercules: there also were the gardens and hort-yards of the Hesperides. Now there floweth thereinto out of the sea a certain creek or arme thereof, and that by a winding channell, wherein men now take it that there were Dragons seruing in good fead to keep and gard the same. It incloseth an Island within it selfe, which, notwithstanding the Tract thereby be somewhat higher, is onely not ouerflowed by the sea tides. In it there standeth erected an altar of Hercules: and setting aside certaine wilde Oliues, nothing else is to be seen of that goodly groue, reported to beare golden Apples. And in good faith lesse may they wonder at the strange lies of Greece, giuen out of these and the riuier Lixus, who would but thinke how of late our countrymen haue deliuered some fables of the same things as monstrous well-neere: to wit, That this a most strong and mighty city, and bigger than great Carthage; moreover, that it is situate right against it, and an infinite way well-neere from Tingi: and other such like, which Cornelius Nepos hath beene most eager to beleue. From Lixus forty miles in the midland part of the main stands Babba, another Colony of Augustus, called by him Iulia in the field or champion: also a third 75 miles off, called Banafa, but now it hath the addition of Valentia. 35 miles from it is the towne Volubile, iust in the mid way between both seas. But in the coast and borders thereof, fifty miles from Lixus, runneth Subura a goodly plenteous riuier, and navigable neere to the Colony Banafa. As many miles from it is the towne Sala, standing vpon a riuier

A A riuier of the same name, neere now vnto the wildernesse, much infested and annoied with whole herds of Elephants, but much more with the nation of the Autololes, through which lies the way to Atlas the most fabulous mountaine of all Affricke. For writers haue giuen out, that this hill arising out of the very midst of the sea sands, mounteth vp to the skie, all rough, ill fauored, and ouergrowne on that side that lieth to the shore of the Ocean, vnto which it gaue the name; and yet the same is shadowie, full of woods, and watered with veines of spouting Springs that way which looketh to Affricke, with fruitfull trees of all sorts, springing of the owne accord, and bearing one vnder another, in such sort, that at no time a man can want his pleasure and delight to his full contentment. Moreover, that none of the inhabitants there are seen all day long: all is still and silent, like the fearfull horror in desert wildernesse; and as men come neerer and neerer vnto it, a secret deuotion ariseth in their hearts, and besides this feare and horrour, they are lifted vp about the clouds, and euen close to the circle of the Moone.ouer and besides, that the same hill shineth oftentimes with many flashes of fires, and is haunted with the wanton lasciuious Egipanes and Satyres, whereof it is full, that it resoundeth with noise of Haut-boies, pipes, and fises, and ringeth againe with the sound of tabers, timbrels, and cymbals. These be the reports of great & famous writers, to say nothing of the labors and works both of Hercules and Perseus there; and to conclude, that the way vnto it is exceeding great, and not certainly knowne. Bookes there were besides of Hanno, a great captain and commander among the Carthaginians, who in the time of the most flourishing state of Carthage, had a charge and commission to discouer and suruey the whole compasse of Affricke. Him, most of the Greeks as well as our countrymen following, among some other fabulous stories, haue written that hee also built many cities there; but neither memoriall vpon record, nor any token of them at all is left extant. Whiles Scipio Emilianus warred in Affricke, Polybius the writer of the Annales, receiued of him a fleet, who hauing sailed about of purpose to search into that part of the world, hath put thus much downe in writing, that from the said mountaine West, toward the forrest full of wild beasts which Affricke breedeth, vnto the riuier Anatis, are 485 miles. And from thence to Lixus 205. Agrippa saith, that Lixus is distant from the streights of Gades 112 miles. Then, that there is an arme of the sea called Saguri. Also a towne vpon the promontory, Mutelacha, riuers, Subura and Sala. Moreover, that the haue Rutubis is from Lixus 313 miles. And so forward to the Promontorie of the Sun. The port or hauen Rifardir, the Gætulians, Autololes, the riuier Cosenus, the nation of the Scelatis and Massilians. The riuers Masfata and Darat, wherein Crocodiles are ingendred. Then forward, that there is a gulfe of 516 miles, inclosed within the promontory or cape of the mountain Barce, running along into the West, which is called Surrentum; after it, the riuier Palsus, beyond which are the Æthiopiens Perorisi, & at their back are the Pharusi. Vpon whom ioin the midlanders, to wit, the Gætulians. But vpon the coast are the Æthiopian Daratites, the riuier Bambotis full of Crocodiles & Hippopotames [i. Water-horses]. From which, he saith, That there is nothing but mountains all the way as far as to that which we call Theon-Ochema (The gods chariot.) Then, in sailing nine daies and nights to the promontorie Hesperium, he hath placed the mountain Atlas in mid-way thereof, which by all other writers is set downe to be in the vtmost marches of Mauritania. The first time that the Romans warred in Mauritania, was in the time of prince Claudius Emperor: at what time as Aspidemon the freed seruant of king Ptolemaeus, by C. Caesar slaine, went about to reuenge his death: for as the barbarous people retired and fled back, certaine it is that the Romans came as far as to the hill Atlas. And not only such Generals as had bin Consuls, and were of the Senators degree and calling, who at that time managed and conducted the wars, but knights also and gentlemen of Rome, who from that time had gouernment and command there, tooke it for an honor and glory, that they had pierced and entred into Atlas. [* Fiue Romaue Colonies, as wee haue said, be in that prouince] and by that common fame and report, there may seeme to lie a thorow faire thither. But that is found for the most part by daily experience, most deceiueable of all things else; because persons of high place and great worth, when they are loath to search out narrowly into the truth of matters, fliecke not for shame of ignorance, to giue out vntruths: and neuer are men more credulous and apt to beleue and be deceiued, than when some graue personage fathereth a lie. And verily I lesse maruell, that they of gentlemen degree, yea, and those now of Senators calling, haue not come to the certaine knowledge of some things there: seeing they set their whole affection and mind vpon nothing but excefse and riot; which how powerful

* It seemeth that this clause is to be set in the beginning of the next chapter.

powerfull it is and forcible, is seen by this most of all, when forests are fought out far and neere for Iuory and Citron trees; when all the rocks in Getulia are searched for Murices and Purpuræ [hell fishes that yeld the purple crimson colour.] Howbeit, the natural inhabitants of that country do write, That in the sea coast 150 miles from Sala, there is the riuer Afana, that receiue salt water into it, but hath in it a goodly faire haue; and nor far from it another fresh riuer, which they call Fur: from which to Dyris (for that is the name in their language of Atlas, by a generall conent) are 100 miles, with a riuer comming betwene, named Vior. And there, the speech so goeth, to be seene the certain tokens of a ground sometimes inhabited; to wit, the reliques of vine yards and date tree groues. *Suetonius Paulinus* (a Consul in our time) who was the first Roman leader, that for certaine miles space went ouer Atlas, also hath reported verily as touching the height thereof, that with the rest; and moreover, that the foot thereof toward the bottom, stand thicke and full of tail woods, with trees therein of an vnkown kinde, but the height of them is delectable to see to, smooth and euen without knots, the leaues & branches like Cypresse, and besides the strong smell they yeeld, are couered all ouer with a thinne downe, of which (with some help of Art) fine cloath may be made, such as the silk-worm doth yeeld. That the top and crest thereof is couered ouer with deepe snow euen in Sommer time. Moreover, that he reached vp to the pitch of it at the tenth daies end, & went beyond it, as far as a riuer called Niger, through wildernesles full of blacke dust; where otherwhiles there stood ouer certaine cliffes, and craggie rocks, as they were scorched and burnt; and that those places by reason of partching heat were not habitable, albeit a man made triall thereof in the winter season: furthermore, that the peasants who dwell in the next forests, were pestered with Elephants, wilde beasts, and serpents of all sorts; and those people were called Canarij; for that they and dogs feed together one with another, and part among them the bowels of wilde beasts. For certaine it is knowne, that a nation of the Ethiopians whom they call Perocsi, joineeth vpon them. *Tuba* the father of *Ptolomæus*, who before time ruled ouer both Mauritanes, a man more memorable and renowned for his study and loue of good letters, than for his kingdom and royall port, hath written the like concerning Atlas; and he saith moreover, that there is an herb growing there called Euphorbia, of his Phytions name that first found it: the milkie iuice whereof he praifeth wondrous much, for to cleare the eies, and to be a preseruatiue against all serpents and poisons whatsoeuer, and thereof hath he written a treatise, and made a book by it selfe: thus much may suffice, if it be not too much, as touching Atlas.

CHAP. II.

¶ The prouince Tingitania.

The length of the Prouince Tingitania taketh 170 miles. The nations therein be these: the Mauri, which in times past was the principall, and of whom the prouince took name: and those most writers haue called Marufij. Being by war weakened and diminished, they came in the end to a few families only. Next to them were the Massæfuli, but in like manner were they consumed. Now is the prouince inhabited by the Getulians, Bannuri, and the Autololes, the most valiant and puissant of all the rest. A member of these were sometime the Vestini, but being diuided from them, they became a nation by themselves, and bounded vpon the Ethiopians. The prouince naturally full of mountains Eastward, breedeth Elephants. In the hill also Abila, and in those which for their euen and equal height they call, The 7 brethren: and these butt vpon Abila, which looketh ouer into the sea. From these beginneth the coast of the Inward sea. The riuer Timuda nauigable, and a town sometime (of that name.) The riuer Laud, which also receiue vessels. The town Rufardie, and the haue. The riuer Malvana nauigable. The towne Siga iust against Malacha seitate in Spaine: the Royall seat of *Syphax*, and now the other Mauritania. For a long time they kept the names of KK. so as the vntmost was called Bogadiana: and likewise Boechi, which now is Cæsarienses. Next vnto it is the haue, for the largenesse thereof called Magnus, with a towne of Roman citizens. The Riuer Muluca, which is the limit of Boechi and the Massæfuli. Quiza Xenitana, a towne of strangers: Arfennaria, a towne of Latines three miles from the Sea: Carcenna, a Colonie of *Augustus*, erected for the second Legion: likewise another Colonie of his planted with the Pretorian band, Gmugi, and the promontorie of *Apolla*. And a most famous towne there Cæsarea, vsually before time called Iol, the Royall Seat of King *Tuba*: endowed by *Claudius* the Empe-

TOUL

- A rout of happie memorie, with the franchises and right of a Colonie, at whose appointment the old souldiers were there bestowed. A new towne, Tipasa, with the grant of the liberties of Latium. Likewise Icosium, endowed by *Vespasian* the Emperour, with the same donations. The colonie of *Augustus* Rusconia, and Ruscurium, by *Claudius* honoured with the free burgeoisie of the citie. Rusoëza, a colonie of *Augustus*. Saldea, a Colonie of the same man. Igelgili also, and Turca, a towne seated vpon the sea and the riuer Amfaga. Within the land, the Colonie Augusta, the same that Succubar, and likewise Tubrisuptus. Cities, Timici, Tigauræ. Riuer, Sarda-bala and Nabar. The people Macurebi; the riuer Vlar, and the nation of the Nabades. The riuer
- B Ampfaga is from Cæsarea 233 miles. The length of Mauritania both the one and the other together, is 339 miles; the breadth 467.

CHAP. III.

¶ Numidia.

Next to Ampfaga is Numidia, renowned for the name of *Masanißa*; called of the Greekes the land Metagonitis. The Numidian Nomades, so named of changing their pasture, who carry their cottages or sheds (and those are all their dwelling houses) about with them vpon waines. Their towne be Cullu and Ruscade, from which 48 miles off within the Midland parts, is the colonie Cirta, surnamed of the Cirtanes: another also within and a free borough town, named Bulla Regia. But in the vntmost coast, Tacatua, Hippo Regius, and the riuer Armua. The towne Tabarcha, of Roman citizens: the riuer Tusca, which boundeth Numidia, and besides the Numidian marble, and great breed of wilde beasts, nothing is there else worth the noting.

CHAP. IV.

¶ Africa.

From Tusca forward, you haue the region Zeugitana, and the country properly called Africa. Three promontories; first the White; then anon that of *Apolla* ouer-against Sardinia: and a third of *Mercurie* opposite to Sicilie, which running into the sea make two creekes: the one Hipponensis, next to the towne which they call Hippo rased; the Greekes name it Diarrhyton, for the little brooks and rills that water the grounds: vpon this, there bordereth Theudalis, an exempt towne from tribute, but somewhat farther from the sea side, then the promontory of *Apolla*. And in the other creek, Vtica, a towne of Roman citizens, ennobled for the death of *Cato*, and the riuer Bagrada. A place called Castra Cornelia: and the colony Carthago, among the reliques and ruines of great Carthage, and the colony Maxulla: towns, Carpi, Misna, and the free borough Clupea vpon the promontorie of *Mercurie*. Item, free townes, Curubis, and Neapolis. Soone after ye shall meet with another distinction of *Afrique* indeed. Libyphenices are they called, who inhabit Byzacium, for so is that region named; containing in circuit 250 miles, exceeding fertile and plenteous, where the ground fowne yeeldeth again to the husband-man 100 fold increase. In it are free townes, Leptis, Adrumetum, Ruspina and Thapsus; then Thema, Macomades, Tacape, Sabrata, reaching to the lesse Syrtis: to which, the length of Numidia and Africa from Ampfaga, is 580 miles: the breadth, as much thereof as is knowne, 200. Now this part which we haue called *Afrique*, is diuided into prouinces twaine, the old and the new; separated one from the other by a fosse or ditch brought as far as to Thema, within the Africane gulfes, which towne is 217 miles from Carthage: and that trench *Scipio Africanus* the second, caused to be made, & bare halfe the charges together with the KK. The third gulfes is parted into twaine, curfed and horrible places both, for the cbbing and flowing of the sea, and the shelles betwene the two Syrts. From Carthage to the nearer of them, which is the lesse, is 300 miles by the account of *Polybius*: who saith also, that the said Syrtis is for 100 miles forward dangerous, and 300 about. By land also thither, the way is passable by obseruation of the Stars, at one time of the yeare onely. And that lyeth through desert sands and places full of serpents. And then you meet with Forests replenished with numbers of wilde beasts. And within-forth Wildernesles of Elephants: and soone after, waste deserts euen beyond the Garamantes, who from the Augile, are distant twelue daies iourney.

Above

Above them was the nation of the Pſylli, and aboute them the lake of *Diomedes* enuironed with defarts. Those Augylæ themselves are seated well neere in the middle way from Æthiopia, which bendeth Westward, and the countrie lying betweene the two Syrtes, with equall distance betweene of both sides: but the shore betwene the two Syrtes of 230 miles. There standeth the citie Ocenſus, the riuier Cinyſs and the countrie. Townes, Neapolis, Taphra, Abrotomum, the other Leptis, called also the great. Then the greater Syrtis, in compasse 625 miles, and in direct passage 313. Next to it, there inhabit the people Ciſſipades. In the inmost gulfes was the coast of the Lotophagi, whom some haue called Alachroas, as far as to the alters of Phylæna, and of sand are they. Next to them, not farre from the Continent, the vast and wide Meere admitteth into it the riuier Triton, and taketh the name of him: but *Callimachus* calleth it Pallantias, and saith it is on this side the lesser Syrtes, but many place it betweene both Cyrtes. The promontory that enclōses the bigger, is named Boryon. Beyond it is the prouince Cyrenaica. From the riuier Amflaga to this bound, Africk contains 26 States, who are subiect to the Roman Empire: among which are six colonies besides the aboue-named, Vthina and Tuburbis. Townes endowed with Franchises of Roman citizens 15. Of which those in the midland parts, worthy to be named, are Azuritanum, Abutenece, Aborienſe, Canopicum, Chilmanenſe, Simittunenſe, Thunufidenſe, Tuburnicenſe, Tyndirumenſe, Tribigenſe, Vcitana twain, the greater and the lesse, and Vagienſe. One towne enjoying the liberties of Latium, Vſalitanum. One tributary or pensionary towne neere Caſtra Cornelia, paith custome and duties to Rome. Free townes 30, of which there are to be named within-forth, Arolitanum, Acharitanum, Auinenſe, Abziritanum, Canopitanum, Melzitanum, Madatrenſe, Salaphitanum, Tuſdrutanum, Tiricenſe, Tiphicenſe, Tunicenſe, Theudenſe, Tagefenſe, Tigenſe, Vluſibritanum, another Vagenſe, Vigenſe and Zamenſe. The rest may well be called not only cities, but also for the most part, Nations, namely the Natadontes, Capſitrani, Miſulani, Sababares, Maſſili, Miſiues, Vamacures, Ethini, Maſſini, Marcubij, and Gatulia all and whole, euen to the riuier Nigris, which parteth Africke and Æthiopia.

CHAP. V.

¶ Cyrene.

The region Cyrenaica, called also Pentapolitana, is famous and renowned for the Oracle of *Hammon*, which is from Cyrene 400 miles, for the fountaine of the Sunne, and principally for 5 cities, Berenice, Arsinoe, Ptolemais, Apollonia, and Cyrene it selfe. Berenice standeth vpon the vtmost winding and nouke of Syrtis, called sometyme the city of the aboue-named Hesperides, according to the wandering tales of Grece. And before the towne, not far off, is the riuier Lethon, the sacred groue where the hort-yards of these Hesperides are reported to be. From Leptis it is 385 miles. From it stands Arsinoe, vſually named Teuchira, 43 miles: and from thence 22 miles, Ptolemais, called in old time Barce. And then 250 miles off the promontory Phycus runs along along the Creticke ſea, diſtant from Tanarus a cape of Laconia, 350 miles: but from Crete it selfe 125 miles. And after it Cyrene, 11 miles from the ſea. From Phycus to Apollonia is 24 miles: to Cherroneſus 88: and ſo forth to Catabathus 216 miles. The inhabitants there bordering, be the Marmaridæ, ſtretching out in length almost from Paratonium to the greater Syrtis. After them the Araraucelles and ſo in the very coast and ſide of Syrtis. The Naſamones, whom before-time the Greekes called Meſammones by reaſon of the place, for that they were ſeated in the middest betwene the two quicke ſands. The Cyrenaick countrie, for the ſpace of 15 miles from the ſea ſide, is fruitfull for trees: and for the ſame compaſſe within the land, but for come onely: but then for 30 miles in bredth, and 250 in length, for the gum Laſer and nothing elſe. After the Maſamones, the Haſbitæ and Maſæ do liue. Beyond them the Hammanientes, eleuen daies iourne from the greater Syrtis to the Weſt, and euen they alſo euery way are compaſſed about with lands: howbeit they find without much ado pits almost in cubits deepe, for that the waters there of Mauritania doe ouerflow. Houſes they make themſelves of ſalt, hewed out of their owne hills in manner of ſtone. From theſe to the Troglodites, in the Southweſt coaſt is foure daies iourne, with whom they chaſſer and traffick onely for a certaine precious ſtone or gem, which we call a Carbuncle, brought out of Æthiopia. There comes betwene, the countrie Phazania, lying toward the wildeerneſſe aboueſaid of Africk, aboute the lesſe Syrtis: where we ſubdued the nation of the Phazaniij, together with the ci-

tices

A ties Alele and Cillaba. In like manner Dydamum ouer-againſt Sabrata. Next to whom there is a mountain, reaching a great way from the Eaſt into the Weſt, called by our men Ater, naturally as it were burnt, & like as if it were ſcorched, and ſet on fire with the reflection of the Sun. Beyond that mountain are the deſarts: alſo Matelgæ a town of the Garamants, & likewise Debris, which caſteth forth a ſpring of waters ſeething vp from noon to midnight exceeding hot: and for as many houres again into midday moſt chilling cold, alſo the moſt goodly towne Garama, the chiefe head of the Garamants. All which places the Romanes haue conquered by force of armes, and ouer them *Cornelius Balbus* triumphed, the onely man of forreiners that was honoured with the triumphant chariot, and endowed beſides with the freedome of Romane citizens. For why, being borne at Gades, he and his vncle both, *Balbus* the elder, were made free denizens of Rome. And this is marvell that our writers haue recorded, that beſides the townes aboue-named by him conquered, himſelfe in his triumph caried the titles and portraictes not of Cydamus and Garama only, but also of all other nations and cities, which were ranged in a Roll, and went in this order, The towne Tabidium, the nation Niteris, the towne Neglegmela, the Nation Bubeicum, the town Vel, the nation Enipi, the town Thuben, the hill named Niger. The town Nitibrum and Rapſa, the nation Diſcera, the town Debris, the riuier Nathabur, the towne Taplagum, the nation Nannagi, the towne Boin, the towne Pege, the riuier Daſibari. And again forward, theſe townes lying one to another together, Baracum, Buluba, Alaſi, Balfa, Galla, Maxala, and Zizama. The hill Gyri, wherein *Titus* hath reported that precious ſtones were engendred. Hitherto the way to the Garamants, was intricate and unpaſſable, by reaſon of the robbers and theues of that countrey, who ſed to dig certain pits in the way (which to them that know the quarters of the countrey, is no hard matter to doe) and then couer them lightly ouer with ſand. But in the laſt way which the Romans maintained againſt the Oenſes, vnder the conduct and fortunate auſpices of *Vespasian* the Emperour, there was found a ſhort and neere way of foure daies iourney; & this way is called *Prætor caput Saxi* (beſides the rocks head) The frontier towne of Cyrenaica is called Catabathmos, which is a towne and a vaile all on a ſudden falling with a ſteepe deſcent. To this bound, from the lesſe Syrtis, Cyrenaica Africa lieth in length 1060 miles, and in bredth, for ſo much as is knowne, 800.

CHAP. VI.

¶ Libya Maraoitis.

The countrey following is named Marcotis Libya, and boundeth vpon Ægypt, inhabited by the Marmaridæ, Adymachidæ, and ſo forward with the Marcotæ. The meaſure of it from Catabathmos to Paretonium, is 86 miles. In that tract there lyeth in the way betwene the village Apis, a place renowned for the religious rites of Ægypt. From it to Paratonium are 12 miles. From thence to Alexandria 200 miles: the bredth thereof is 169 miles. *Eratosthenes* hath deliuered in writing, that from Cyrene to Alexandria by land is 525 miles. *Agrippa* ſaith, that the length of all Africk from the Atlantick ſea, together with the inferior part of Ægypt containeth 3040 miles. *Polybius* and *Eratosthenes*, reputed to haue bin moſt exact and curious in this kinde, ſet downe, from the Ocean to great Carthage 1600 miles. From thence to Canopicum the neereſt mouth of Nilus, they make 1630 miles. *Iſidore* reckoneth from Tingi to Canopus 3599 miles. And *Artemidorus* forty leſſe than *Iſidore*.

CHAP. VII.

¶ Iſlands about Africke, and ouer-againſt Africke.

Theſe ſeas haue not very many Iſlands within them. The faireſt of them all is Meninx, 33 miles long, and 25 broad, called by *Eratosthenes* Lotophagitis. Two townes it hath, Meninx on Africke ſide, and Thæon on the other: it ſelfe is ſituate from the right hand promontory of the lesſe Syrtis 200 paces. A hundred miles from it againſt the left hand is Cercina, with a free towne of the ſame name, in length it is 25 miles, and halfe as much in bredth where it is moſt; but toward the end not above foue miles ouer. To it there lieth a pretty little one toward Carthage called Cercinitis, & ioineth by a bridge vnto it: from theſe almost 60 miles, lies Lopadufa ſix miles long. Then, Gaſulos and Galata: the earth whereof killeth the Scorpion, a ſell

* Or 1500 paces, a mile and a half.

c762

creature, and noisome to Africke. Men say also that they wil die in Clupea, ouer against which lieth Corfyra, with a towne. But against the gulf of Carthage be the two Æginori, rocks more like than Islands, lying most between Sicily and Sardinia. There be that write how these sometime were inhabited, but afterwards sunke downe and were couered.

CHAP. VIII.

¶ The Æthiopiāns.

BVt within the inner compass and hollow of Africke toward the South, & about the Gæ-
tians, where the deserts come between, the first people that inhabit those parts, be the Li-
bij Ægyptij, and then the Leucæthiopes. About them are the Æthiopian nations, to wit,
the Nigritæ, of whom the riuertooke name: the Gymetes, Pharusi, and those which now reach
to the Ocean, whom we spake of in the marches of Mauritania, namely, the Perossi. From all
these, it is nothing but a wilderness Eastward, till you come to the Garamantes, Augylæ, and
Trogilodites, according to the most true opinion of them, who place 2 Æthiopies about the
deserts of Africk; and especially of *Homer*, who saith, that the Æthiopiāns are diuided 2 waies,
namely, East and West. The riuier Nyger is of the same nature that Nilus. It bringeth forth
Reed and Papyr, breedeth the same liuing creatures, and riseth or swellth at the same seasons.
It springeth betweene the Tareleia Æthiopiāns, and the Oecaliæ. The towne Mavin belong-
ing to this people, some haue set vpon the wilderness; as also, neere vnto them, the Atlantes,
the Ægipanes, halfe wilde beasts, the Blemmyi, the Gamphantes, Satyres, & Himantopodes.
Those Atlantes if we will beleue it, degenerate from the rites and manners of all other men.
For neither call they one another by any name, and they look wistly vpon the Sun, rising, & set-
ting, with most dreadful curses, as being pernicious to them & their fields; neither dream they
in their sleep as other men. The Trogilodites dig hollow caues, and these serue them for dwel-
ling houses; they feed vpon the flesh of serpents. They make a gnashing noise, rather than vtter
any voice, so little vse haue they of speech one to another. The Garamants liue out of wedlock
and conuerse with their women in common. The Augylæ do no worship to any but to the di-
uels beneath. The Gamphantes bee all naked, and know no Wars, and fort themselves with
no forraier. The Blemmyi, by report haue no heads, but mouth and eies both in their breast:
The Satyres besides their shape only, haue no properties nor fashions of men. The Ægipanes are shap-
ed, as you see them commonly painted. The Himantopodes be some of them limber legged
and tender, who naturally go creeping on the ground. The Pharusi, sometime Persæ, are said to
haue bin the companions of *Hercules*, as he went to the Hesperides. More of Africke worth the
noting, I haue not to say.

CHAP. IX.

¶ of Asia.

VNto it ioineeth Asia, which from the mouth of Canopus vnto the mouth of Pontus, after
Timolthenes 2639 miles. From the coast of Pontus to that of Mæotis, *Eratolthenes* saith, is
1545 miles. The whole, together with Egypt vnto Tanais, by *Artemidorus* and *Isidorus*, tak-
eth 8800 miles. Many seas there be in it, taking their names of the borderers; and therefore
they shall be declared together with them. The next country to Africk inhabited, is Egypt, ly-
ing far within forth to the South, so far as the Æthiopiāns, who border vpon their backs. The
nether part thereof the riuier Nilus, diuided on the right hand and the left, by his claspings doth
bound and limit, with the mouth of Canopus from Africke, with the Pelusiacke from Asia, and
carrieth a space between of 170 miles. Whereupon, considering that Nilus doth so part it self,
some haue reckoned Egypt among the Islands, so as it maketh a triangular figure of the land.
And here it is that many haue called Egypt by the name of the Greeke letter Delta, Δ. The
measure of it from the channell where it is but one, and from whence it beginneth first to part
into skirts and sides, vnto the mouth of Canopus, is 146 miles; and to the Pelusiack 256: the vp-
permost part thereof bounding on Æthiopia, is called Thebais. Diuided it is into townships with
seuerall iurisdicions, which they call Nomos; to wit, Ombites, Phatuites, Apollopolites, Her-
monhites, Thinites, Phanturites, Caprites, Tentyrites, Diospalites, Antæopolites, Aphrodito-
polites,

Alites, and Lycopolites. The country about Pelusium, these townships with their seuerall iurisd-
icions, Phæroërites, Bubastites, Sethroites, & Tanites. The rest haue these following, the A-
rabickie, the Hammoniacke which extendeth to the Oracle of *Iupiter Hammon*, Oxyrinchites,
Leontopolites, Atarrabites, Cynopolites, Hermopolites: Xoites, Mendefines, Sebennites, Ca-
pastites, Latæopolites, Heliopolites, Protopites, Panopolites, Busirites, Onuphites, Sorites, Pre-
nethu, Pthempthu, Naucratis, Nitrites, Gynæcopolites, Menelaïtes, in the country of Alexan-
dria. In like manner of Libya Marcotis. Heracleopolites is in the Island of Nilus, fiftie miles
long, wherein also is that which they call *Hercules* his town. Two Arfinoites there be they, and
Memphites reach as far as two the head of Delta. Vpon it there do bound out of Africka the
two Ouafira. There be that change some names of these, and set down for them other iurisd-
icions, to wit, Heroopolites, and Crocodilopolites. Between Arfinoites and Memphites there
was a lake 50 miles about, or as *Mutianus* saith, 450, fifty paces deep, [i. 150 foot,] & the same
made by mans hand, called the Lake Meridis, of a king who made it. 72 miles from thence is
Memphis, the castle in old time of the Ægyptian kings. From which to the Oracle of *Hammon*
is twelue daies iournie, & so to the diuision of Nilus, which is called Delta, fifteen miles. The
riuier Nilus rising from vnkowne springs, passeth thorow deserts and hot burning countries:
and going thus a mighty way in length, is known by same onely, without armes, without wars,
which haue discouered and found out all other lands. It hath his beginning, so far forth as *Tabæ*
was able to search and find out in a hill of the lower Mauritania, nor far from the Ocean, where
a lake presently is seen to stand with water, which they call Nilides. In it are found these fishes
called Alabeta, Coracini, Siluri, and the Crocodile. Vpon this argument & presumption Nilus
is thought to spring from hence, for that the pourtraict of this source is consecrated by the
said prince at Cæsaria, in Iseum, and is there at this day seene. Moreover, obserued it is, that as
the Snow or rain do satise the countrie in Mauritania, so Nilus doth encrease. When it is run
out of this lake, it scorneth to run through the sandy and ouergrown places, and hides himself
for certaine daies iournie. And then soone after out of a greater lake, it breaketh forth in the
country of the Massælyi, with Mauritania Cæsarienses, and looks about viewing mens com-
pany, carrying the same arguments still of liuing creatures bred within it. Then once again be-
ing receiued within the sands, it is hidden a second time for twenty daies iournie, in the deserts
as far as to the next Æthiopes: and so soone as hee hath once againe espied a man, forth hee
startes (as it should seem) out of that spring, which they called Nigris. And then diuiding Af-
rick from Æthiopia, being acquainted, if not presently with people, yet with the frequent
company of wild and sauaige beasts, and making shade of woods as he goes he cuts through the
middlest of the Æthiopiāns: there furnamed Astapus, which in the language of those nations
signifieth a water flowing out of darkenesse. Thus dasheth he vpon such an infinite number of
Islands, and some of them so mighty great, that albeir he bare a swift streame, yet is he not able
to passe beyond them in lesse space than 5 daies. About the goodliest and fairest of them Me-
roe, the channell going on the left hand is called Astabores, that is, the branch of a water com-
ming forth of darkenesse: but that on the right hand Astafapes, which is as much as, lying hid,
to the former signification. And neuer taketh the name of Nilus, before his waters meet againe
& accord all whole together. And euen so was he aforetime named Siris, for many miles space:
and of *Homer* altogether Ægyptis: and of others, Triton: here and there, and euer and anon hit-
ting vpon Islands, and stirred as it were with so many prouocations: and at the last enclosed and
shut within mountaines, and in no place he carries a rougher and swifter stream, while the wa-
ter that he beareth, hastens to a place of the Æthiopiāns called Catadupi, where in the last fall
among the rocks that stand in his way, he is supposed not to runne, but to rush downe with a
mighty noise. But afterwards he becomes more milde and gentle, as the course of his streame
is broken, and his violence tamed and abated, yea, and partly wearied with his long way: and so
though with many mouths of his, he discharge himselfe into the Ægyptian sea. Howbeit at
certaine set daies he swellth to a great height: and when he hath travelled all ouer Egypt, hee
furtherfloweth the land, to the great fertility and plenty thereof. Many and diuers causes of this
rising and increase of his, men haue giuen: but those which carry the most probability, are ei-
ther the rebounding of the water, driuen back by the winds Etetia, at that time blowing against
it, and driving the sea withall vpon the mouths of Nilus; or else the Summer rain in Æthiopia
by reason that the same Etetia bring clouds thither from other parts of the world. *Timæus* the

Mathematician, alledged an hidden reason thereof, to wit, that the head and source of Nilus is named Phyla, and the river it selfe is hidden, as it were drowned within certain secret trenches within the ground, breathing forth vapors out of creeking rockes, where it thus lieth in secret. But so soone as the sunne during those daies, commeth neere, drawne vp it is by force of heate, and so all the while he hangeth aloft, ouerfloweth: and then againe for feare he should be wholly deuoured and consumed, putteth in his head againe and lieth hid. And this happeneth from the rising of the dog starre Sicinus, in the Sunnes entrance into Leo, while the planet standeth plumb over the fountaine afore said: for as much as in that climate there are no shadows to be seene. Many againe were of a different opinion, that a river floweth more abundantly, when the Sunne is departed toward the North pole, which happeneth in Cancer and Leo: and therefore at that time is not so easily dried: but when he is returned once againe back toward Capricorn and the South pole, it is drunke vp, and therefore floweth more sparely. But if according to *Himani* a man would thinke it possible that the water should be drawne vp, the want of shadows during those daies, and in those quarters, continueth still without end. For the river begins to rise and swell at the next change of the Moone after the Sun, steed, by little and little gently, so long as he passes through the signe Cancer, but most abundantly when he is in Leo. And when he is entred Virgo, he falleth and setteth low againe, in the same measure as he rose before. And is cleane brought within his bankes in Libia, which is, as *Herodotus* thinketh, by the hundredth day. All the whiles it riseth, it hath been thought vnlawfull for kings or gouernours to faile or passe in any vessell vpon it, and they make conference to do so. How high it riseth, is known by markes and measures taken of certaine pits. The ordinary height of it is sixteen cubits. Vnder that gage the waters ouerflow not all. About that flint there are a let and hinderance, by reason that the later it is ere they be fallen, and downe againe. By these, the feede time is much of it spent, for that the earth is too wet. By the other there is none at all, by reason that the ground is dry and thirsty. The province taketh good keep and reckoning of both, the one as well as the other. For when it is no higher than 12 cubits, it findeth extreame famine: yea, and at 13 it feelleth hunger still, 14 cubits comforts their hearts, 15 bids them take no care, but 16 affordeth them plenty and delicious dainties. The greatest flood that euere was knowne vntill this daies was 18 cubits, in the time of Prince *Claudius* Emperour: and the least, in the Pharaliam warre, against the death of *Pompey*: as if the very river by that prodigious token, lothed to see the same. When at any time the waters seeme to stand and couer the ground still, they are let out at certaine sluices, or flood-gates drawne vp and set open. And so soon as any part of the land is freed from the water, straight waies it is sowed. This is the only river of all others that breatheth out nowind from it. The Seignory & dominion of *Aegypt* beginneth at Syene, the frontier rowne of *Ethiopia*. For that is the name of a demy Island 100 miles in compasse, wherein are the *Cerastæ* vpon the side of Arabia: and ouer against it the 4 Islands *Philæ*, 600 miles from the partition of Nilus, where it began to be called Delta, as we haue said. This space of ground hath *Artemidorus* deliuered, and withall, that within it were 250 townes. *Tuba* stretcheth down 400 miles. *Arifcoron* saith, that from Elephantis to the sea is 750 miles. This Elephantis being an Island, is inhabited beneath the lowest cataract or fall of water 3 miles, and about Syene 16: and it is the vtmost point that the *Aegyptians* faile vnto, & is from Alexandria 586 miles. See how far the Authors aboue written, haue erred and gone out of the way: there meet the *Ethiopian* ships, for they are made to fold vp together, and carry them vpon their shoulders, so often as they come to those cataracts or downefalls afore said. *Aegypt* ouer and about all other boasts and glory of antiquitie, brags that in the raigne of king *Amasis*, there were inhabited in it and peopled twenty thousand cities. And euen at this day full it is of them, such as they be, and of base account. Howbeit, that of *Apollonia* is much renowned, as also neere vnto it another of *Leucæthea*, and *Diospolis* the great, the very fame that Thebes, famous for the 100 gates in it. Also, Capros, a great mart towne next to Nilus, much frequented for merchandise and commodities out of India and Arabia. Moreouer the towne of *Venus*, and another of *Iupiter*, & *Tentyris*, beneath which standeth Abydos, the royall seat of *Aemmon*, and *Osiris* renowned for the temple there, seuen miles and an halfe distant from the river, toward Lybia. Then *Ptolemais*, *Panopolis*, and another yet of *Venus*. Also in the Lybian coast, *Lycou*, where the hills doe bound Thebais. Soone after, these townes of *Mercurie*, *Alabastron*, *Canum*, and that of *Heracles* spoken of before. After these, *Arfinoe*, and the aboue said *Memphis*, betweene which

The circle
of capros.

A and the dioceffe *Arfinoe*, in the Lybian coast, the towers called *Pyramides*, the *Labyrinth* built vp in the lake of *Mœris* without any iot of timber to it, and the town *Crialon*. One more besides, standing within-forth and bounding vpon Arabia, called the towne of the Sunne, of great account and importance.

CHAP. X.

¶ Alexandria.

B Vt right worthy of praise is Alexandria, standing vpon the coast of the Egyptian sea, built by *Alexander* the Great on *Africke* side, 12 miles from the mouth of *Canopus*, neere to the lake *Marcotis*, which was before time called * *Arapotis*. *Dionochares* the Architect (a * *Rachobert*) man renowned for his singular wit many waies) aid the modell and platforme thereof by a subtil and witty deuise, for hauing taken vp a circuit of 15 miles for the city, he made it round like to a Macedonian cloke, full in the skirts, bearing out into angles and corners, as well on the right hand as the left, so as it seemed to lie in folds and plaits; and yet euen then he set out one fifth part of all this plot for the kings palace. The lake *Marcotis* from the South side, meeteth with an arme of the river *Nilus*, brought from out of the mouth of the said river called *Canopus*: for the more commodious trafficke and commerce out of the firme ground and inland Continent. This lake containeth within it sundry Islands, and (according to *Claudius Cæsar*) it is thirty miles ouer. Others say, that it lieth in length 40 Schoeni, and so, whereas euery Schoene is 30 stadia, it commeth by that account to be 150 miles long, and as many broad. Ouere besides, there be many goodly faire towns of great importance, standing vpon the river *Nilus* where he runneth, and those especially which haue giuen name to the mouthes of the river, and yet not to all those neither (for there be 11 of them in all, ouer and besides foure more, which they themselves call bastard mouthes) but to 7 of the principal: to wit, vpon that of *Canopus*, next vnto Alexandria; then *Bolbitinum*, and so forth to *Sebenniticum*, *Phatiticum*, *Mendesicum*, *Taniticum*, and last of all *Pelusiæcum*. Other cities there be besides, to wit, *Buros*, *Pharbatos*, *Leontopolis*, *Achrisbris*, *Iris* towne, *Bufiris*, *Cynophis*, *Aphrodites*, *Sais*, *Naucratis*, of which some thinke the mouth *Naucraticum* tooke the name, which they be that call *Heracleoticum*, preferring it before *Canopicum*, next vnto which it standeth.

D

CHAP. XI.

¶ Arabia [the Desart or Petrae.]

B Eeing once past that arme of the river *Nilus*, which entereth into the sea at *Pelusiæ*, you come into Arabia, confining vpon the red sea; and that other Arabia, so rich & odoriferous, and therefore renowned with the synname of *Happie*. As for this desart Arabia, possessed it by the *Catabanes*, *Esbonites*, and *Serenite* Arabians: all barren and fruitlesse, saue whereas it meeteth with the confines of Syria, and setting aside the mountaine *Cafius*, nothing memorable. This region confronteth the Arabians *Canchlei* on the East-side, and the *Cedraei* Southward, and they both confine together afterwards vpon the *Nabathæes*. Moreouer, 2 Baies there be, the one called the gulf of *Heroopolis*, and the other of *Eliani*; both in the red sea on the coast of Egypt, 150 miles distant, betweene two townes, *Eliana*, and *Gaza*, which is in our (Mediteranean) sea. *Agrippa* counteth from *Pelusiæ* to *Arfinoe*, a towne situate vpon the red sea, an hundred and fise and twenty miles. See how small a way lyeth betweene two Climates so different in Nature.

E

CHAP. XII.

¶ Syria, Palestine, Phœnicie.

F Vpon the coast of the said Arabia, confineth Syria; a Region in times past, the chief and most renowned vpon earth; and the same distinguished by sundry names. For where it confineth vpon the Arabians, called it was *Palestina*, *Iurie*, *Cœle-Syria*, and afterward, *Phœnicie*. But go farther within the firme land, *Damaſcene*. Turne more still Southwards, it is named *Babylonia*. And the same, between the rivers *Euphrates* and *Tygris*, carrieth the name

of Mesopotamia. Beyond the mountain Taurus, it is Sophene; but on this side the hill, they call Comagene. The country beyond Armenia, is Adiabene, named before-time Assyria: but the marches of Syria, which confront Cilicia, is knowne by the name of Antiochia. The whole length of Syria, from the frontiers of Cilicia to Arabia, containeth 470 miles: the breadth between Seleucia Pieria, to Zeugina, a towne seated vpon Euphrates, taketh 175 miles. They that make a more subtile and particular diuision, would haue Phoenice to be enuironed with Syria. And first, as you come from Arabia, is the sea-coast of Syria, which comprileth in it Idumæa & Iudæa; then you enter into Phoenicia, and so into Syria again, when you are past Phoenicia. And within-forth farther into the country, Phoenice is inclosed with Syria Damascena. All that sea yet, which beateth vpon that coast, beareth the name of the Phœnician sea. As for the nation it selfe of the Phœnicians, haue been highly reputed for their Science, nauigation, and martial skill. Being past Pelusium, you come to a city called Chabria Casira to the mountain Caius, and the temple of *Iupiter Caius*: also the tombe of *Pompeius Magnus*; and last of all to the city Ostracium. To conclude, from Pelusium to the frontiers of Arabia the Desert, [alongst the coast of Syria] are 65 miles.

CHAP. XIII.

¶ *Idumæa, Syria, Palestina, Samaria.*

Soon after beginneth Idumæa & Palestina, euen from thersing vp of the lake Sirbon, which some haue reported to carry a circuit of 150 miles. *Herodotus* saith, it is hard vnder the foot of the hill Caius: but at this day it is but a small lake. As for the towne there, they be Rhinocolura, and more within the land, Rhaphæa: also Gaza a port towne, and farther within, Antheion, and the mountain Angoris. From thence you descend to the coast of Samaria, the free citie Ascalon, and Azotus; the two Iamnes, whereof the one is well within the land; and so forward to Ioppe, a towne in Phoenicia, which by report, is more antient than the deluge. Scituate it is vpon a hill, with a rocke before it, wherein are to be seen the tokens and reliques of *Lady Andromædaes* prison where she was bound. Within a chappell there, the *Siren Decreto*, whereof the Poets tell such tales, is worshipped. Being past Ioppe, you meet with Apollonia: the towne of Strato, called also Cæsarea, founded by *K. Herod*: it beareth now the name of Prima Flauia, a colony there planted and endowed with priuiledges by *Vespasian* the Emperor. The bounds of Palestina be 180 miles from the confines of Arabia: and there entreth Phoenice. Within-forth in the country, are the townes of Samaria, and Neapolis, which before-time was named *Martha* (or *Maxbota*.) Also Sabaste vpon the mountain, and Gamala, which yet standeth higher than it.

CHAP. XIII.

¶ *Iurie and Galilee.*

A Boue Idumæa and Samaria, Iudæa spreadeth out far in length and breadth. That part of it which ioieth to Syria, is called Galilee: but that which is next to Syria and Egypt, is named Perea, [i. beyond Iordan.] Full of rough mountaines dispersed here and there: and seuered it is from other parts of Iury, by the riuier Iordan. As for the rest of Iudæa, it is diuided into ten gouernments or territories, called Toparchies, in this order following: to wit, that of Hierichea, a vaille richly planted with Date trees: Emmaus, well watered with fountaines: Lydda, Ioppica, Accrabadena, Gophnitica, Thamnitica, Betholene, Tephene, and Orine, wherein stood Ierusalem, the goodliest citie of all the East parts, and not of Iury only. In it also is the principallitie Herodium, with a famous towne of that name.

CHAP. XV.

¶ *Iordane the Riuier.*

The riuier Iordan springeth from the fountaine Pancades, which gaue the Syname to the citie Cæsarea, whereof we will speake more. A pleasant riuier it is, and as the site of the country will permit and giue leaue, winding and turning in and out, seeking as it were for

Ioue

A Ioue and fauour, and applying it selfe to please the neighbor inhabitants. Full against his will, as it were, he passeth to the lake of Sodom, Asphaltites, that ill-fauored and curied lake: and in the end falleth into it, and is swallowed vp of it, where amongst those pestilent and deadly waters, he loseth his owne that are so good and wholesome. And therefore to keep himselfe out of it as long as he possibly could, vpon the first opportunity of any vallies, hee maketh a lake, which many call Genesara, which is 16 miles long, and 6 broad. The same lake is enuironed with diuers faire and beautifull townes; to wit, on the East side, with Iulias and Hippo; on the South, with Tarichea, of which name, the lake by some is called Tarichion; and on the West, with Tiberias, an healthfull place for the baines there of hot waters.

B

CHAP. XVI.

¶ *Asphaltites.*

A Asphaltites, or the lake of Sodom, breedeth and bringeth forth nothing but Bitumen; and thereupon it tooke the name. No liuing body of any creature doth it receiue into it: bulls and camels swim and stoe aloft vpon it. And hereupon ariseth that opinion which goeth of it, That nothing there wil go downe and sink to the bottome. This lake in length exceedeth 100 miles, 25 miles ouer it is at the broadest place, and six at the narrowest. On the East, the Arabian Nomades confront it; and on the South side, Macharus regardeth it in time past, the second fortresse of Iudæa, and principall next to Ierusalem. On the same coast, there is a fountain of hot waters, wholesome and medicinable, named Callirhoe, and good against many diseases.

C The very name that it carrieth, importeth no lesse praise and commendation.

CHAP. XVII.

¶ *The people Esseni.*

A Long the West coast inhabit the Esseni. A nation this is, liuing alone and solitarie, and of all others throughout the world most admirable and wonderfull. Women they see none: carnal lust they know not; they handle no money, they lead their life by themselves, and keepe company onely with Date trees. Yet neuertheless, the country is euermore well peopled, for that daily numbers of strangers resort thither in great frequence from other parts; and namely, such as be weary of this miserable life, are by the surging waues of frowning fortune driuen hither, to sort with them in their manner of liuing. Thus for many thousand yeares [a thing incredible, and yet most true] a people hath continued without any supply of new breed and generation. So mightily increase they euermore, by the wearisome estate & repentance of other men. Beneath them stood sometime Engadda, for fertilitie of soile and plenty of Date-tree groues, accounted the next city in all Iudæa, to Ierusalem. Now, they say, it serueth for a place only to inter their dead: beyond it, there is a castle or fortresse scituate on a rock, and the same not far from the lake of Sodom Asphaltites. And thus much as touching Iudæa.

E

CHAP. XVIII.

¶ *Decapolis. [i. Cale-Syria.]*

T Here ioyneth to it on Syria side, the region Decapolis, so called of the number of towne and cities in it. Wherein, all men obserue not the same, nor make like account: howbeit most men speake of Damascus and Oporos, watered with the riuier Chryssorhœa. Also, Philadelphia, renowned for the fruitfull territory about it. Moreouer, of Scythopolis, taking name of the Scythians thence planted: and before-time Mysla, so named of Prince or Father *Bacchus*, by reason that his nource there was buried. Also Gadara, scituate on the riuier Hieromias, running euen before it. Besides, the aboue-named Hippo Dios. Likewise Pella, enriched with the good fountaines: and last of all, Galazæ and Canatha. There lie betwene and about these cities, certaine Royalties called Triarchies, containing euery one of them as much as an whole country: and reduced they be as it were into feuerall countries; namely, Trachonitis Panias, wherein standeth Cæsarea, with the fountain aboue-said, Abila, Arca, Ampelossia, and Gaber-

K 3

CHAP.

Returne now we must to the sea-coast of Phœnice. A river runneth there called Crocodilon, whereupon stood a towne in times past bearing the name. Also there remain in those parts the bare reliques still of cities, to wit, Dorum, Sycaminum, the cape or promontory Carmelum, and a towne vpon the hill so named; but in old time called Ecbatana. Neere thereto Getta and Iebba; the river Pagida or Pelus, carrying chryftall glasse with his sands vpon the shore. This river cometh out of the meere Ceuducia, from the foot of mount Carmel. Neere vnto it is the city Ptolemais, erected in the forme of a colony, by *Claudius Caesar*; in ancient time called Are. The towne Eedippa, and the cape Album. Then follows the noble citie Tyrus, in old time an Island, lying almost 3 quarters of a mile within the deepe sea; but now, by the great traueil and deuises wrought by *Alexander the Great* at the siege thereof, ioyned to the firme ground; renowned, for that out of it haue bene three other cities of ancient name, to wit, Lep-tis, Vtica, and that great Carthage, which so long froue with the Empire of Rome for the monarchy and dominion of al the whole world; yea, and Gades, diuided as it were from the rest of the earth, were peopled from hence. But now at this day all the reputation and glory thereof, stands vpon the die of purple & crimson colors. The compasse of it is 19 miles, so ye comprise Palætyrus within it. The very towne it selfe alone, taketh vp 22 stadia. Neere vnto it are these townes, Luhadra, Sarepta, and Ornython; also Sydon, where the faire and cleer glasse is made, and which is the mother of the great citie Thebes in Bœotia.

Behind it, beginneth the mount Libanus, and for 1500 stadia reacheth as farre as to Smyrna, whereas Coele-Syria takes the name. Another promontory there is as big ouer-against it, called Antilibanus, with a vallie lying betwene, which in old time ioyned to the other Libanus with a wall. Being past this hill, the region Decapolis sheweth it selfe to you within-forth, called Decapolis; and the aboue-named Tetrarchies or Realmes with it, and the whole largeness that Palestine hath. But in that coast and tract still along the foot of the mount Libanus, there is the river Magoras; also the colonie Berytus, called Fœlix Iulia. The towne Le-ontos; the river Lycos; also Palæbyblos, [i. Byblos the old.] Then ye come vpon the river Adonis, and so to these townes, Byblos [the new,] Botrys, Gigarta, Trieris, Calamos, and Tripolis, vnder the Tyrians, Sydonians, and Aradians. Then meet you with Orthosia, and the river Eleutheros. Also these townes, Simyra, Marathos, and ouer-against, Aradus, a towne of seven stadia: and an Island lesse than a quarter of a mile from the Continent. When you are once past the countrie, where the said mountaines doe end, and the plaines lying betwene, then beginneth the mount Bargylis; and there, as Phœnicie endeth, so begins Syria againe. In which countrie are Carne, Balanea, Paltos, and Gabale; also the Promontorie, whercupon standeth the free city Laodicea, together with Diospolis, Heraclea, Charadus, and Posidium.

Go forward in this tract, and you shall come to the cape of Syria Atiochena: within-forth is seated the noble and free citie it selfe Antiochena, surnamed Epidaphne: through the mids whereof runneth the river Orontes. But vpon the very cape, is the free citie Seleucia, named also Pieria.

Aboue the citie Seleucia, there is another mountaine named Casius, as well as that other, which confronteth Arabia. This hill is of that heighth, that if a man be vpon the top of it in the darke night season, at the reliefe of the fourth watch, he may behold the Sunne arising

A sing. So that with a little turning of his face and body, hee may at one time see both day and night. To get vp by the ordinary high-way to the very pitch of it, a man might fetch a compas of 19 miles; but climbe directly vp right it is but 4 miles. In the borders of this country runs the river Orontes, which ariseth between Libanus and Antilibanus, neere to Heliopolis. Then the towne Rhosfos appears: and behind it, the freight passages and gullets betwixt the mountaines Rhotij and Taurus, which are called Porta Syria. In this tract or coast stands the town Myriandros, the hill Avanus (where is the towne Bomilæ, which separateth Cilicia from the Syrians.

It remaineth now to speake of the townes and cities in the midland parts within the firme land: and to begin with Coele Syria, it hath in it Apamia, separated from the Nazerines tetrarchy by the river Marfa: likewise Bambyce, otherwise called Hierapolis; but of the Syrians, Magog. There is honored the monstrous idoll of the Meermaid, Atargatis, called of the Greeks Decreto. Also Chalcis, with this addition, Vpon Belus: from which the region Chalcidene, most fertile of all Syria, taketh name. Then haue you the quarter Cyrrhistica, with Cirrhos, Gazata, Gindarenes, and Gabenes. Moreouer, two Tetrarchies, called Granucomara. Moreouer, the Hemifenes, Hylates, the Ituranen country (and principally those of them who are named Betarrani) and the Mariammitanes. The Tetrarchie or Principallitie named Mammicea, the city Paradisus, Pagra, Pinarites, and two Seleucia; besides the aboue named, one called, Vpon Euphrates; and the other, Vpon Belus: and last of all, the Carditenses. The rest of Syria hath these States (besides those which shall be spoken of with the river Euphrates) the Arethufians, Beræenses, and Epiphanenes: and Eastward, the Laodicenes, namely those who are entituled, Vpon Libanus: the Leucadians and Larissæans: besides 17 Tetrarchies reduced into the forme of realmes, but their names are barbarous.

And here me-thinks is the fittest and meettest place to speake of Euphrates. The source of it, by report of them that saw it last and neereest, is in Caranitis, a state vnder the government of Armenia the greater: and those are *Domitius* and *Corbulo*, who say, that it springeth in the mountaine Aba. But *Licinius Mutianus* affirmeth, that it issueth from vnder the foot of the mountaine which they call Capotes, 12 miles higher into the country than is Simyra: and that in the beginning it was called Pyxirates. It runs first directly to Dêrene, and so forth, to Ana also, excluding the regions Armenia, the greater as well as the lesse, from Cappadocia. The Dastufe from Simyra are 75 miles: from thence it is nauigable to Pærtosa, 50 miles: from it to Melitene in Cappadocia, 74 miles. So forward to Elegia in Armenia, ten miles; where he receiueth these rivers, Lycus, Arfania, and Arfanus. Neere to Elegia he meeteth afront with the hill Taurus: yet slayeth he not there, but preuaileth a pierceth thorow it, although it beare a bredth there of 12 miles. At this entry where he breaketh thorow the hill they call him Omiras, and so soon as he hath made way and cut thorow it he is named Euphrates. Being past this mountaine, he is full of rocks and very violent: howbeit he passeth through the country of the Moeri, where he carieth a stream of 3 Schoenes bredth, where he parts Arabia on the left hand, from Comagene on the right. And neuerthelesse, euen there whereas he conquereth and getteth the vpper hand of Taurus, he can abide a bridge to be made ouer him. At Claudiopolis in Cappadocia he courseth Westward: and now the mountain Taurus, though resisted and overcome at first, impeacheth and hindereth him of his way, and notwithstanding (I say) he was overcome and dismembred one piece from another, he gets the better of him another way, breaking his course now, and driuing him perforce into the South. Thus Nature seems to match the forces of these two champions equally in this manner. That as Euphrates goes on still without stay as far as he will, so Taurus will not suffer him yet to run what way he wil. Now when these Caracts and downsalls of the river are once past, it is nauigable againe, and forty miles from that place

place standeth Samosata the head city of Comagena. Now hath Arabia beside the townes afore said, Edessa, sometime called Antiochea, Callirhoe, taking name of the fountain: and Carrae, so famous and renowned for the desfeature there of *Crassus* and his army. Hereunto ioineeth the government and territorie of Mesopotamia, which also taketh the first beginning from the Assyrians, in which stand the townes Anthemula and Nicephorium. Hauing passed this country, ye straitway enter vpon the Arabians called Rhetavia, whose capitall city is Singara. Now to returne to Samosata, from it in the coast of Syria, the riuer Marfyas runneth into Euphrates. As Gingla limiteth Comagene, so the land of the Meri beginneth there. The townes Epiphania and Antiochia haue the riuer running close to them, and hereupon they haue this addition in their names, Standing vpon Euphrates. Zenyma likewise, 72 miles from the Samosata, is innoled for the passage ouer Euphrates: for ioined it is to Apamia, right against, by a bridge, which *Selenus* the founder of both caused to be made. The people that ioine hard to Mesopotamia be called Rhoali. As for the townes of Syria which be vpon this riuer, are Europum, Thapscum in times past, at this present Amphipolis; and last of all the Arabian Scenipum. Thus passeth Euphrates, as far as to the land Vra, where turning his course to the East, hee leaueth behinde him the Desarts of Palmyra in Syria, which reach to the city Petra; and to the country of Arabia Felix.

CHAP. XXV.

¶ Palmyra.

The noble city Palmyra is passing well seated, as well for the riches of the soile, as for abundance of waters, which imbelish and set out the country on euery side. As rich and long as it is, the territory all about is inuironed and inclosed with bars of sand. And as if Nature had a desire to exempt it from all other lands to liue apart in peace, the hath set it iust in the midst and confines, between two puissant and mighty empires, to wit, the Romans and Parthians: for there is not so soone any war proclaimed between those two States and Monarchies, but at first they haue on both sides a regard of it as a neutre. It is from Seleucia of the Parthians, namely that vpon Tigris, 537 miles: and from the next port or coast of Syria, 252: and from Damasco 27 neerer.

CHAP. XXVI.

¶ Hierapolis.

Beneath the desarts and wilderness of Palmyra lieth the country Sirelandia, wherein are the cities named at this day Hierapolis, Berceia, and Chalcis. Beyond Palmyra also, Hemecia taketh vp some part of those said desarts: and likewise Elutium, neerer to Petra by one halfe than is Damafcus. And next to Afura standeth Phisicum, a towne of the Parthians vpon Euphrates: from which by water it is a iourney of ten daies to Seleucia, and from thence as many likewise to Babylon: for Euphrates, 83 miles from Zeugma, about the village Massice, diuideth it selfe into two armes. On the left side he passeth into Mesopotamia, euen thorow Seleucia, and about it entreth into the riuer Tygris, which runneth hard by: but on the right hand he carieth a current in his channell toward Babylon, the chiefe city sometime of Chaldaea, and passing through the midst thereof, as also of another called Otis, he parts asunder into sundry lakes and meeres. And there an end of Euphrates. He riseth and falleth at certain times after the order of Nilus: yet some little difference there is betweene them in the manner, for he ouerfloweth Mesopotamia when the Sun is in the 20 degree of Cancer, and begins againe to diminish and flake when the Sun is past Leo, and newly entered into Virgo: so as in the 29 degree of Virgo he is downe againe, and come to his ordinary course.

CHAP. XXVII.

¶ Cilicia, and the nations adioyning, to wit, Isaurica, Homonades, Pisidia, Lycania, Pamphylia, the mountaine Taurus, and Lycia.

But time it is to returne now to the coasts of Syria, and to Cilicia that confronts it. Where in the first place we meet with the riuer Diaphanes, the mountain Crocodilus, the streights and

A and passages of the mount Amanus: more riuers also, to wit, Andricon, Pinarus, and Lycus, as also the gulf Issic. The towne Issa standeth vpon it, then come we to Alexandria to the Riuer Chlorus, the free towne Aige, the riuer Pyramus, and the streights in the entrance to Cilicia. Beyond them we encounter the townes Mallos & Magarfos: as for Tarfos it is more within the country. From this towne we enter vpon the plaines of Aleij, and so forward to these townes, Caipolis, and Mopsum, which is free, and standeth vpon the riuer Pyramus; Thygnos, Zephyrium, and Anchiala. On forward you shall haue the riuers Saros and Sydnus, which runs through: Tarsus a free city far from the sea: then are ye in the country Celeduderitis, together with the capitall towne thereof. And anon ye shall set foot in a place called Nymphæum, and Soloe Cilij now Pompeiopolis, Adana, Cibina, Pinara, Pedalic, Halix, Arsinoe, Tabæ, & Doron: and neere the sea side you shall finde a towne, an harbour, and a caue, named all Corycos. Soon after, the riuer Calicadnus. The cape Sarpedon, the townes Olme and Mylae, the Cape and towne both of *Yenus*, the very next harbor from whence men passe into the Isle Cypres. But in the maine land you shall finde these townes, Myanda, Anemurium, Coraceum: and the riuer Melas, the antient bound that limiteth Cilicia. Farther within-forth are to be spoken of, the Anazarbenes, at this day Caesar Augustani; Castabla, Epiphania, before-time Eniandos, Eleusa, and Iconium: Seleucia vpon the riuer Calicadnus, surnamed also Trachiotis, a city removed backward from the sea, where it was called Hormia. Furthermore, within the country, the riuers Liparis, Bombos, and Paradisus. Last of all, the mountaine Iubaras. All Cosmographers haue ioyned Pamphylia to Cilicia, and neuer regarded the Nation of Isaurica, being a country by it selfe, hauing within it these towns, Isaura, Clibanus, Lalassis. And it thours down to the sea side, full vpon the frontiers of the country Anemurium aboue said. In like sort, as many as haue set forth maps and descriptions of the world, had no knowledge at all of the Nation Homonades confining vpon it, notwithstanding they haue a good towne within it, called Homona. Indeede the other fortresses, *viz.* 44, lie hidden close among the hollow vallies & hills of that country. There inhabit the mountaines ouer their heads, the Pisidians, sometime called Sobymy, whose chiefe colony is Casaria, the fame that Antiochia. Their townes be Oroanda and Sagalestos. This nation is inclosed as it were within Lycania, lying within the iurisdiction of the lesse Asia, and euen so together with it, the Philomelians, Timbrians, Leucolithi, Pelteni, and Hyrienfes resort thither for law and iustice. There is a government or Tetrarchy also, out of the quarter of Lycania, on that side that bordereth vpon Galatia; vnto which belong 14 States or cities, the chiefe whereof is called Iconium. As for the nations of Lycania, those of any note be, Tembasa vpon Taurus, Sinda in the confines of Galatia, and Cappadocia. But on the side thereof about Pamphylia, ye meet with Mylia, descended in old time from Thrace, who haue for their head city Aricanda. As for Pamphilia, it was in antient time called Mopsopia. The Pamphylia sea ioineeth to the Cilician. The townes scituare vpon that coast be Side, Aspensid on the hill, Plantanistus, and Perga. Also the cape Leucolla, the mount Sardemius, the riuer Eurymedon, running hard by Aspensid. Moreouer, Cataraetes the riuer, neere vnto which stand Lynessus and Olbia; and the vtmost towne of all that coast Phaselis. Fast vpon it lieth the Lycian sea, and the nation of the Lycians, where the sea makes a huge great gulfe.

E The mountaine Taurus likewise, confining vpon the Levant sea, doth limit Lycia and Cilicia, with the promontorie Chelidonium. This Taurus is a mighty mountain, and determineth as a iudge an infinite number of nations. So soone as he is risen from the coast of the East Indian sea hee parteth in twaine, and taking the right hand passeth Northward, and on the left hand Southward, somewhat bending into the West: yea, and diuiding Asia through the midst, and (but that he meeteth with the seas) ready to stop and dam vp the whole earth besides. He retireth back therefore, as being curbed, toward the North, fetching a great circuit, and so making his way, as if Nature of purpose opposed the seas effloones against him to bar him of his passage, of one side the Phrenician sea, of another the great sea of Pontus, the Caspian & Hyrcanian seas likewise; and full against him the lake Maeotis. And notwithstanding all these bars, within which he is pent, twined, and wrested, yet maketh he means to haue the mastery, and get from them all: and so winding byas he passeth on, vntill he encounter the Rhiphaean hills, which are of his owne kinde: and euer as he goeth is entituled with a number of new names. For he is called Imaus where he first beginneth: a little forward, Emodus, Paropamisus, Ciricus, Canibades, Parphariades, Choatras, Oregos, Oroandes, Niphates, and then Taurus. Neuertheless where

where he is highest, and as it were ouer-reacheth himselfe, there they name him Caucaſus : G where he stretcheth forth his armes like as if he would now and then be doing with the seas, he changerh is name to Sarpedon, Coraccius, and Cragus : and then once again he takes his former name Taurus, euen where he opens and makes passage as it were to let in the world. And yet for all these waies and ouertures he claimeth his owne fil, and these passages are called by the names of gates, in one place Armenia, in another Caspia, and sometimes Cilicia. Ouer and besides, when he is broken into parcels, and escaped far from the sea, he taketh many names from diuers and sundry nations on euery side: for on the right hand he is termed Hyrcanus, and Caspius: on the left, Paricrus, Moschicus, Amazonicus, Coraxicus, and Scythicus; and generally throughout all Greece, Ceraunius.

To returne then to Lycia, being past the foresaid cape there, Chelidonium, ye come to the towne Simena, the hill Chimæra, which casteth flames of fire euery night, the city Hephæstium, where the mountaine about it likewise oftentimes are known to burne. Sometimes the city Olympus stood there, but now nothing to be seene but mountaines, and amongst them these townes, Gage, Corydalla, and Rhodiopolis. On the sea coast, the city Lymira vpon a riuer, to which Aricandus runneth: also the mountaine Massyrates, the cities Andriara and Myra. Also these townes, Apyre, and Antiphellos, which sometime was called Habessus; and more within-forth in a corner, Phellus. Then come ye to Pyrrha, and so to Xanthus, 15 miles from the sea, and to a riuer likewise of that name. Soon after ye meet with Patara, before-time named Sararos, and Sydinia seated vpon an hill, and so to the promontorie Ciagus. Beyond which ye shall enter vpon a gulfe as big as the former, vpon which standeth Pinara and Telmessus, the utmost bound in the marches of Lycia. In ancient time Lycia had in it 60 townes, but now not about 36. Of which the principall and of greatest note, besides the aboue named, be Canæ, Candibia, where is the famous wood Onium, Podalia, Choma, vpon the riuer Adela, Cyane, Afcandalis, Amelas, Nofcopium, Tlos, and Telanorus. As for the midland parts of the maine, you shall finde Chabalía, with three townes thereto belonging, Oenoda, Balbura, and Bubon.

When you are beyond Telmessus you meet with the Asiaticke sea, otherwise called Carpathium, and this coast is properly called Asia. Agrippa hath diuided it in two parts, whereof the one by his description confronteth vpon Phrygia and Lycania Eastward: but on the West side it is limited with the Ægean sea. Southward it bounds vpon Egypt, and in the North vpon Paphlagonia: the length thereof by his computation is 470 miles, the breadth 300. As for the other he saith, That Eastward it confineth vpon Armenia the lesse: Westward vpon Phrygia, Lycania, and Pamphylia: on the North it butteth vpon the prouince or realm of Pontus, and on the South side is inclosed with the Pamphylian sea. He addeth moreover, that it containeth 575 miles in length, and 315 in breadth. The next coast bordering thereupon is Caria: and when you are past it, Ionia, and beyond that, Æolis. As for Caria it incloseth Doris in the mids, enuironing it round on euery side, as far as to the sea. In it is the Cape Pedalum, also the riuer Glaucus, charged with the riuer of Telmessus. The townes of any respect be Dædala and Crya, peopled only with banished persons. Therein you finde the riuer Axoum, and the towne Calydua.

CHAP. XXVIII.

¶ The riuer Indus.

THE riuer Indus, arising from the mountaines of the Cybirates, receiueh into it 60 other running riuers, maintained with springs, of other small riuers and brookes fed with land floods, about 100. Vpon it standeth the free towne Canos, and a little off, Pymos. Soon after ye meet with the port Cressa, ouer against which is discovered the Island Rhodus, within the kenning of twenty miles. Being past that haven, you shall enter vpon the plaine Loryma, vpon which are seated the townes Tyfanusa, Tarydion, Larymna. Then meet you with the gulfe Thymnia, and the cape Aphrodisias: and on the other side of it the towne Hyda, and another gulf Schoenus. Then followes the country Bubassus, wherein stood in ancient time, the towne Acanthus, otherwise called Dulopolis. Also vpon the cape there, the free city Gnidos, Triopia, then Pegusa, called likewise Stadia. Beyond which you enter into the Countrey of Doris,

A Doris. But before we passe farther, meet it were to speake of those cities and States which are in the midland countrey, and which lie behind, and namely of one, named Cibiratica. The towne it selfe is in Phrygia, and to it resort for law and iustice 25 cities.

CHAP. XXIX.

¶ Laodicia, Apamia, Ionia, Ephesus.

THE principall citie in those quarters (of the Cibirites) is Laodicia. Seated it is vpon the riuer Lycus: and yet there run hard to the sides thereof two other riuers, Afopus, and Caper. This citie in times past was called Diopolis, & afterwards Rheas. The other nations belonging to that iurisdiction of the Cibirates, worth the naming, by the Hydrelites, Themifones, and Hierapolites. Another countie count or towne of resort there is, which taketh the name of Synnada: and to it repaire for iustice, the Licaonians, Appians, Encarpenes, Dorylei, Midæi, Iulienfes, and other states of no great reckoning, fiftene. A third Seignorie or Shire there is that goes to Apamia, which in old time was called Celæna, and afterwards Ciboron: situate it is at the foot of the hill Signia, enuironed with three riuers, Marſias, Obrima, and Orga, falling all into the great riuer Mæander. As for the riuer Marſias (which a little from his spring was hid vnder the ground, whereas Marſyas the musitian stroue with Apollo in playing vpon the flute) sheweth himselfe again in Autlocrone, for so is the vallie called, ten miles from Apamia, as men trauell the high way to Phrygia. Vnder this iurisdiction, we should do well to name the Metropolitans, Dionysopolites, Euphorbenes, Acmoneses, Peltenes, and Silbians. There are besides to the number of 60 small townes of no account. But within the gulfe of Doris there stand Leucopolis, Amaxites, Eleus, and Euthenæ. Moreover, other townes of Caria, Pitauim, Eutanie, and Halicarnassus. And to this citie were annexed, as subiect and homages by Alexander the great, six other townes, namely, Theangela, Sibde, Medmossa, Euranius, Pedalum, and Telmessus: which townes are inhabited betweene the two gulfs, Ceramicius, and Iasus. From thence yee come to Myndus, and where sometime stood Palæmndus, Neapolis, Nariandus, Carianda, the free citie Termera, Bergylia, and the town Iasus which gaue the name to the gulfe Iasus. But Caria is most renowned & glorious for the places of name within it in the firme land: for therein are these cities, to wit, Mylasa free, and Antiochia, now standing where sometime were the townes, Seminethos, and Cranaos: and enuironed now it is about with the riuers Mæander, and Mossinus. In the same tract stood sometime Mæandropolis also. There is besides, the citie Eumenia, vpon the riuer Cludrus: the riuer Glaucus: the towne Lyſias and Orthasia. The tract or marches of Berecinthus, Nyſa, Trallais, which also is named Euanthia, Seleucia, and Antiochia, which is situate vpon the riuer Eudone that runneth hard by it, and the Thebanis which passes quite through it. Some there be who report, that the dwarfs called Pigmei, sometime there dwelt. In which region besides, were these townes, Thydonos, Pyrrha, Eurome, Heraclea, Amyzon, and the free citie Alabanda, whereof that shierwicke or iurisdiction tooke name. Also the free towne Stratonicea, Hynidos, Ceramus, Træzene, and Phorontis. Yea there be nations farther remote, that resort thither to pleade and haue iustice in that court: namely, the Othroniens, Halydiens, or Hyppines, Xyſtians, Hydissenes, Apollonates, Trapezopolites, and of free condition the Aphrodisians. Ouer and besides these, there are Cossinus, & Harpasa, situate vpon the riuer Harpafus, which also ran vnder Trallicon, when such a towne there was. As for the countrey of Lydia, watered it is in many places with the recourse of Mæanders streame, winding and turning in and out, as his manner is: and it reacheth about Ionia: confining vpon Phrygia in the East, vpon Miffa in the North, and in the South side enclosing all the countrey of Caria. This Lydia was sometimes named Mœnia. The capitall citie of this region, is Sardis, seated vpon the side of the mountaine Tmolus, called before-time Timolus, a hill well planted with vineyards. Moreover, renowned is this countrey for the riuer Pactolus issuing forth of this mountaine, which riuer is called likewise Chryſorhoas: as also for the fountain Tarnes. The city about said, was commonly by the Moenians called Hyde, famous for the meer or lake of Gyges. At that iurisdiction is at this day called Sardinia. Thither resort besides the abouenamed, the Cadutenes, descended from the Macedonians, the Lo-renes, Philadelphienes, yea and the very Moenians, such as inhabit vpon the riuer Cogamus at the foot of Tmolus; and the Tripolitans who together with the Antoniopolites, dwell vpon the

the riuier Mæander. Furthermore, the Apollonos-Hieriteæ, Myfotmolites, and others of small G reputation.

Ionia beginneth at the gulfe Iafius, and all the coast thereof is very full of creekes and reaches. The first gulfe or creeke therein is Bafilicus; and ouer it the cape Pofideum, and the town called fometime, the Oracle of Branchida; but at this day, of Apollo Didymæus, 20 fadja from the fea fide. Beyond which 180 fadja, ftandeth Milletus, the head citie of Ionia, named in time paff Lelegeis, Pityula, and Anaftoria. From which, as from a mother citie, are defended more than eighty others, all built along the fea coast by the Millefians. Neither is this city to be defrauded of her due honour, for bringing forth that noble citizen *Cadmus*, who deuised and taught first to write in Prose. Concerning the riuier Mæander, it issueth out of a lake at the foot of the mountain Aulocrene; and passing vnder many townes, and filled still with as many riuers running into it, it fetcheth such windings to and fro, that oftentimes it is taken for to run back againe from whence it came. The first countrie that it paffeth through, is Apamia; and from thence it proceedeth to Eumenitica, and so forward through the plaines Bergylletici. Last of all, hee commeth gently into Caria, and when hee hath watered and ouerflowed all that land with a moist fat and fruitful mud that he leaueth behind him, about ten fadja from Milletus, he dischargeth himselfe into the fea. Neere to that riuier, is the hill Latmus: the citie Heraclea, furnamed Caryca, of a hill of that name: also Myus, which as the report goeth, was the first citie founded by the Ionians after their arriuall from Athens, Naulochum, and Pyrene. Also vpon the fea coast, the towne called Troglia, and the riuier Gessus. Moreouer, this quarter all the Ionians resort vnto in their deuotion, and therefore named it is Panionia. Neere vnto it was built a priueledged place for all fugitiues, as appeareth by the name Phygela: as also the town Marathesium flood there sometime; and about it, the renowned citie Magnesia, furnamed, Vpon Mæander, of the foundation of that other Magnesia in Thessalie. From Ephesus it is 15 miles; and from Trallais thither, it is three miles farther. Beforetime, called it was Thessalocæ, & Androlitia; and being otherwise situate vpon the frond, it tooke away with it other Islands called Deraides, and ioine them to the firme land from out of the fea. More within the maine standeth Thyatira (in old time called Pelopia and Euhippa) vpon the riuier Lycus. But vpon the fea coast, yee haue Manteium, and Ephesus, founded in times past by the Amazones. But many names it had gone through before, for in time of the Troiane war, Alopes it was called: soone after, Ortygia, and Morges; yea, and it took name Smyrne, with addition of Trachæa, [rough] K Samonium, and Ptelea. Mounted it is vpon the hill Pione, and hath the riuier Caystus vnder it, which commeth out of the Cilbian hills, and bringeth downe with it many other riuers, and principally is maintained and enriched with the lake Pegaseum, which dischargeth it selfe by reason of the riuier Phryites that runneth into it. With these riuers he bringeth downe a good quantitie of mud, whereby he increaseth the land: for now already a good way within the land, is the Island Syrie, ioined to the continent. A fountain there is within the citie, called Callipia; and two riuers (height both Selinus) comming from diuers parts, enuiroin the temple of *Diana*. After you haue been at Ephesus, you come to another Manteium, inhabited by the Colophonians: and within, the countie Colophon it selfe, with the riuier Hælus vnder it. Then meet you with the noble temple of *Apollo Clarius*, and Lebedos. And in this quarter sometime was to be seen the towne Notium. The promontory also Coryceon is in this coast: and the mountaine Mimas, which reaches out 250 miles, and endeth at length in the plaines within the continent that ioine vnto it. This is the place, wherein *Alexander* the Great commanded a trench seven miles long and an halfe to be cut through the plain, for to ioine two gulfs in one, and to bring Erythree and Mimas together for to be enuiroined round therewith. Neere this city Erythree were sometimes the townes, Pteleon, Helos, and Dorion: now, there is the riuier Aleon, and the cape Corineum: vpon the mount Mimas, Clazomene, Parthenie, and Hippi called Chytrophoria, hauing benee sometime Islands: the same, *Alexander* caused to be vntied to the firme land for the space of two fadja. There haue perished within-forth and benee drowned, Daphnus, Hermesia, and Sipylum, called before-time Tantalus, notwithstanding it had bene the chiefe citie of Mæonia, situate in that place, where now is the meere or lake Sale. And for that cause Archæopolis succeeded in that preeminence, and after it Colpe, and in stead thereof Lebedæ. M As you returne from thence toward the sea fide, about twelue miles off, you come vpon the citie Smyrna, built by an Amazonite, but repaired and fortified by *Alexander* the Great. Situate

A tuat it is pleasantly vpon the riuier Melis, which hath his head and source not far off. The most renowned hills in Asia for the most part, spread themselves at large in this tract, to wit, Mastia, on the backe fide of Smyrna; and Termetis, that meets close to the foot of Olympus. This hill Olympus endeth at the mountain Tmolus; Tmolus at Cadmus; and Cadmus at Taurus. When you are past Smyrna, you come into certain plains, occasioned by the riuier Hermus, and therefore adopted in his name. This riuier hath his beginning neere to Doryleus a city of Phrygia, and takes into it many other cities, & principally Phryge, which giues name to the whole nation, and diuides Phrygia and Caria asunder. Moreouer Lyllus & Crios, which also are big and great by reason of other riuers of Phrygia, Mysia, and Lydia, which enter into them. In the very mouth of this riuier stood sometime the towne Temnos; but now in the very utmost nouke B of the gulfe certain stony rocks called Myrmeces. Also the towne Leuce vpon the cape so called: sometime an Island it was: and last of all Phocæa, which limiteth and boundeth Ionia. But to returne to Smyrna; the most part of Æolia, whereof we will speake anon, repaires commonly thither to their Parliament and Assises. Likewise the Macedonians, fynamed Hircani, as also the Magnetes from Sipylum. But vnto Ephesus, which is another principal and famous city of Asia, resort those that dwell farther off, to wit, the Cæfarians, Metropolitæ, Cyblianæ, the Myfo-Macedonians, as well the higher as the lower, the Mastaurians, Bullites, Hyppæoniens, and Dios-Hieriteæ.

CHAP. XXX.

¶ *Æolis, Troas, and Pergamum.*

A Æolis, in old time Mysia, confronts vpon Ionia: so doth Troas, which bounds on the coast of Hellefpontus. Being then past Phocæa, you meet with the port Afcanius, & the place where sometime Larilla stood: and now Cyme, and Myrina which loucheth to be called Sebastopolis. Within the firme land, e.g.a, Attalia, Pofidea, Neon-tichos, and Temnos. But vpon the coast, the riuier Titanus, and a city taking name thereof. The time was when a man might haue seen there the city Grynia: but now there is but an haue and the bare ground, by reason that the Island is taken into it, and ioined thereto. The towne Elæa is not farre from thence, and the riuier Caicus comming out of Mysia. Moreouer, the towne Pyrane, and the Riuier Canaius. Other townes there were in old time, but they are lost and perished, namely, Canæ, Lyfimachia, Atarnæa, Carenæ, Cisthene, Cilla, Cocillum, Thebæa, Atyre, Chryfa, Palæostepis, Gergithos, and Neandros. Yet at this day are to be seen the city Perperene, & beyond it the tract and territory Heracleotes, the towne Coryphas, the riuier Gryliofolius, the quarter called Aphrodisias, before-time Politice. Orgas the countie, and Scepsis the new. The riuier Evenus, vpon the banke whereof stood once Lymæffos, and Mileros, but now they are gon. In this tract is the mountain Ida. Moreouer, in the sea coast, Adramytteos, sometime called Pedafus, where the Parliament and Terme is holden, and whereof the gulfe is named Adramytteos. Other riuers be there besides, to wit, Aftron, Cormalos, Eryannos, Alabastros, and Hieros out of Ida. Within-forth be Gargara, a towne and hill both. And then again toward the sea fide, E Antandros, before-time called Edonis: then, Cymeris, and Aflos, which also is Apollonia. Long since also there was a towne called Palamedium. After all these, you come vpon the cape Leonon, the middle frontier between Æolis and Troas. And there had bin in ancient time the city Polymedea, and Cryffa, with another Lariffa also. As for the Temple Smintheum it remaineth still. But farther within, the towne Colone that was, is now decayed and gon, and the traffique and negotiation in all affaires turned from thence to Adramyteum. Now as touching the territorie of the Apollonians, after you be past the riuier Rhynidius, you finde these States; the Eresians, Miletopolites, Poemanees, Macedonians, Aschilacæ, Polychæni, Pionites, Cilices, and Mandagandenes. In Mysia, the Abretines, and those called Hellefpontij; besides those of base account and estimation. The first city you encounter in Troas, is Amaxintus: then Cebrenia and Troas it selfe, named also Antigonia, now Alexandria, and is entituled a Roman Colony. Beyond Troas standeth the towne Næe: there runneth also Scamander, a riuier nauigable; and Sigæum, a Towne sometime, vpon the cape so called. At length you come to the haue of the Greeks, into which Xanthus and Someis runne ioynly together, as also

also Pala-Scamander, but first it maketh a lake. The rest that *Homer* so much speaks of, namely *Rhæus*, *Heptaporus*, *Careus*, and *Rhodus*, there is no mention or token remaining of them: as for the river *Granicus*, it runneth from diuers parts into the chanel of *Propontis*. Yet there is at this day a little city called *Scamandria*: and one mile and a halfe from the port or sea, the free city *Ilium*, that enioyeth many immunities and liberties; of which towne goeth all that great name. Without this gulfe lieth the coast *Rhoetea*, inhabited with these townes vpon it, namely, *Rhoeteum*, *Dardanum*, and *Arisbe*. There stood sometimes also *Acheleum*, a towne neere vnto the tombe of *Achilles*; founded first by the *Mityleneans*, and afterwards re-edified by the *Athenians*, vpon the Bay *Sigæum*, vnder which his fleet rode at anchor. There also was *Acanthium*, built by the *Rhodiens*, in another coine or canton of that coast, where *Aias* was interred, a place thirty stadia distant from *Sigæum*, and the very Bay wherein his fleet also lay at harbour. Aboue *Æolis* and one part of *Troas*, within the Continent and firme land there is the towne called *Teuthrania*, which the *Myrians* in old time held. And there springeth *Cæicus* the river aboue said. A large country this is of it selfe, and especially when it was vnit to *Myfia*, and all so called: containing in it *Pionia*, *Andera*, *Cæle*, *Stabulum*, *Conisum*, *Tegium*, *Balcea*, *Tiare*, *Teuthrane*, *Sarnaca*, *Haliferne*, *Lycide*, *Parthenium*, *Thymbrium*, *Oxiopum*, *Lygdanum*, *Apollonia*, and *Pergamus* the goodliest city of them all by many degrees: through it passeth the river *Selinus*, and *Cæcius* runneth hard vnder it, issuing out of the mountain *Pindarus*. And nor far from thence is *Elea*, which as we said standeth vpon the strand. And verily all that tract and iurisdiction is of that city named *Perganena*. To the Parliament and iudiciall Assises there resort the *Thyatyrenes*, *Mygdones*, *Mossines*, *Bregmenteni*, *Hieracomitæ*, *Perpeteni*, *Tyareni*, *Hierapolenses*, *Harmatapolites*, *Atrallenses*, *Pantaenses*, *Apollonidenes*, and other petty cities of no name and account. As for *Dardanum*, a pretty towne it is, threescore and ten stadia from *Rhoeteum*. Eightene miles from thence is the cape *Trapeza*, where the sea begetteth to rush roughly into the streight *Hellepont*. *Eratothes* mine Authour saith, That the cities of the *Solyms*, *Leleges*, *Bebrices*, *Colycantij* and *Trepcedones* sometime flourished, but now are vtterly perished. *Isidorus* reporteth as much of the *Arymeos* and *Caprete*, the very place where *Apamia* was built by *Seleucus*, betwene *Cilicia*, *Cappadocia*, *Catonia*, and *Armenia*: and for that he had vanquished most fierce and cruell nations, at the first he named it *Damea*.

CHAP. XXXI.

¶ The Islands lying before little Asia, and in the Pamphylian sea. Also *Rhodus*, *Samos*, and *Chios*.

THE first Island of Asia is iust against the mouth or channell of *Nilus*, called *Canopicus* of *Canopus*, (as men say) the Pilot of *K. Menclaus*. The second is *Pharus*, which is ioined to *Alexandria* by a bridge: in old time it was a daies sailing from *Ægypt* to it: and now by fires from a watch-tower sailers are directed in the night along the coast of *Ægypt*. *Cæsar* Dictator erected therein a colory. And in truth it serueth in right good stead as a Lanthorne: for the hauens about *Alexandria* be very dangerous and deceitfull, by reason of the barres and shelles in the sea: and there are but three channels and no more, by which a man may passe safely to *Alexandria*, to wit, *Tegamum*, *Poideum*, and *Taurus*. Next to that Isle, in the *Phœnician* sea before *Ioppa*, lies *Paria*, an Isle of no great compass, for it is all one town. This is the place, folke say, where lady *Andromeda* was exposed and cait out to a monster. Moreouer, *Æredos*, the Isle before named, between which and the Continent there is a fountaine, as *Mutianus* writeth, in the sea where it is fifty cubits deep, out of which fresh water is drawne and conueighed from the very bottome of the sea, through pipes made of leather. As for the *Pamphylian* sea, it hath some small Islands of little or no reckoning. In the *Cilician* sea there is *Cyprus*, one of the five greatest in those parts, and it lieth East and West full against *Cilicia* and *Syria*. The Seate it was in times past, whereunto nine Kingdomes did homage, and of which they held. *Timotheus* saith, That it contained in circuit foure hundred and nineteen miles and an halfe: but *Isidorus* is of opinion, that it is but three hundred twenty five miles about. The full length thereof

A thereof betwene the two capes, *Dinaretas* and *Acamas*, which is Southward, *Artemidorus* reporteth to be a hundred and sixtie miles and a halfe: and *Timotheus* two hundred; who saith besides, that sometime it was called *Acamantis*: according to *Philonides*; *Cerastis*: after *Xenagoras*, *Aspelia*, *Amathusia*, and *Macatia*: *Asynomus* calleth it *Cryptos* and *Colonia*. Townes there be in it fiftene, *Paphos*, and *Palepaphos* (that is, *Paphos* the new, and *Paphos* the old), *Curias*, *Citium*, *Corineum*, *Salamis*, *Amathus*, *Lepathos*, *Solce*, *Tamaleus*, *Epidarum*, *Chyttri*, *Arfinoe*, *Carpasium*, and *Golgi*. There were in it besides, *Ciniyra*, *Marium* and *Idalium*: but now are they come to nothing. And from the cape *Anemurium* in *Cilicia*, it is fifty miles distant. All that sea which lieth betwene it and *Cilicia*, they call *Aulon Cilicium*; that is to say, The plaine of *Cilicia*. In this tract is the Island *Elæusa*: and foure others besides, euen before the cape, named *Clides*, ouer-against *Syria*. Likewise one more, named *Stiria*, at the other cape or point of *Cilicia*. Moreouer, against *Neampaphos*, [i. new *Paphos*] the Isle *Hierocopia*. Against *Salamis*, *Salamina*. Moreouer in the *Lycian* sea there be Isles, *Illyris*, *Telendos*, *Attelebussa*, and three *Cyprie*, all barren and fruitlesse: besides *Dionysia*, before-time called *Caretha*. Moreouer, against the promontory of *Taurus*, and the *Chelidonia*, hurtfull and dangerous to saylers: and besides them as many more, together with the towne *Leucola*, called *Pastræ*, namely, *Lafia*, *Nymphous*, *Macris*, *Megista*, in which the citie that stood is gone. Besides these, many others there were, but of no importance. But ouer-against the cape *Chimera*, *Dolichiste*, *Chirogilium*, *Crambulia*, *Rhoge*, *Enagora* of eight miles. Against *Dedalion*, two: against *Cryeon*, three: *Stongyle*, moreouer, against *Sidynia*, which king *Antiochus* founded: and toward the river *Glaucus*, *Lagula*, *Macris*, *Didyma*, *Helbo*, *Scope*, *Apfis*, and *Telandria*: howbeit, the towne in it is sunke and gone: last of all the Isle *Rhodussa*, next to the harbor-outh or haueu *Cannus*. But the fairest of all is the Isle *Rhodes*, a free state, and subiect to none: it containeth in compass an hundred and thirtie miles, or if we rather giue credit to *Isidorus*, an hundred and three. Three great townes there be in it well peopled, *Lindus*, *Camirus*, and *Ialysus*, now called *Rhodes*. By the account of *Isidorus* it is from *Alexandria* in *Ægypt*, five hundred seventy and eight miles: but according to *Eratothes* five hundred sixty and nine: after *Mutianus* five hundred, and from *Cyprus* foure hundred and sixteene. Many names hath it been knowne by in times past, to wit, *Ophylæ*, *Asticia*, *Æthra*, *Trinacia*, *Corymbia*, *Pœssa*, *Atabyria* of king *Atabyris*: and finally, *Macaria*, and *Oioessa*. Many other Islands be subiect vnto it, and namely *Carpathus* (which gaue name to the sea *Carpathium*) *Cafos*, *Achme* in times past and *Niseros*; distant from *Gnidus* twelue miles and an halfe, which heretofore had beene called *Porphyrus*. And in the same range, *Syme*, betwene *Rhodes* and *Gnidus*, and is in circuit six and thirtie miles and a halfe. Enriched this Island is with eight commodious hauens. Ouer and besides these, there lie about *Rhodes*, *Cyclopis*, *Teganon*, *Cordylusa*, foure vnder the name of *Diabete*: *Hymos*, *Chalcis*, wherein standeth a good towne: *Seutlusa*, *Nartheusa*, *Dimaltos*, and *Progne*. Being past *Gnidus*, ye shall discover *Ciferussa*, *Therionace*, *Calydne* beautified with three townes, to wit, *Notium*, *Nisyrtus*, *Mendeterus*: with *Aronesus* the Isle, wherein standeth the towne *Ceramus*. Vpon the coast of *Caria*, the Islands, twenty in number, called *Argie*: besides, *Hystulla*, *Lepia*, and *Leros*. But the goodliest & most principall of all others in that coast is *Cos*, which lieth from *Halicarnassus* fiftene miles; and in compass about, it beareth an hundred miles: as men thinke, *Merope* it was called: as *Staphylus* saith, *Cos*: but according to *Dionysius*, *Meropis*; and afterwards *Nymphæa*. This Isle is fortified with the mount *Prion*: and as some thinke, *Nisyris* the Island, named before-time *Porphyrus*, was of old vnit to this; and afterwards dismembred from it. Beyond this Island ye may discover *Carianda*, with a towne in it: and not farre from *Halicarnassus*, *Pidosus*. Moreouer, in the gulfe *Ceramicus*, *Priaponeffus*, *Hipponeffus*, *Pfyra*, *Mya*, *Lampemandus*, *Passala*, *Crusa*, *Pyrre*, *Sepiussa*, *Melano*. And within a little of the maine, another called *Cinedopolis*, by occasion of certain *Camtamites* and shamefull baggages that king *Alexander* the Great left there. The coast of *Ionia* hath in the sea the Islands *Ægeæ* and *Coriæ*, besides *Icaros*, spoken of before. Also *Lade*, before-time called *Laræ*; and among some other little ones of no worth, the two *Camelas* neer to *Miletus*. Moreouer, *Mycalum*, *Trogylia*, *Trepilium*, *Argennon*, *Sardalion*: & the free Island *Samos*, which in circuit hath fourecore and seven miles, or as *Isidorus* thinkes, a hundred. *Aristotle* writeth, how at the first it was called *Parthania*, afterwards *Dryusa*, and then *Anthemusa*.

Arifocris giueth it moreouer other names, to wit, Melamphyllus, yea, and Cyparissia: others terme it Partheno-arula, and Stephane. Riuer in it is Imbrafus, Chesus, and Ibetres: fountaines of fresh water, Gigarto, and Leucothea: but no other hills, saue only Ceretius. There lie adioyning to it other Islands besides, namely, Rhypara, Nympha, and Achillea. Four score and thirteene miles from it, you may discover Chios, a free state, with a town in it, which is an Island as renowned euery way as Samos: *Ephorus* by the ancient name calleth it *Aethalia*: *Metrodorus* and *Cheobulus*, Chia, of a certaine lady Nymph, whose name was *Chio*: others supposed it was so called of Chion, i. Snow: and some would haue it to be Macris and Pitryfa. An hill there is in it called Pellenas, where the good marble is digged, called Chium. The ancient Geographers haue written, That it is a hundred twenty and five miles about, and *Isidorus* addeeth nine more. Scituate it is betwene Samos and Lesbos, full opposite vnto the cape Erythra. Neere vnto it lie Thallusa (which some write Dapnusa), Ocnusa, Elaphites, Euryanassa, Arginussa with a towne. Now are all these about Ephesus, as also the Isles of *Pisistratus*, so called: and those which are named Anthina, to wit, Myconessus, and Diareusa. In both these the townes that were, be lost through water. Furthermore, the Island Poroselenus with a towne in it, Cercia, Halone, Commone, Illetia, Lepria, and Rheispheria, Procusa, Bolbule, Phana, Priapos, Syce, Melane, Enare, Sidusa, Pela, Drymusa, Anydros, Scopelos, Sycussa, Marathussa, Pile, Perirheusa, and many others of no reckoning. But among the Isles of name, is that of Teos, lying farther in the deepe sea, which hath a towne in it: and lieth from Chios fourescore and one miles, and as much from the Bay Erythra. Neere vnto Smyrna are the Islands Periferides, Cateria, Alopec, Elarussa, Bachina, Pyritra, Crommyonessus, and Megale. And iust before Troas, the Isles Ascania, and three Platea. Then the Lania, and two Plitania. Moreouer, the Islands Plate, Scopelos, Getone, Artheidon, Cela, Lagussa, and Didyma. But the most stateli of all others in this sea, is Lesbos, which lies from Chios threescore and five miles. Named it was in times past, Hemerte, Lafia, Pelagisa, Egira, Ethiope and Macaria: within it were eight townes of name; whereof one, namely Pyrrha, is swallowed vp of the sea: and another, to wit, Arisbe, ouerthrowne by an earthquake. As for the Isle Methymna was peopled from Antiffa, which was vnited to it, and wherein were eight townes, and is about seuen and thirtie miles from Asia the lesse. As for the townes Agamede and Hiera which were in it, gone they be now and vtterly perished. Yet there remaine Erefos, Pyrrha, and Mitylene, which hath continued for fve hundred yeeres, mighty and puissant. *Isidorus* saith, That this Island is in circuit about a hundred seuentie and three miles: but the old Geographers, a hundred ninety and fve. In it are these mountaines, Lepethymus, Ordymnus, Maritus, Creon, and Olympus. Eight miles and a halfe it is from the Continent, where it lieth neereft. About this Island Lesbos, there lie neere at hand other little ones, namely, Saudalion, and the fve Leuca. Of which Cydonea is one, wherein is a fountaine of hot water. As for Argenuffe, from thence to Egira is reckoned foure miles. There are besides in this coast Phellusa, & Pedua. Now without Hellespont, ouer-against the bay and cape Sigeum, lieth the Isle Tenedus, called sometimes Leucophris, Phanicus, and Lynceffos, from Lesbos it is six and fifty miles, and from Sigeum twelue miles and a halfe.

CHAP. XXXII.

¶ *Hellespontus, Mysia, Phrygia, Galatia, Bithynia, Bosphorus.*

Archipelago.

LEt vs now leaue the Isles in the sea Egeum, and come to Hellespont, now called the streights of Gallipolis: whereinto the maine fea gushes with a mighty force and violence, with his gulfes and whirlpooles, digging before him a way, until he haue limited and diuided Asia from Europe. The promontory first appearing there, we named Trapeza. From which tenne miles off, standeth the towne Abidum, where the streights are but seuen stadia ouer. Beyond it is Percote the towne: and Lampacium, called before-time Pitryfa. Moreouer, the Colonie Parium, which *Homer* named Adraffia. Moreouer, the towne Priapos, the riuer Aescopus and the cape Zelia. Then come ye to Propontus, for so is the place called where the sea begins to enlarge it selfe. Into this channell runneth the riuer Granicum, which maketh the haven Artace, where once stood a towne. Beyond it there is an Island, which *Alexander* the Great ioined to the Continent [by two bridges, according to *Strabo*] in which standeth the towne Cyzicum,

A zicum, founded by the Milesians, called heretofore Arconefos, Dolionis, & Dindymis, neere the top whereof is the mountaine Dindymus. When ye are beyond Cizicum, you meet with these townes besides, Placia, Ariacos, Scylacum, & behind them, the hill Olympus, called sometime Mæstus. Also the city Olympena. The riuer Hori. ius and Rhyndacus, named heretofore Lycus. This riuer taketh his beginning in the marsh or meere Artynia, neere to Miletropolis. It receieth into it Marcetos, and many others, and parteth Asia from Bithynia. This region in ancient time was called Cronia: after, Thelatis: then Malianda, and Strymonis. All this nation of these quarters, *Homer* named Halizones, for that they be enuironed with the sea. Therein stood in old time a mighty great city named Attusa. At this day it hath 15 cities, amongst which is Gordia: come, now called Iulio polis: and in the very coast vpon the sea, Dalcys. Go further on and ye meet with the riuer Gebes: and within the maine, the towne Helgas, the same that Germanicopolis, knowne also by another name, Boocære, as also Apamea, now called Myrtea of the Colophonians. Being past it, you come to the riuer Etheleum, the ancient limit of Troas, where Mysia beginneth. Afterwards you enter into the gulfes of Bryllion, whereinto runneth the riuer Ascanium, vpon which standeth the towne Bryllion, and beyond it you shall see the riuer Helas and Cios, together with a towne of that name. A mart towne this was, where to resorteth the Phrygians that border neere to it, for to traffique and furnish themselves with merchandise: built verily it was by the Milesians: but the place whereon it stood was called Ascania of Phrygia. And therefore me thinks we cannot do better than euen here to speake of that country. Phrygia then spreadeth out about Troas and the nations before named, from the cape Lectus vnto the riuer Etheleus. It confronteth on the North side vpon part of Galatia, Southward it boundeth hard to Lycaonia, Pisidia, and Mygdonia. And on the East part it reacheth to Cappadocia. The townes of greatest name, besides those before rehearsed, be Ancyra, Andria, Celæne, Colosse, Carina, Cortiaion, Cerane, Iconium, and Midaion. Certain Authors I haue, who write, that out of Europe there come to inhabit these parts, the Myfi, Brvges, and Thyni, of whom are defended and likewise named, the Mysians, Phrygians, and Bithynians.

And euen here I think it good to write also of Galatia, which lying higher than Phrygia, yet possesseth a greater part of the plaine countrey thereof: yea and the capitall place of it, sometime called Gordium. They that inhabited and held that quarter of Phrygia were Gaules, called Tolistobogi, Voturi, and Ambitui: but they that occupied the countreys of Macedonia and Paphlagonia were named Trochmi. This region confronteth Cappadocia on the North and East side, and the most fruitfull part thereof the Testofages and Teutobodiaci kept in their possession. And so much for the principall nations of this countrey. As for the States, Tetrarchies, and regiments, there be in all 195. The townes are these: of the Testofages, Ancvra: of the Trochmi, Taviu: of the Tolistobogians, Pefinus. Besides these, there be States of good account, Attalentes, Aranteses, Comenles, Diof hieronita, Lybreni, Neapolitani, Oeandenses, Seleucenses, Sebasteni, Timmoniacenses, and Tefabeni. This Galatia extendeth euen as far as Gabalia and Milya in Pamphylia, which are scituate about Baris: also Cyllaticum and Oroadicum, the marches of Pisidia, likewise Obigene, part of Lycaonia. Riuer there be in it, beside those before named, Sangarium and Gallus, of which riuer, the gilded priests of dame *Cybele*, mother of the gods, were named Galli. Now it resteth to speake of the towns vpon the sea coast. Yet I cannot ouerpasse Prusa neere to Cios, which lieth farr within the countrey of Bithynia, which *Anniball* founded at the foot of the hill Olympus: from Prusa to Nicæa are counted 25 miles: in which way lieth the lake Ascanius betwene. Then come you to Nicæa in the very vtmost part of the gulf Ascauium, which before was called Olbia: also to another Prusa, built vnder the mountaine Hippis. Once there were in this coast Pythopolis, Parthenopolis, and Coryphanta. And now there be vpon the sea side these riuer, Eusius, Bryazon, Plataneus, Arcus, Siros, Gendos, named also Chryforhoas. The promontory also, vpon which stood the towne Megaricum. Then the gulfes or arme of the sea which was called Craspedi res, for that that towne before named stood as it were in a fold, plait, or nouke thereof. Sometimes also there was the towne Ascam, wherevpon the Creeke tooke the name of Apacenus. Moreouer, in ancient time, the Towne Libyssa, by report, was planted there: But now there remaineth nothing else to be seen but the tombe of *Anniball*. But in the inmost part of the Gulse, where it endeth, there standeth the goodly faire City of Bithynia called Nicomedia.

media. The cape Leucatas, which incloseth the gulfe Aftareus, is from Nicomedia 42 miles and halfe. Being past this gulfe, the sea begins to streighten again, and the land to meet neerer together; and these streights reach as far as Bosphorus in Thracia. Vpon these streights stands the free city Chalcedon, 72 miles and a halfe from Nicomedia. Before time it was called Procerastis: then Compusa: afterwards, the city of the Blind, for that they who founded it, being in a place but 7 stadia from Bizantium, where was a seat in all respects more commodious and fit for a city, were so blind as not to chuse it for the plot of Chalcedon. But within the firme land of Bithynia is the colony Apamena: and there inhabit also the Agrippenses, Iulio-polites, and they of Bithynium. Moreouer, for riuers yehaue Syrium, Laplas, Pharmicas, Alces, Cry-nis, Lylaus, Scopius, Hieras, which parteth Bithynia from Galatia. Beyond Chalcedon stood Chrysolopolis: then Nicopolis, of which the gulfe still retains the name, wherein is the haue of Amycus: the cape Naulocum, Estia, wherein is the temple of *Neptune*: and the Bosphorus, a streight halfe a mile ouer, which now once again parteth Asia and Europe. From Chalcedon it is 12 miles and an halfe. There beginneth the sea to open wider, where it is 8 miles & a quarter ouer, in that place where stood once the towne Philopolis. All the maritime coasts are inhabited by the Thyni, but the inland parts by the Bithynians. Lo here an end of Asia, and of 282 nations, which are reckoned from the limits and gulf of Lycia, vnto the streights of Constantinople. The space of the streights of Hellespont and Propontis together, vntill you come to Bosphorus in Thracia containeth in length 188 miles, as we haue before said. From Chalcedon to Sigeum, by the computation of *Isidor*, are 372 miles and a halfe. Islands lying in Propontis before Cyzicum, are these, Elaphonnesus, from whence cometh the Cyzicen marble; and the same Isle was called Neuris, and Proconessus. Then follow Ophysa, Acanthus, Phœbe, Scopelos, Porphyriœne, and Halone with a towne. Moreouer, Delphacia and Polydora, also Artacœon, with the towne. Furthermore, ouer against Nicomedia is Demonefœs: likewise beyond Heraclea, iust against Bithynia, is Thynias, which the Barbarians call Bithynia. Ouer and besides, Antiochia: and against the fosse or riuier Rhyndacus, Besbicos, 18 miles about. Last of all, Elara, two Rhodusse, Erebinthus, Magale, Chalciris, and Pityodes.



THE SIXTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

CHAP. I.

¶ Pontus Euxinus.



He sea called Pontus Euxinus, and named by the Greeks in old time, Axenos, for the hard vsage that passengers found at the hands of those sauage Nations vpon the coasts thereof, is spread also betwixt Europ and Asia, vpon a very spite and speciall enuy of Nature, as it seems, to the earth, and a wilfull desire to maintain the sea still in his greatnesse, and to fulfill his greedy and endlesse appetite. For hee was not contented to haue inuironed the whole earth, with the main Ocean, yea and taken from it a great part thereof, with exceeding rage ouerflowing the same, and laying all empty and naked: it sufficed not, I say, to haue broken through the mountaines, and so to rush in, and after the sea had dismembred ^a Caspe from Affricke, to haue

A haue swallowed vp much more by far than is left behind to be seen: no nor to haue let Propontis gush through Hellespont, and so to encrease again vpon the earth and gaine more ground: vntilse from the streights of Bosphorus also he enlarge himselfe into another huge and vast sea, and yet is neuer content, vntill the lake Mœotis also with his streight, meet with him as hee thus spreadeth abroad and floweth at liberty, and so ioine together and part as it were, their stonie good betwene them. And verily that all this is happened maugre the earth, and that it made all resistance that it could, appeareth evidently by so many streights and narrow passages lying between these two elements of so contrary nature (considering that in Hellespont, the space is not about 875 paces from land to land; and at the two Bosphori the sea is so passable, that oxen or kine may swim at ease from the one side to the other: and hereupon they both tooke their name): the which vicinitie serueth very wel to entertaine and nourish amity among nations, separated by nature one from another; and in this disunion as it were, appeareth yet a brotherly fellowship and vnitie. For the cocks may be heard to crow, and the dogs to bark, from the one side to the other; yea and men out of these two worlds may parly one to another with audible voice, and haue commerce of speech together, if the weather be calme, and that the winds doe not carry away the sound thereof.

Well, the measure some haue taken of the sea, from Bosphorus Thracius to the lake of Mœotis, and haue accounted it to be 1438 miles and a halfe. But *Eratosthenes* reckoneth it lesse by one hundred. *Agrippa* saith, that from Chalcedon to Phacis, is a thousand miles, and so to Bosphorus Cimmerius 360 miles. As for vs we will set downe summarily and in generall, the distances of places, according to the moderne knowledge of our nation in these daies, forasmuch as our armies haue warred in the very streight and mouth of this Cimmerian freight.

C Being passed then from the streight of Bosphorus Thracius, we meet with the riuier Rhebas, which some haue called Rheusius; and beyond it Pôllis another riuier, then come we to the port of Calpas, and Sangarius one of the principall riuers of Asia; it ariseth in Phrygia, it receiueth other huge riuers into it, and among the rest Tembrogius and Gallus. The same Sangarius was called also Coralius. After this riuier, begin the gulfs Mariandini, vpon which is to be seen the towne Heraclea, scituate vpon the riuier Lycus. It is from the mouth of Pontus 200 miles. Beyond it is the port Acœne, cursed for the venomous herbe and poisonous Acœnium, which taketh name thereof. Also the hole or caue Acherusia. Riuers also there be, Pedopiles, Callichorum and Sonantes. One towne, Tium, eight and thirty miles from Heraclea: and last of all, the riuier Bilis.

CHAP. II.

¶ The nation of the Paphlagonians and Cappadocians.

B Beyond this riuier Bilis, is the countrey Paphlagonia, which some haue named Pylemerina; and it is inclosed with Galatia behinde it. The first towne ye meet in it, is Mastia, built by the Milcians: and next to it, is Cromna. In this quarter the Heneri inhabit, as *Cornelius Nepos* saith. Moreouer, from thence the Venetians in Italy, who beare their name, are descended as he would haue vs beleue. Neere to the said towne Cromna, is another called Sesamum in times past, and now Amastris. Also the mountaine Cytorus, 64 miles from Tium. When you are gone past this mountain, you shall come to Cimolus and Stephane, two townes, and likewise to the riuier Parthenius; and so forward to the cape and promontory Corambis, which reacheth forth a mighty way into the sea; and it is from the mouth of the sea Pontus 315 miles, or as others rather thinke, 350. As far also it is from the streight Cimmerius, or as some would rather haue it, 312 miles and a halfe. A towne there was also in times past of that name; and another likewise beyond it called Arminum: but now, there is to be seen the colony Sinope, 164 miles from Citorum. Being past it, you fall vpon the riuier Varetum, the people of Cappadocia, the townes Gazima and Gazelum, and the riuier Halyto, which issuing out of the foot of the hill Taurus, passeth through Cataonia and Cappadocia. Then meet you with these riuers following, Gangre, Carissa, and the free city Amisum, which is from Sinope 130 miles. As you traueil farther, you shall see a gulfe carrying the name of the said towne, where the sea runneth so far within the land, that it seems to make Asia well-near an Island: for from thence vnto the gulf Issicus in Cilicia is not about 200 miles through the continent. In all which tract, there be

no more than three nations which iustly and by good right, may be called Greekes, to wit, the Dorians, Ionians, and Æolians, for all the rest are reputed barbarous. Vnto Amisum, there ioined the towne Eupatoria, founded by K. *Mitridates*; and after that he was vanquished, both together tooke the name of Pompeiopolis.

CHAP. III.

¶ *Cappadocia.*

IN Cappadocia, there is a city well within the land, called Archelais, situate vpon the river Halys; which *Claudius Cæsar* the Emperor erected as a colony, and peopled it with Romane soldiers. There is besides a towne which the river Sarus runneth vnder: also Neo Cæsarea, which Lycus passeth by: and Amasia with the river Iris running vnder it, within the country Gazacena. Moreouer, in the quarter called Colopena, there stand Sebastia & Sebastopolis, little towns indeed, howbeit comparable with those abovesaid. In the other part of Cappadocia there is the city Melita, built by queene *Scmiramis*, not far from Euphrates: also, Dio-Cæsarea, Tyana, Castabala, Magnopolis, Zela, and vnder the mountaine Argæus, Mazaca, which now is named Cæsarea. That part of Cappadocia which lieth before Armenia the greater, is called Melitene: that which bordereth vpon Comagene, Cataonia: vpon Phrygia, Garsauritis: vpon Sargaurasana, Cammaneu; and finally vpon Galatia, Morimene. And there the river Cappadox separateth the one from the other. Of this river the Cappadocians took name, whereas beforetime they were called Leucolyrius for the lesse Armenia, the river Lycus diuideth it from Neo-Cæsarea before said. Within the country there runneth also the great river Ceraunus. But on the coast side, when you are past the city Amysum, you meet with the town Lycatum, and the river Chadisia; and once past them, you enter into the country Themiscyrea. In this quarter also you may see the river Iris, bringing down with it another river Lycus that runneth into it. And in the midland parts there is the city Zicia, ennobled for the ouertrow of *Triarius*, whom *C. Cæsar* defeated with his whole army. But in the coast againe you shall encounter the river Thermodon, which issueth from before a castle named Phanaroza, and passeth beside the foot of the mountaine Amazonius. In which place there stood sometime a towne of that name, and other five, namely, Phamizonium, Themiscyrea, Sorira, Amasia, Comana, at this present called Mantium.

CHAP. IV.

¶ *The people of the region Themiscyrene.*

Moreouer, in Pontus ye haue the nations of the Generæ & the Chalybes, together with a towne of Cotyi. People besides called Tibareni, and Mossyni, who brand and marke their body with hot searing yrons. Also the nation of the Macrocephali, with the towne Cerasus, and the port Cordula. Beyond which you come to a people named Bechires, and Buzerli, and to the river Melas. And so forward to the quarter of the Macrones, Sideni, & so to the river Sydenum, vpon which is situate the town Polemonium, distant from Amisum 220 miles: where ye shall finde the riuers Iasonus and Melanchius; and a towne 80 miles from Amisum, called Pharnacea; the castle and river of Tripolis. Item, Philocalia, and Liuiopolis without a river: and lastly the imperiall & free city Trapezus, enuironed with a high mountain, 100 miles from Pharnacea. And being past Trapezus, you enter into the country of the Armenochalybes, and Armenia the greater, which are 30 miles asunder. But vpon the coast you shall see the river Pyxites that runneth euen before Trapezus; and beyond it the country of the Sanni Heniochi. Moreouer, the river Abfarus, in the mouth whereof there is a castle likewise so named, from Trapezus 150 miles. Behind the mountains of that quarter, you meet with the region Iberia; but in the coast thereof the Heniochi, Ampreuxæ and Lazi. The riuers Campseonyis, Nogrus, Bathys. When ye are once past them, you come into the country of the Colchians, where stands the town Marium, with the river Heraclum passing vnder it, & a Promontorie of that name, & last of all, the most renowned river of all Pontus, called Phasis: this river riseth from out of the Moschian mountains, & for 38 miles and an halfe, is nauigable, & beareth other great vessels whatsoeuer. And then for a great way it carrieth smaller bottoms, & hath out it

A 120 bridges. Beautified it was sometimes with many faire townes vpon the bankes thereof on both sides, and the principall of them all, were Tyritum, Cygnus, and the city Phasis situate in the very mouth thereof, as it falleth into the sea. But the goodliest city planted vpon this river, and most famous of all the rest was Æa, fiftene miles distant from the seawhere Hippos and Cyanos, two mighty great riuers, coming from diuers parts, enter both into the river Phasis. But now there is no count made of any but of Surium onely, which taketh name of the river Surium which runneth to it. And thus far we said that Phasis was capable of great ships. Among other riuers which it receiues, for number and greatnesse admirable, is the river Glaucus. In the fosse and mouth of this river Phasis, where hee is discharged into the sea, there be some little Islands of no reckoning. And there, from Blarus it is 75 miles. Being past Phasis you meet with another river called Charien: vpon which bordereth the nation of the Salæ, named in old time Phthirophagi and Suani, where you shall meet with the river Cobus, which issueth out of Caucasus, and runneth through the country of the Suani aboue said. Then you come to another river Rhoads, and so forward to the region Ecrete: to the riuers Sigania, Tersos, Atelpos, Chrysothoas, and the people Abfilæ: the castle Sebastopolis, an hundred miles from Phasis, the nation of the Sanigores, the towne Cygnus, the river and towne both called Pitius. And last of all ye arriue vpon the country of the Heniochæ, where be nations entituled with many and sundry names.

CHAP. V.

¶ *The region of Colchis, the Achæi, and other nations in that tract.*

NExt followeth the region of Colchis, which is likewise in Pontus: wherein the mountain Caucasus windes and turnes toward the Rhiphaean hills, as hath been said before, and that mountaine of the one side bendeth downe toward Euxinus, Pontus, and Mæotis; and of the other, inclineth to the Caspian and Hircæan seas. When ye are descended to the maritime coasts, ye shall find many barbarous and sauage nations there inhabiting, to wit, the Melanchlani, and the Choruxi, where sometimes stood Diofcurias a city of the Cholchians, neere vnto the river Anthemus, which now lieth wast and dispeopled, notwithstanding it was so renowned in times past, that by the report of *Timosthenes*, there repaired thither and inhabited therein 300 nations of diuers languages. And euen afterwards our Romanes were forced to provide themselves of 130 interpreters, when they would negotiate and traffick with the people in and about Diofcurias. Some there be that think how it was first founded by *Amphitus* and *Telchium*, who had the charge of the chariots of *Cæsar* and *Pollux*: for certain it is, that the fierce and wild nation of the Heniochi, are from them descended. Being past Diofcurias, you come vnto the towne Heraclium, which from Sebastopolis is 80 miles distant: and so forward to the Achæi, Mardi and Cercetæ: and after them to the Serri, and Cephaloromi. For within that tract stood the most rich and wealthy town Pitius, which by the Heniochians was ranfacked and spoiled. On the backe part thereof inhabit the Epagerites [a nation of the Sarmatians] euen vpon the mountaine Caucasus: and on the other side of that hill, the Sauromatæ (the country is at this day called Tartaria the great.) Hither retired and fled king *Mitridates* in the time of *Claudius Cæsar* the Emperor, who made report, that the Thali dwell thereby, and confine Eastward vpon the very opening of the Caspian sea: which by his report remaineth dry, whensoever the sea doth ebbe. But now to turne vnto the coast neer vnto the Cercetæ, you meet with the river Iacusa, with a towne and river called Hierum, 156 miles from Heraclium. Then come yee to the cape Cronæa, in the very ridge and high pitch whereof the Toretæ inhabit. But beneath it you may see the citie Sindica, 67 miles situate from Hierum: and last of all, you arriue vpon the river Scæaciriges.

CHAP. VI.

¶ *Mæotis, and the streights thereof called Bosporus Cimmerius.*

From the said river to the very entrance of the Cimmerian Bosporus are counted 88 miles and a halfe. But the length of the very demy Island, which extendeth and stretcheth out between Pontus and Mæotis, is not about 87 miles and a halfe, and the breadth in no place lesse

lesse than two acres of land. This the passants of that country do call Eione. The very coasts of this streight Bosphorus, both of Asia side and Europa, boweth and windeth like a curb to Mœotis. As touching the townes here planted, in the very first entry thereof standeth Hermonassa, and then Cepi, founded by the Milesians. Being past Cepi you come soone after to Stratiia, Phanagoria, and Apaturos, in manner vnpeopled and void: and last of all, in the very utmost point of the mouth where it falleth into the sea, you arrive at the towne Cimmerius, named before-time Cerberian.

CHAP. VII.

¶ Nations about Mœotis.

Being passed Cimmerium, you come to the very broad lake Mœotis, whereof we spake before in the Geography of Europe. Vpon the coast wherof, beyond Cimmerium on the side of Asia, inhabit the Mœotici, Vati, Serbi, Archi, Zingi, and Plesij. After this, you come to the great riuier Tanais, which runneth into Mœotis with two armes or branches: and on the sides of it dwell the Sarmations, an off-spring descended in old time (as men say) from the Medians: but so multiplied now, that they themselves are diuided and dispersed into many nations. And first of all are the Sauromates, surnamed Gynaecocratemeni; i. (as one would say) subiect to women: from whence the Amazones are provided and furnished of men to serue their turne in stead of husbands. Next to them are the Euasæ, Cottæ, Cicimeni, Messeniani, Costobocci, Choatæ, Zigæ, Dandari, Thussageræ, and Turcæ, euen as far as the wildernesses, forests chafes, and rough vallies. But beyond them are the Arnuphæi, who confine vpon the mountaine Rhiphæi. As for as the riuier Tanais, the Scythians call it Silys: and Mœotis, they name Temerinda, that is to say, the mother of the sea, or rather, the seas end. In ancient time there stood a great towne vpon the very mouth of Tanais, where it falleth into the sea. As for the neighbour borders of this sea, inhabited they were sometime by the Lares: afterwards, by the Clazomenij, and Mœones: and in processe of time, by the Panticapenses. Some Authours write, that about Mœotis toward the higher mountaine Ceraunij, these nations following doe inhabit, to wit, first vpon the very coast and sea side, the Napææ: and about them, the Eßedones, joyning vpon the Colchy, and the high mountaine [Corax.] After them, the Carnaces, the Oranes, Anticæ, Mazacæ, Afcantici, Acapates, Agagammate, Phycari, Rhimofoli, and Afcomarci. Moreouer, vpon the hill Caucasus, the Icauales, Imaduches, Ranes, Anelaks, Tydians, Charastasci, and Afuciandes. Moreouer, along the riuier Lagous, issuing out of the mountaines Cathei, and into which Opharus runneth, these nations ensuing do dwell, to wit, the Caucaadians, and the Opharites: beyond whom runneth the riuers Menotharus, and Imitues, out of the mountaines Cissij, which passeth through the Agedi, Carnapes, Gardei, Accifi, Gabri, and Gregari: and about the source or spring of this riuier Imitues, the people Imitui and Aparrhieni. Others say, that the Suites, Auchetes, Saternel, and Asampates, invaded and conquered these parts; and that the Tanaites and Nephonites, were by them put to the edge of the sword, and not one person of them spared. Some write, that the riuier Opharus runneth through the Canteci, and the Sapæi: and that the riuier Tanais trauesed sometime through the Phatareans, Herticci, Spondolici, Synthietæ, Amassi, Ißi, Cataretæ, Tagori, Catoni, Neripi, Agandei, Mandarei, Saturchei, and Spalci.

CHAP. VIII.

¶ Cappadocia.

Hitherto haue wee treated and gone through the nations and inhabitants of the coasts vpon the Mediterranean sea. Now are wee to speake of the people inhabiting the very midland parts of the maine within: wherein I protest, and deny not, but that I will deliver many things otherwise than the ancient Geographers haue set downe: forasmuch as I haue made diligent search into the state of those regions, as well by enquiry of *Domitius Corbulo* (who lately went with an army through those quarters (as of diuers kings and princes, who made repaire to Rome with sutes and supplications, but especially of those kings sons that were left as hostages in Rome. And first to begin with the nation of the Cappadocians. This is a country that

A that of all others which bound vpon Pontus, reacheth farthest within the firm land; for on the left hand it passeth by both Armenia, the greater and the lesse, & Comagene: and on the right all those nations in Asia before-named, confining many others; and still preuailing with great might, growing on and climbing Eastward vp to the mountain Taurus, it passeth beyond Lycania, Piliidia, and Cilicia: and with that quarter which is called Cataonia, pierceeth about the tract of Antiochia, and reacheth as far as to the region Cyrhestica, which lyeth well within that country. And therefore the length of Asia there, may containe 1250 miles, & the breadth 640.

CHAP. IX.

¶ Armenia the greater and the lesse.

The greater Armenia, beginning at the mountains Pariedri, is diuided from Cappadocia by the riuier Euphrates, as hath bin said before: & where the riuier Euphrates beginneth to turne his course from Mesopotamia, by the riuier Tigris as renowned as the other, both these riuers is it furnished withal, which is the cause that it taketh the name of Mesopotamia, as being situate between them both. The main land which lyeth between, is possessed by the mountains of Arabia called Orei: howbeit, it extendeth vntill it confine vpon Adiabene. Being past it once, it is hemmed in with mountains that encounter it ouerthwart, which cause it to enlarge it selfe into a breadth on the left hand, as far as to the riuier Cyrus: and then it turneth euer coast, vntill it meet with the riuier Araxes: but it carrieth his length into the lesse Armenia, crossing still vpon the riuier Abarus, which falleth into the Ponticke sea: and the mountaines Pariedri (from which the said riuier issueth) which diuide it from the lesse Armenia. As for the riuier Cyrus, it springeth in the mountains Heniochij, which some called Coraxici. But Araxes issueth out of the same mountain from whence Euphrates commeth, and there is not about six miles space between them both. This riuier Araxes is augmented with the riuier Musis, and then himselfe loseth also his name, and as moke haue thought, is carried by the riuier Cyrus into the Caspian seas: for the townes of name in the lesse Armenia, they be these, Caesarea, Asia, and Nicopolis. In the greater yee haue Arsamole, fast vpon the riuier Euphrates: likewise Carcathiocerta, situate vpon Tigris. In the higher country, is the city Tigranocerta, built in the plain beneath, neere to Araxes, Artaxata. *Ausidius* saith, that both the Armeniæ containe in all 500 miles. *Claudius Caesar* reporteth, that in length from Dascusa to the confines of the Caspian sea, it taketh 1300 miles, and in breadth halfe so much, to wit, from Tigranocerta to Iberia. This is wel knowne, that diuided it is into certain regiments, which they call Strategians, and yet some of them in old time, were as large each of them as realmes and kingdoms: and to the number they were of 120, but such barbarous names they had, that they cannot well be set downe in writing. Enclosed it is Eastward with the mountains, but neither the hills Ceraunij, nor yet the region Adiabene, do presently and immediately confine thereupon: for the country of the Sopheni lyeth between: then you come to the mountains aforesaid, and being past them, you enter into the country of the Adiabenes. But on that coast where the plaines lie and the flat vallies, the next neighbors to Armenia, be the Menobardi and Moscheni. As for Adiabene, enuironed it is partly with the riuier Tigris, and partly compassed with an vnaccessible steep mountaine. On the left hand, it confineth vpon the Medians, and hath a prospect to the Caspian sea, the which commeth out of the Ocean (as we shall shew in meet and convenient place) and is inclosed wholly within the mountains of Caucasus. As for the nations there inhabiting along the marches and confines of Armenia, now wil we speake of them.

CHAP. X.

¶ Albania, and Iberia.

Al the plaine country between Armenia and the riuier Cyrus, the Albanois of Asia do inhabit. Being past it, you enter anon into the Iberians region, who are separated from the Albanois aforesaid by the riuier Alazon, which runneth downe from the Caucasian hills into Cyrus. The townes of importance, in Albania, is Cabalaca; in Iberia, Harmastis, neere to the riuier Neoris: beyond which, is the region Thasie, and Triare, as farre as vnto the mountaines

taines Partedori. And when you are past them, you enter into the defarts of Cholchis: and on the side of them which lyeth toward the Cerauni, the Armenochalybes do inhabit: and so forward you come into the tra^{ct} and marches of the Moschi, which extend to the riu^{er} Iberus, that runneth into Cyrus. Beneath them, inhabit the Saccasani, and beyond them the Macronians, who reach euen to the riu^{er} Abfarus. Thus you see how the plaines and the hanging of the hills in these parts are inhabited, Againe, from the marches and frontiers of Albania, all the forefront of the hills is taken vp and possessed by the sauage people of the Sylui; and beneath them, of the Lubienes, and so forward by the Didurians, and Sodij.

CHAP. XI.

¶ The gates and passages of the mountaine Caucasus.

When ye are beyond the Sodij, you come to the Streights of the hill Caucasus, which many haue erroneously called Caspiæ Portæ. And certes, Nature hath performed a mightie piece of worke, in cleauing asunder at one instant those mountaines, where the gates were barred vp as it were with iron portculleises, whiles vnder the mids thereof, the riu^{er} Dyriodorus runneth: and on this side of it, standeth a strong fort and castle called Cumathia, situate vpon a rock, able to impeach an army neuer so puissant & innumerable that would passe thereby; in such fort, as in this place by means of these bar-gates, one part of the world is excluded from the other: and namely most of all they seeme to be set opposite as a rampart against Harmatis a towne of Iberia. But being passed these said gates, you come to the mountaines Gordyei, where the Valli and Suarni, barbarous and sauaige nations, are employed only in the mines of gold. Beyond them as far as to the Ponticke sea, you enter into the countrey of the Heniuchi, wherof be many forts, and soon after to the Achei. And thus much as touching this tra^{ct} of the sea Ponticke, and of the most renowned gulfs of all others. Some haue set downe in writing, that betweene Pontus and the Caspian sea, it is not aboue 375 miles. *Cornelius Nepos* saith it is but 150. See into what great streights betweene both seas Asia is diu^{id}ed again, and as it were thronged. *Claudius Casar* hath reported, that from Cimmerius Bosphorus to the Caspian sea, it is 150 miles, and that *Selenus Nicator* purposed if he had liued, to cut the land through from the one side to the other: but in this purpose of his, himselfe was cut short and slain by *Philemaus Ceraunus*. To conclude, it is in manner held for certain, that from those gates of Caucasus vnto the Pontick sea, it is 200 miles, and no lesse.

CHAP. XII.

¶ The Islands in the Ponticke sea.

IN the Pontick sea lye the Islands Planæ, otherwise Cyaneæ or Symplegades. Then Apollonia, named also Thynnias, for distinction sake from that other so named in Europe: it is from the continent one mile, and is in circuit three. Just ouer against Pharnacea, is the Isle Chalceritis, which the Greeks called Aria, consecrated as it were to *Mars*; wherein they say the fowles that are, vsed to fight and flutter with their wings against all other birds that come thither.

CHAP. XIII.

The Regions and people confining vpon the Scythian Ocean.

Hauing thus sufficiently discoursed of all the countries within the firme land of Asia, let vs now determine to passe ouer the Rhiphæan hills, and discouer the coasts of the Ocean which lie on the right hand of those hills. Wherein we haue to consider, that Asia is dashed and beaten vpon by this maine sea on three parts: to wit, on the North side, and there it is called Scythicus on the East, where they call it Eous; and last from the South, and there they name it Indicus. And according to the sundry gulfs and creekes that it maketh, and the inhabitants by whom it passeth, many names it taketh. Howbeit, a great part of Asia toward the North, lieth desart, and hath in it much wilderness inhabitable, by reason of the extreme cold of that frozen climar, so subiect to the Pole Artick. But being once past the utmost quarter of the

A the North-point, and came to the North-East where the Sun ariseth at midsummer, then you come to the Scythians. Beyond whom, and the very point of the North-pole and the winde from thence, some haue placed the Hyperborci; of whom we haue spoken at large in the treatise of Europe. On this side the Hyperborci, the first cape or promontory that you meet with, all in the countrey Celtica, is named Lytarnis: and then you come vnto the riu^{er} Caramubicus, where by the forcible influence of the starres, the high mountains Rhiphæas being wearied, begin to settle and abate themselves lower. At the fall and descent of which mountains, I haue heard say, that certain people named Arnupheæ inhabited: a nation not much unlike in their manner of life to the Hyperboreans. They haue their habitations in forests; their feeding is vpon berries & trees: shorne they be all and shauen, for both men and women count it a shame to haue haire on their heads: otherwise they are ciuill enough in their conuersation and behaviour: and therefore, by report, they are held for a sacred people and inuiolable, in so much as those cruell nations and inhumane that border vpon them, will offer them no abuse; neither do they respect them only, but also in regard and honour of them, they forbear those also that lie vnto them as to a place of franchise and priuilege. Goe beyond them once, you come among the Scythians indeed, the Cimmerij, Cicianthi, Georgi, and the nation of the Amazons, & these confront the Caspian or Hircan sea: for it breaks forth of the deep Scythian Ocean, toward the back parts of Asia, and takes diuers names of the inhabitants coasting vpon it, but especially about all other of the Caspians & Hircaneans. *Clitarchus* is of this opinion, that this sea is full as great and large as Pontus Euxinus. And *Eratosthenes* sets downe the very measure and pourprise thereof: namely, from East to South along the coast of Cadusia and Albania, 5400 stadia: from thence by the Aratiatics, Amarij, and Hircanij, to the mouth of the riu^{er} Zoom, 4800 stadia: from it to the mouth of Iaxartes where it falleth into the sea, 2400 stadia: which being put together amount in all to 1575 miles. *Artemidorus* counteth lesse by 25 miles. *Agrippa* in bounding out and limiting the circuit of the Caspian sea, & the regions coasting vpon it, together with them Armenia both the greater and the lesse, namely, Eastward with the Ocean of the Seres, Westward with the mountains of Caucasus; on the South side with the hill Taurus, and finally on the North with the Scythian Ocean, hath written, That the whole precinct & compass of these parts may contain in length [so far as is known & discouered of those countries] 590 miles, and 290 in breadth. Yet for all this, therewant not others who say, That the whole circuit of that sea, and begin at the very mouth and firsh thereof, ariseth to 2500 miles. As for this mouth aforesaid where it breakes into the sea it is very narrow, but exceeding long: howbeit when it begins once to enlarge it selfe and grow wide, it turns and fetcheth a compass with horned points like to a quarter moone, and after the manner of a Scythian bow, as *M. Varro* saith, it windes along from his mouth toward the lake Moecotis. The first gulf that it makes is called Scythicus; for the Scythians inhabit on both sides, and by means of the narrow freight betweene haue commerce and traffike one with another: for of the one side are the Nomades and Sauromatæ, comprising vnder them many other nations of diuers names: and on the other, the Abzoxæ, who haue no fewer states vnder them. At the very entry of this sea on the right hand, the Vdines, a people of the Scythians, dwell vpon the very point of this mouth: and then along the coast, the Albanos, a nation descended (as men say) from *Iafon*, where the sea lying before them is called Albanum. This nation is spread also vpon the mountaines of Caucasus, and so along downe the hills as far as to the riu^{er} Cyrus, which confines the marches betweene Armenia and Iberia, as hath bin said. Aboue the Maritime coasts of Albania & the Vdines country, the Sarmatians, called Vtridors, and Aroteres, are planted: and behinde them, the Amazons, whom we haue already shewed; who also are women Sauromatians. The riuers of Albania which fall into the sea, are Cassios and Albanos: and then Cambices, which hath his head in the Caucasian mountains: and soon after Cyrus, which arises out of the hills Corax, as before is said. *Moroeus* *Agrippa* writes, that this whole coast of Albanie (fortified with those high and inaccessible mountains of Caucasus) contains 425 miles. Now when you are past the riu^{er} Cyrus, the Caspian sea begins to take that name, for that the Caspians doe inhabit the coasts thereof. And here the error of many is to be laid open and corrected, euen of those also who were in the last voyage with *Corbulo* in Armenia with the Romane armie: for they tooke it, that those gates of Caucasus wherof we spake before, were the Caspian gates, and so called them: and the verie mappes and descriptions which are painted and sent from thence, beare that name and title.

M

Likewise

* At this day the Moscho- uites, white & black Russians, Georgians, Amazons, & the little Tartars.

Likewise the menacing commandements, and threatening commissions sent out by *Nero* the Emperour for to gaine and conquer those gates, which through Iberia lead into Sarmatia, made mention of the gates Caspia there, which had in a manner no passage at all to the Caspian sea, by reason that the mountaine Caucasus empeached it. Howbeit in very truth, there be other gates so called, which joine vpon the Caspian nations, which we had neuer knowne from the other, but by relation of those that accompanied *Alexander* the Great in his voyage and expedition to those parts. For the realme and kingdom of the Persians, which at this day wee take that the Parthians hold, lieth aloft betwene the Persian and Hircane seas vpon the mountaines of Caucasus, in the very hanging and descent thereof, on both sides confining vpon Armenia the greater: and on that part which lieth to Comagene, confronteth and joineth (as we haue said) vpon Sephenia: and vpon it againe bordereth Adiabene, where the realme of the Assyrians doth begin: whereof Arbelitis, which boundeth next vpon Syria, taketh vp a good part: which is the countrie wherein *Alexander* the Great discomfited and vanquished *Darius*. All this tract, the Macedonians who entered with *Alexander*, surnamed Mygdonia, for the resemblance of that in Greece from which they came. Townes of name there be in it, Alexandria, and Antiochia, which they call Nisibis: and from Artaxata it is 750 miles. There was also another citie called Ninus, or Niniue, seated vpon the river Tygris, which regarded the West, which in times past was highly renowned. But on the other side, where it lieth toward the Caspian sea, lieth the region Atropatene, separated by the river Araxes, from Otene in Armenia: wherein is the citie Gazax, 450 miles from Artaxata: and as many from Ecbatana in Media, whereon some part the Atropatenes do hold.

CHAP. XIII.

¶ Media, and the gates Caspia.

AS for Ecbatana the head citie of Media, *Seleucus* the king founded it: and it is from Seleucia the great 750 miles, and from the Caspian gates 20. The other great towns of importance in Media be Phaulia, Agamzua, and Apamia, named also Rhaphane. And as for the streights there, called the Caspian gates, the same reason is there of that name, as of the other by Caucasus, by reason that the mountaine is clouen and broken through, and hath so narrow a lane, that hardly a waine or cart is able to passe by it; and that for the length of 8 miles: all done by the picke-axe and mans hand. The rockes and cliffes that hang ouer on the one side and the other, be like as if they were forched and half burnt: so dry and thirsty is all that tract, and without fresh water for 38 miles space: for all the liquor and moisture issuing out of those craggie rockes, runneth through it, which letteth the passage, and causeth folke to auoid that way. Besides, such a number of serpents doe there haunt, that no man dare passe that way but in winter onely.

CHAP. XV.

¶ Nations about the Hircane sea.

Vnto Adiabene, joyneth the countrie of the Carduchy, so called in times past, and now Cordueni, by which the river Tigris runneth: and vpon them the Parthians do confine, called also Paredoni: who keepe the hold of the Caspian gates afore said. On the other side of whom, you shall meet with the deserts of Parthia, and the mountaine Cithenus: but being passed that once, you come freight into the most pleasant and beautiful tract of the same Parthia, called Chora; and there stand two cities of the Parthians, built sometimes as forts opposite against the Medians: namely, Calliope & Iffatis, situate in times past vpon another rocke. As for the capitall citie of al Parthia, Hecatompylos, it is from the Caspian gates aboute said 133 miles. Thus you see how the kingdom of the Parthians also is limited & separat by these mountaines and streights. When a man is once gotten forth of these gates, presently he enters vpon the Caspians countrie, which reacheth as far as to the sea side, and gaue the name as well to the gates afore-named. Howbeit al the region vpon the left hand is full of mountains from whence backward to the river Cyrus, are by report 220 miles, but from that river if you would go higher vp to those gates, you shall find it 700 miles. And in very truth from this place began *Alexander* to make the account and reckoning of his iournies, in that voyage of his to India,

A India, saying that from those gates to the entrance of India, it was 15680 stadia: from thence to the city Bacha, which they call Zariafpa 3700, and so to the river Iaxartes 5 miles.

CHAP. XVI.

¶ Other Nations also.

FROM the Caspians country Eastward, lieth the region called Zapanortene, & in it the land Daricum, the most fertile tract of all those parts. Then come you to the Tapyrians, Anariaci, Stauri and Hircani, at whose coasts the same sea begins to take the name Hircanum, even from the river Syderis. About it are other riuers, to wit, Mazeras and Stratos, all issuing out of Caucasus. Out of the realme of Hircania, you enter into the country Margiana, so commendable for the warme Sun-shine weather there, and the only place in all that quarter which yeeldeth vines. Enuironed it is on euery side with goodly pleasant hills to the eie, for the compass of 1500 stadia. Fortified it is besides, and affordeth hard access vnto it by reason of the sandy and barren deserts for the space of 120 miles. And situate it is euery against the tract of Parthia, wherein *Alexander* the Great sometime had built Alexandria, which being raised and destroyed by the Barbarians, *Antiochus* the son of *Seleucus* re-edified in the same place vpon the river Margus, which runs through it, together with another river Zodalce, and it was called Syriana [or rather Seleucia.] Howbeit, he desired rather that it should be named Antiochia. This citie containeth in circuit 70 stadia: and into it, *Ordes* after that he had defeated *Crassus* & his host, brought all the Romans whom he had taken prisoners. Being past the high country Margiana, you come to the region of Mardi, a fierce & sauage people, subiect vnto none, they inhabit the mountain Caucasus, and reach as far as to the Baetrians. Beyond that tract are these nations, the Ochanes, Chomares, Berdrigei, Hermatrotrophii, Bomarei, Commiani, Marucæi, Mandrueni and Iartii. The riuers also Mandrus and Gridinus. Beyond inhabit the Chorasmii, Gandarii, Attarini, Paricani, Sarangæ, Parafini, Maratiani, Nafotiani, Aorfi, Gelæ, whom the Greeks called Cadusii, and the Mariati. Moreouer, in it stood the great towne Heraclea, built by *Alexander* the Great, which afterwards was subuerbed and ouerthrowne: but when it was repaired again by *Antiochus*, he named it Achais. Beneath in the country, the Derbines do inhabit, thorough whose marches in the very midst runneth the river Oxus, which hath his beginning out of a lake called Oxus. Beyond them are the Syrmatae, Oxij, Tagæ, Heniochi, Bateni, Saraparae, and Baetrians, with their towne Zariafpa, called afterwards Baetrum, of the river Baetra. This nation inhabiteth the back parts of the hill Paropamisus, ouer against the source & spring of the river Indus, & is enuironed with the river Ochus. Beyond the Baetrians are the Sogdianes, & Panda the principal city of that country. In the very utmost marches of their territory standeth the town Alexandria built by *Alexander* the Great, wherein are to be seen the altars and columnes, erected by *Hercules*, prince *Bacchus*, *Cyrus*, *Semiramis*, and *Alexander*: supposed and taken to be the very end of all their voiaiges in that part of the world, resting within the river Iaxartes, which the Scythians call Silys. For *Alexander* and his soldiers thought it had bin Tanaïs. Howbeit, captain *Demonax*, who serued vnder the kings *Seleucus* and *Antiochus*, passed ouer that river with an army; and at the end of his voiage set vp altars vnto *Apollo Didymus*. And the *Demonax* we follow, especially in this description and Geographic of ours.

CHAP. XVII.

¶ The Scythian Nation.

BEYOND the realm Sogdiana, inhabit the Nations of the Scythians. The Persians were wont to call them in general Sacas, of a people adjoining vnto them, so named. In old time they were known by the name of Arameans. And on the other side, the Scythians for their part vsed to term the Persians, Chorsarii: and the hill Caucasus, they called Graucalus, that is to say, white with snow. The principal nations of Scythia, be the Saræ, Massagetæ, Dahæ, Eftedonæ, Ariacæ, Rhymnici, Pescici, Amordi, Histi, Edones, Camæ, Camacæ, Eucharæ, Cotieri, Antariani, Pialeæ. Arimaſpi beforetime called Cadici, Afæi & Oetei. As for the Napæans & Apelæans who sometime dwelt there, they be vtterly extinct and gone. The riuers there of name be Mandagreus and Caspius. And surely there is not a region wherein Geographers doe varie

and disagree more than in this: and as I take it, this cometh of the infinit number of those nations, wandering to & fro, and abiding neuer in one place. *Alexander* the Great and *M. Varro* make report, that the water of the Scythian sea is fresh in taste, & potable. And in truth *Pompey* the great had such water brought vnto him from thence to drink, when he waged war thereby against *Mithridates*: by reason no doubt of the great riuers that fall into it, which overcome the saltneffe of the water. *Varro* saith moreover, That during this expedition and iourney of *Pompeius*, it was for certain knowne, that it is but seven daies iourney from out of India to the *Bactrians* country, euen as far as to the riuier *Icarus* which runneth into *Oxus*: and that the merchandise of India, transported by the *Caspian* sea, and so to the riuier *Cyrus*, may be brought in five daies by land as far as to *Phasis* in *Pontus*. Many Islands there lie all ouer that sea: but one above the rest, and most renowned, is *Tazata*, for thither all the shipping from out of the *Caspian* sea and the *Scythian* Ocean, do bend their course & there arrive, for that all the sea coasts do affront the *Leuant*, and turn into the East. The frontiers of *Scythia* from the first cape thereof is inhabitable by reason of the snow that lies continually: neither are the next regions inter-frequented and tilled, for the barbarous crueltie of those nations that border vpon it: such as the *Anthropophagi*, who liue of mans flesh, and haunt those parts. Hereupon it cometh, that you shall find nothing there but huge desert forests, with a number of wild beasts, lying in wait for men as saueage as themselves. When you are past this region, you enter againe amongst the *Scythians*, where you shall find likewise a wilderness full of wild beasts, euen as far as to the promontory & mountain called *Tabis*, which regardeth the sea. In such sort as one moitie in manner of that coast, all along which looketh toward the East, lieth wast, and is not inhabited. The first people of any knowledge and acquaintance be the *Seres*, famous for the fine silk that their woods do yeeld. They kemb from the leaues of their trees the hoary downe thereof, and when it is steeped in water, they card and spin it yea, and after their manner make therof a few or web, wherupon the dames herewith vs haue a double labour both of vndoing, and also of weaving again this kind of yeam. See what ado there is about it, what labour and toile it costeth, & how far bet it is, and all for this, that our ladies and wiues when they go abroad in the street may cast a lustre from them, and shine again in their silks and veluets. As for the *Seres*, a mild and gentle kind of people they are by nature: howbeit, in this one point they resemble the brute and wild beasts, for that they cannot away in the commerce with other nations, with the fellowship and society of men, but shun and auoid their company, notwithstanding they desire to * trafficke with them. The first riuier known among them is *Psitars*: the next to it *Carabi*: the third *Lanos*: and then you come to a cape of that name. Beyond it is the gulfie *Chryse*, the riuier *Attaraps*, and another bay or creeke called *Attanos*. By it lieth the region of the *Attaci*, a kind of people, secluded from all noisome wind & aire, keeping vpon hills, exposed to the pleasant sunshine, where they enjoy the same temperature of aire that the *Hiperboreans* liue in. Of this country and people, *Amonetius* hath written a feuerall booke of purpose: like as *Heraclius* hath compiled such another treatise of the *Hiperboreans*. Beyond the *Attaci* or *Attacores*, the *Thyrians* and *Tocharians* do inhabit: yea, and the *Casirians*, who now by this time belong to the *Indians*, & are a part of them. But they within forth that lie toward the *Scythians*, feed of mans flesh. As for the *Nomades* of India, they likewise wander to & fro, and keep no resting place. Some write, that they confine vpon the very *Ciconians* and *Brytannians* on the North side. But there (as all Geographers do agree) the mountains *Emodi* arise and shoot vp: and there entereth the country of the East *Indians*, and extendeth not only to that sea, but also to the Southerne, which we haue named the Indian sea. And this part of the Orientall *Indians*, which lieth directly straight forth, as far as to that place where India beginneth to twine and bend toward the Indian sea, containeth 1875 miles. And all that tract which windeth and turneth along the South, taketh 2475 miles (as *Erastosthenes* hath collected & set downe) euen vnto the riuier *Indus*, which is the utmost limit of India Westward. But many other writers haue set downe the whole length of India in this manner, namely, that it requirith 40 daies and nights sailing, with a good gale of a forewind: also, that from the North to the South coast thereof, is 2750 miles. Howbeit, *Agrippa* hath put down in writing that it is 3003 miles long, and 2003 broad. *Polidorus* took measure of it from the Northeast to the Southeast: & that by this means it is directly opposit vnto *Gaule*, which he likewise measured along the West coast, euen from the North west point where the Sun goeth down at Mid-summer, to the South-west where it setteth in the

A in the midst of Winter. He addeth moreover and saith, That this West wind which from behind *Gaule* bloweth vpon India, is very healthfull & wholesome for that country, and this he proued by very good reason & demonstration: and verily the *Indians* haue a far different aspect of the sky from vs. Other flars rise in their Hemisphere, which we see not. Two Summers they haue in one yere, and as many harvests: and their winter between both the *Etesian* winds blowing in our dog-daies, in stead of the Northern blasts with vs. The winds are kind and mild with them: the sea alwaies nauigable: the nations there dwelling, & the cities and towns there built, innumerable: if a man would take in hand to reckon them all, for India hath bin discovered, not only by *Alexander* the great his mighty and puissant army, and by other kings his successors (& namely *Selenus* and *Antiochus*, and their Admirall *Ptolemy*, who failed about it: euen to the *Hircane* and *Caspian* seas:) but also by diuers other Greek Authors, who making abode, & sojourning with the kings of India (like as *Megasthenes* and *Dionysius* sent thither of purpose from *Philadelphus*) haue made relation of the forces which those nations are able to raise and maintain. And yet further diligence is to be imploied still in this behalfe, considering they wrote of things there so diuers one from another, and incredible withall. They that accompanied *Alexander* the great in his Indian voiage, haue testified in their writings, that in one quarter of India which he conquered, there were of towns 500 in number, and not one lesse than the city *Cos*: of feuerall nations nine. Also that India was a third part of the whole earth: & the same so well inhabited, that the people in it were innumerable. And this they said (beleue mee) not without good apparance of reason: for the *Indians* were in manner the only men of all others that neuer went out of their own country. Moreover, it is said, That from the time of *Bacchus* vnto *Alexander* the Great, there reigned ouer them successively 154 kings, for the space of 5402 yeres between, and 3 moneths ouer. As for the riuers in that country, they be of a wonderfull bignes. And reported it is, that *Alexander* failed euery day at the least 600 Itadia vpon the riuier *Indus*. And yet in lesse than five moneths and some few daies ouer, he could not come vnto the end of that riuier, and lesse it is than *Ganges* by the confession of all men. Furthermore, *Seneca* a Latine writer, assaied to write certain commentaries of India: wherein he hath made report of 60 Riuers therein, and of nations 120 lacking twaine. As great a labour it was to reckon vp & number the mountains that be in it. As for the hills *Imaus*, *Emodius*, *Paropamisus*, as parts all and members of *Caucasus*, but one vpon another, and conioine together. And being past them yee do go downe into a mighty large plain country, like to *Egypt*. It remaineth now to shew the continent and firm land of this great country, and for the more euident demonstration, let vs follow the steps of *Alexander* the great, and his Historiographers, *Diogenes* and *Beron*, who set down all the feats and iournies of that prince, haue left in writing, That from the *Caspian* ports vnto the city *Hecatompyles* which is in *Parthia*, there are as many miles as we haue set down all ready. From thence to *Alexandria* in the *Ariane* country (which city the same king founded) 562 miles: from whence to *Prophthasia* in the *Dranganes* land, 199 miles: & so forward to the capitall towne of the *Arachosians*, 515 miles. From thence to *Orthopomus*, 250 miles: last of all, from it to the city of *Alexandria* in *Opianum*, 50 miles. In some copies these numbers are found to vary and differ. But to return to this foreaid city, situate it is at the very foot of *Caucasus*. From which to the riuier *Chepra* and *Pencolaitis*, a town of the *Indians*, are counted 237 miles. From thence to the riuier *Indus* & the towne *Tapila*, 60 miles: and so onward to the noble and famous riuier *Hidaspes*, 120 miles: from which to *Hypasis*, a riuier of no lesse account than the other, 490, or 3900. And there an end of *Alexanders* voiage: howbeit, he passed ouer the riuier, and on the other side of the bank, he erected certaine altars and pillars, and there dedicated them. The letters also of the king himselfe, sent back into *Greece*, do carry the like certificate of his iournies, and agree iust herewith. The other parts of the country were discovered & surueied by *Selenus* *Nicator*, namely from thence to *Hesudrus* 168 miles: to the riuier *Ioanes* as much: & some copies adde 5 miles more thereto: from thence to *Ganges* 112 miles: to *Rhodapha* 119, & some say, that between them two it is no lesse than 125 miles. From it to *Calinipaxa*, a great town, 167 miles: and an half others say, 265. And so the confluent of the riuers *Ioanemes* & *Ganges*, where both meet together, 225 miles, & many put therto 13 miles more: from thence to the town *Palibotta* 425 miles: & so to the mouth of *Ganges* where he falleth into the sea, 638 miles. As for the nations, which it paines me not to name, from the mountains *Emodi*, & the principal cape of them, *Imaus*, which signifies in that country, language full of snow, they

be these: the Isari, Cofyri, Izgi, and vpon the very mountains, the Ghisoforagialso the Brachmanæ, a name common to many nations, among whom are the Maccocalingæ. Of riuers besides, there are Pinnae & Caines, the later of which twain runneth into Ganges, & both are nauigable. The people called Calingæ, coast hard vpon the sea. But the Mandeï & Malli, among whom is the mountain Mallus, are about them higher in the country. And to conclude, then you come to Ganges, the farthest bound and point of all that tract, India.

CHAP. XVIII.

¶ The riuer Ganges.

Many haue bin of opinion, & so haue written, that the spring of Ganges is vncertain, like as that also of Nilus: and that he swelleth ouerfloweth, and wate: eth all the countries whereby he passeth, in the same sort that Nilus doth. Others again haue said that it issueth out of the mountains of Scythia: & how into it there run 19 other great riuers: of which ouer and about those before named, certain are nauigable; namely, Canucia, Vama, Erranoboa, Cosagous, and Sonus. There be also that report, that Ganges presently ariseth to a great bignesse of his owne sources and springs, and so breaketh forth with great noise and violence, as running downe with a fall ouer craggy and stony rocks: and when he is once come into the flat plains and euen country, that he taketh vp his lodging in a certain lake, and then out of it carrieth a mild and gentle stream, 8 miles broad where it is narrowest; and 100 stadia ouer for the most part, but 160 where he is largest: but in no place vnder 20 paces deep, [i. a 100 foot.]

CHAP. XIX.

¶ The nation of India, beyond the riuer Nilus.

When ye are ouer Ganges, the first region vpon the coast that you set foot into, is that of the Gandaridæ and the Calingæ, called Parthalis. The king of this country hath in ordinance for his wars 80000 foot, 1000 horse, and 700 Elephants, ready vpon an houres warning to march. As for the other nations of the Indians that lue in the champaigne plaines countries, there be diuers states of them, of more ciuility than the mountainer. Some apply themselves to tillage and husbandry: others set their minds vpon martiall feats: one sort of them practise merchants trade, transporting their owne commodities into other countries, and bringing in forrein merchandise into their own. As for the nobility and gentry, those also that are the richest and mightiest among them, they manage the affaires of State and Commonweale, and sit in place of justice, or els follow the court, and sit in counsell with the king. A fit estate there is besides in great request, & namely of Philosophers & Religions, giuen wholly to the study of wisdom & learning, and these make profession of voluntary death: and verily when they are disposed to die at any time, they make a great funerall fire, cast themselves into it, and so end their daies. Besides all these, one thing there is among them halfe brutish, and of exceeding toile and trauell (and yet it is that which partly maintaineth all the other estates abouesaid) namely, the practise of hunting, chasing and taming Elephants. And in very truth, with them they plow their ground, vpon them they ride vp & down: with these beafts are they best acquainted, they serue in the wars for maintenance of their liberty, and defence of their frontiers against all inuasion of enemies. In the choise of them for war-seruice, they regard and consider their strength, their age, and bignesse of body, But to leaue them. An Island there is within the riuer Ganges, between two arms thereof, of great largenesse and capacity, which receiue one nation by it selfe, apart from others, & named it is Modogalica. Beyond it are seated the Modubians and Molindians, where standeth the stately city Molinda, situated in a plentiful and rich soile. Moreouer, the Galmudrosians, Pretians, Calisse, Safuri, Fassalæ, Colubæ, Orxulæ, Abali, and Taluæ. The king of these countries hath in ordinary for his wars 50000 foot, 3000 horse, and 400 Elephants. Then you enter into a country of a more puissant & valiant nation, to wit, the Andarians, planted with many villages well peopled, and moreouer with 30 great townes, fortified with strong walls, towers, and battiles. These find and maintain preft & ready to serue the king in his wars, an Infantry of 100000 foot, a Caualery of 2000 horse, and 100 Elephants besides, well appointed. Of all the regions of India, the Dardanian country

A is most rich in gold mines, and the Selian in fluer. But about all the nations of India thorough out, and not of this tract and quarter only, the Prasij far exceed in puissance, wealth, and reputation; where the most famous, rich, and magnificent city Palibotria stands, where of some haue named the people about it, yea and all the nation generally beyond Ganges, Palibotrians: their king keeps continually in pay 600000 foot men, and 30000 horsemen, and 9000 Elephants euery day in the yere, whereby you may soon guesse the mighty power & wealth of this prince. Beyond Palibotria, more within the firme land, inhabit the Monedes and Suari, where standeth the mountain Maleus: and there for six moneths space the shadowes in winter time fall Northward; and in summer season go into the South. The pole Arcticke starres in all that tract are seen but once in the yere, and that no longer than for 15 daies, as Bezon reporteth. But Megasthenes writeth, that this is viall in other parts of India. The Antartique or South pole the Indians call Dromosa. As for the riuer Iomanes, which runs into Ganges, it traueseth through the Palibotrians country, and passeth between the townes Methora and Cyrisiborea. Beyond the riuer Ganges, in that quarter and clymate which lieth Southward, the people are caught with the Sun, and begin to be blackish, but yet not all out of sun-burnt and blacke indeed as the Æthyopians and Moores. And it seemeth, that the neerer they approach to the riuer Indus, the deeper coloured they are and tanned with the Sun: for you are not so soone past the Prasians country, but presently you are vpon Indus: and among the mountaines of this tract, the Pygmæans, by report, do keepe. Artemidorus writeth, that betweene these two riuers there is a distance of 21 miles.

CHAP. XX.

¶ The riuer Indus.

The great riuer Indus, which the native people call Sandus, issueth out of a part or dependence of the hill Caucasus, which is called Paropamisus: hee takes his course and runs full against the Sun rising, and makes 19 riuers more to lose their names, which he takes in vnto him: among which the principall are these, Hydaspis one, bringing with him 4 more: and Cantabra another, accompanied with 3 besides. Moreouer, of such as are of themselves nauigable, without the help of others, Acesines, and Hypasis. And yet for all their additions, the riuer of Indus (such a sober and modest course as it were his waters keepe) is in no place either D about 50 stadia ouer, or 15 paces, i. 75 foot, or 12 fathom and halfe deep. This riuer incloseth within two branches of it, a right great Island named Prasiane, and another that is lesse, called Patale. As for himselfe, they that haue written the least of him say he beareth vessels for 1240 miles: and turning with the course of the Sun, keepeth him company Westward vntill hee is discharged into the Ocean. The measure of the sea coast from Ganges vnto him I wil expresse generally and in grosse, as I find it written, albeit there is no agreement at all of Authors touching this point. From the mouth of Ganges where he entrench into the sea, vnto the cape Cagliugon and the towne Dandagula, are counted 725 miles: from thence to Tropina 1225 miles: Then to the promontorie Perimula, where stands the chiefe mart or towne of merchandise in all India, they reckon 750 miles: from which to the towne aboue said Parale within the Isle, E 620 miles. The mountainer inhabiting betwixt it and Iomanes, are the Cesti and Celiboni, wilde and savage people: next to them the Megallæ, whose king hath in ordinary preft for seruice 500 Elephants, of foot and horse a great number, but vncertaine it is how many, sometime more, sometime fewer. As for the Chryseans, Parafangians, and Afangians, they are full of the wilde and cruell Tygers: they are able to arme 30000 foot and 800 horse, and to set out with furniture 300 Elephants. This country is on three sides enuironed and inclosed with a range of high mountaines, all desert and full of wildernes for 625 miles, and of one side confined with the riuer Indus. Beneath those wilde hills you enter among the Dari & Suræ: then you come againe to waste desarts for 188 miles, compassed about for the most part with great bars and banks of sand, like as the Islands with the sea. Vnder these desert forrests you shall meet F with the Maltecores, Cingians, Marobians, Rarungians, Morintes, Masæ, and Pangungæ. Now for those who inhabit the mountaines, which in a continuall range without interruption stand vpon the coasts of the Ocean, they are free States and subiect to no Prince, and many fair townes and cities they hold among these clifffes and craggy hills. Then come you to the Nations,

reans, inclosed within the highest mountaine of all the Indian hills, Capitalia. On the other side of this mountaine great store there is all ouer it, of gold and siluer mines, wherein the Inhabitants do dig. Then you enter vpon the kingdom of Oratura, whose king indeed hath but ten Elephants in all, howbeit a great power of footmen. And so forward to the Varetates, who vnder their King keepe no Elephants at all for his seruice, trusting vpon their Caualery and Fanterie, wherein they are strong. Next to them the Odomboerians & Salabastres, where standeth a goodly faire city called Horata, enuironed and fortified with deepe fosses and ditches full of standing water: wherein there keepe a great number of Crocodiles, which for the greedy appetite to deuoure mens bodies, wil suffer none to passe into the towne but ouer the bridge. Another towne there is besides among them, of great name and importance, to wit, Automela, standing vpon the sea side: and otherwise much resort there is vnto it of merchants from all parts, by reason of 5 great riuers which meett all there in one confluence. Their king maintains in ordinary 1600 Elephants, 150000 footmen, and 5000 horse. The king of the Charmians is but poore to speake of: his strength lieth in 60 Elephants, for his power otherwise is but smal. Being past that realme, you come into the country of the Padians, the only nation of all the Indians, which is gouerned by women. One of this sex, they say, was begotten somtime by *Hercules*, in which regard she was the better accepted, and had the prerogative of the regencie ouer the greatest kingdom. From her the other Queens fetch their pedigree, and haue the dominion and rule ouer 30 great townes, and the command of 150000 foot, and 500 Elephants. Beyond this realme you come to the nation of the Syriani, containing 300 Cities: and from them to the Deraugæ, Pofunge, Bugæ, Gogyarci, Vmbre, Neræ, Brancosi, Nobunda, Cocoda, Nefei, Pedatiræ, Solobriatæ, and Oloitræ, who confine vpon the Island * Patale: from the vtmost point of which Iland vnto the gates Casioæ, are reckoned 1805 miles. Now on this side the riuier Indus, iust against them, as appeareth by euident demonstration, there dwell the Amata, Bolingæ, Gallitalutæ, Dimuri, Megari, Ordabæ, and Mefæ. Beyond them the Vri and Sileni, and then you come to the desarts for 250 miles: which hauing passed ouer, you shall meet with the Organæes, the Abaorts, Cibare, and the Suerta: and beyond these, a wilderness againe as great as the former. Passe on farther, you come among the Sarpophages, Sorgæ, Baraomata, and the Gunbretes, of whom there be 13 feuerall nations, and each one hath two great cities apiece. As for the Aleri, they people three cities: their capitall city is Bucephala, built in the very place where king *Alexanders* horse called *Bucephalus* was interred. Aboue them are the mountaines on the rising of the hill Caucaus, named Solcadæ, and Sondæ: and when you are on the other side of the riuier Indus, as you go along the coast and banks thercof, you shall see the Samarabrians, the Sambrucenes, the Brisabrites, Olij, Autixeni, and Taxillæ, with a famous city called Amandra, of which all that tra. now lying more flat and plaine within the country is named Amandria. Foure other nations there be besides of Indians, the Peucolaitæ, Arsalagites, Geretes, and Afei: for many of the Geographers set not down Indus the riuier, for to determine the marches of the Indians Westward; but lay thereto foure other provinces and feuerall seigniories, to wit, of the Gedrosians, Arachotes, Arii, and Paropamisades.

CHAP. XXI.

¶ The Arii, and other nations depending vnto them.

Other writers are of opinion, that the vtmost frontier and limit of India is the riuier Co-phetes, and both it and all those quarters are included within the territory of the Arii; yea and most of them affirme, that the city Nylæ, as also the mountaine Merus consecrated to god *Bacchus*, belong vnto India as parcels thercof. This is that mountaine whereof arose the poetical fable, That *Bacchus* therein was borne and issued out of *Iupiters* thigh. Likewise they assigne and lay to India the country of the Aspogores, so full of vines, laurel, and box, and generally of all sorts of apple trees and other fruitfull trees that grow within Greece. Many strange, wonderfull, and in manner fabulous things they report of the fertilitie of that land, of the diuers sorts of corne, of trees bearing cotton, of wilde beasts, of birds, and other creatures there breeding and liuing: which because they are not properly belonging to this Treatise now in hand, I will reserue them for another part of this Worke, and write more particularly

larly of them in their due and feuerall places. And as for those 4 provinces which I touched before, I will speake of them anon: for now I hasten and thinke it long vntill I haue said somewhat of the Island Taprobane. And yet before I come to it there be other Isles which I cannot passe by, and namely that of Patala, which I noted to ly in the very mouth of the riuier Indus, and it carrieth the forme and shape of a triangle figure, and is 220 miles long. Without the mouth of the riuier Indus two other Isles there be, Chryse and Agyræ, so named (as I thinke) of the gold and siluer mines which they do yeeld: for I cannot easily beleuee, that the very earth and soile there is all gold and siluer entire, as some haue made report. Twenty miles from them lieth the Isle Crocala: and 12 miles farther into the sea, Bibaga, where of oysters and other shell fishes called Purples are found good store. And last of all, 9 miles beyond it, Toralliba shewes it selfe, and many other petty Islands of no regard.

CHAP. XXII.

¶ The Island Taprobane.

It hath bene of long time thought by men in antient daies, that Taprobane was a second world, in such sort as many haue taken it to be the place of the Antipodes, calling it the Antichthonos world. But after the time of *Alexander* the Great, and the voiage of his army into those parts, it was discouered and knowne for a truth, both that it was an Island, and what compass it bare. *Onesicritus* the Admirall of his fleet hath written, that the Elephants bred in this Island be bigger, more fierce and furious for war seruice than those of India. *Megasthenes* saith there is a great riuier which parteth it in twaine, and that the people thercof dwelling along the riuier be called Palæogoni: adding moreover, that it affordeth more Gold and bigger pearles by farre than India doth. *Erastosthenes* also took the measure thereof, and saith, that in length it beareth 7000 stadia, and in bredth 5000: that in it there be no cities or great townes, but villages to the number of 700. It begins at the Levant sea of Oriental Indians, from which it stretcheth and extendeth between the East and West of India; and was taken in times past to ly out into the sea from the Prasians countrey 20 daies sailing. But afterwards, for that the boats and vessels vsed vpon this sea in the passage thither, were made & wound of paper reeds like those of the riuier Nilus, and furnished with the same kinde of tackling, the voiage thither from the foresaid country was gaged within a lesse time: and well knowne it was, that according to the faile of our ships and gallies, a man might arriue there in 7 daies. All the sea lying between is very ebbe, full of shallowes and shelles, no more than 5 fathom deepe: howbeit in certain chanelles that it hath, it is so deepe that it cannot be sounded, neither wil any anchors reach the bottom, and there rest; and withall, so streight & narrow these chanelles are, that a ship cannot turne within them: and therefore to auoid the necessitie of turning about in these seas, the ships haue prows at both ends, and are pointed each way: in sailing they obserue no star at all. As for the North pole, they neuer see it: but they carry euer with them certaine birds in their ships, which they send out oft times when they seeke for land, euer obseruing their flight: for knowing well that they wil fly to land, they accompany them, bending their course accordingly: neither vse they to saile more than one quarter of a yeare: and for 100 daies after the Sun is entred into Cancer, they take most heed, and neuer make faile: for during that time it is winter with them. And thus much we come to knowledge of, by relation of antient Writers. But we came to far better intelligence, and more notable information, by certain Embassadors that came out of that Island, in the time of *Claudius Cæsar* the Emperour: which happened vpon this occasion, and after this manner: It fortuned that a free slave of *Annius Placanus*, (who had farmed of the Exchequer the customs for imposts of the red sea) as he made faile about the coasts of Arabia, was in such wise driuen by the North windes besides the realme of Carmania, and that for the space of 15 daies, that in the end he fell within an harbour thercof called Hippuros, and there arriued. When he was set on land, he found the King of that Countrey so courteous that hee gaue him entertainment for six moneths, and entreated him with all kinde of civility that could be deuised. And as he vsed to discourse and question with him about the Romanes and their Emperour, he recounted vnto him at large of all things. But amongst many other reports that he heard he wondred most of all at their iustice in all their dealings, & was much in loue therewith, and namely, that their Deniers of the money which was taken, were alwaies of like

like weight, notwithstanding that the sundry stamps and images vpon the pieces shewed plainly that they were made by diuers persons. And hereupon especially was he moued & sollicitated to seeke for the alliance and amitie of the people of Rome: and so dispatched 4 Embassadors of purpose, of whom one *Rachius* was the chiefe and principall personage. By these Embassadors we are informed of the state of that Island, namely, that it contained fise hundred great townes in it: & that there was a hauein therein regarding the South coast, lying hard vnder Palefimumdum the principall citie of all that realme, and the kings seat and pallace: that there were by iust account 200000 of commoners & citizens: moreover, that within this island there was a lake 270 miles in circuit, containing in it certain Islands good for nothing else but pasturage, wherein they were fruitfull; out of which lake there issued 2 riuers, the one, Palefimumdas, passing neere to the citie abovesaid of that name, and running into the hauein with three streames, wherof the narrowest is fise stadia broad, and the largest 155 the other Northward on India side, named Cydara: also that the next cape of this country to India is called Colaicum, from which to the neereft port of India is counted foure daies sailing: in the midst of which passage, there lieth in the way, the Island of the Sunne. They said moreover, that the water of this sea was all of a deepe Greene colour, and more than that, full of trees growing within it: as much as the pilots with their helmes many times brake off the heads and tops of those trees. The stars about the North-pole, called Septentriones, the Vaines or Beares, they wondred to see here among vs in our Hemisphere: as also the Brood-hen, called *Vergilia* in Latine, as if it had been another heauen. They confessed also they neuer saw with them, the Moone about the ground before it was 8 daies old, nor after the 16 day. That the Canopus, a goodly great and bright star about the pole Antarctike, vsed to shine all night with them. But the thing that they marvelled and were most astonied at was this, that they obserued the shadow of their own bodies fell to our Hemisphere, and not to theirs; and that the Sun arose on their left hand, and set on their right, rather than contrariwise. Furthermore they related, that the front of that Island of theirs which looked toward India, contained 10000 stadia, & reached to the South-East beyond the mountains Enodi. Also, that the Seres were within their kenning, whom they might easily discouer from out of this Island; with whom they had acquaintance by the means of traffike and merchandise: and that *Rachius* his father vsed many times to trauell thither. A firming moreover, that if any strangers came thither, they were encountered and assailed by wild & sauage beasts: and that the inhabitants themselves were gyants of stature, exceeding the ordinary stature of men, hauing red haire, eyes of colour blewish, their voice for found horrible, for speech not distinct nor intelligible for any vse of traffike and commerce. In all things else their practise is the same that our merchants and occupiers do vse: for on the farther side of the riuer, when wares and commodities are laid downe, if they list to make exchange they haue them away, and leaue other merchandise in lieu thereof to content the forrein merchant. And verily no greater cause haue we otherwise to hate & abhor this excessive superfluitie, than to cast our eye so far and consider with our selues, what it is that we seeke for, from what remote parts we fetch it, and to what end we so much desire all this vanitie. But euen this Island Taprobane, as farre off as it is, seeming as it were cast out of the way by Nature, and diuided from all this world wherein we liue, is not without those vices and imperfections wherewith we are tainted and infected. For euen gold & siluer also is there in great request and highly esteemed: and marble, especially if it be fashioned like a tortois shell. Iemmes and pretious stones; pearles also, such as be orient and of the better fort, are highly prized with them: and herein consisteth the very height of our superfluous delights. Moreover, these Embassadors would say, that they had more riches in their Island, than we at Rome, but we mote vse thereof than they. They affirmed also, that no man with them had any slaues to command: neither slept they in the morning after day-light, ne yet at all in the day time. That the manner of building their houses was low, somewhat raised above the ground, and no more adoe: that their markets were neuer deare, nor price of victuals raised. As for courts, pleading of causes, and going to law, they knew not what it meant. *Hercules* was the onely god whom they worshipped. Their king was alwaies chosen by the voices of the people: wherein they had these regards; that hee were aged, mild, and childlesse: but in cas he should beget children afterward, then hee was deposed from his regall dignitie, to the end that the kingdom should not in proceesse of time be hereditary and held by succession, but by election onely. This king being thus chosen and inuested,

A inuested, hath thirtie other gouernours assigned vnto him by the people: neither can any person be condemned to death, vntill he be cast by the more part of them, and pluralitie of voices: and thus condemned as he is, yet may he appeale vnto the people. Then are there 70 iudges deputed to sit vpon his cause: and if it happen that they assaile and quit this party condemned: then those 30 who condemned him, are displaced from their state and dignity, with a most bitter and sharpe rebuke, and for euer after, as disgraced persons liue in shame and infamie. As for the king, arraigned he is in apparel as prince *Bacchus* went in old time: but the subiects and common people are clad in the habit of Arabians. If it fortune that the king offend, death is his punishment: howbeit, no man taketh in hand to doe execution. All men tume away their faces from him, and deigne him not a looke nor a word. But to do him to death in the end, they appoint a folemne day of hunting, right pleasant and agreeable vnto Tygres and Elephants, before which beasts they expose their king, and so he is presently by them deuoured. Moreover, in that Island good husbands they are for their ground, and till the same most diligently. Vines haue they no vfe at all: for all sorts of fruits otherwise they haue abundance. They take also a great pleasure and delight in fishing, and especially in taking of tortoises: and so great they are found there, that one of their shels will serue to couer an house: and so the inhabitants doe employ them in stead of rouses. They count an hundred yeeres no long life there: that is the ordinary time of their age. Thus much we haue learned and knowne as touching Taprobane. It remaineth now to say somewhat of those foure Sattaries or prouinces, which we did put off vnto this place. Of them therefore as followeth.

CHAP. XXIII.

¶ *Capissene, Carmania.*

Beyond those nations that confine hard vpon the riuer Indus, as yee turn toward the mountaines, yee enter vpon the realme of *Capissene*, wherein sometime stood the citie *Capissa*, which *Cyrus* the king caused to be raised. At this day there standeth the citie *Arachotia*, with a riuer also of that name in the country *Arachotia*: which citie some haue called *Copbe*, founded by queene *Semiramis*. There likewise is to be seen the riuer *Hermandus*, which runneth by *Abeste*, a city of the *Aracosians*. The next that confront *Aracosia* Southward, toward part of the *Arachotes*, are the *Gedrosians* and on the Northside, the *Paromafides*. As for the towne *Dartana*, named afterwards *Tetragnus*, scituate it is at the foot of the mountaine *Caucasus*. This country lies ouer-against the *Bactrians*: then you come to the principall towne thereof *Alexandria*, named so of king *Alexander* the founder thereof: vpon the marches whereof are the *Syndari*, *Dangule*, *Porapiani*, *Cantaces*, and *Maci*. Moreover, vpon the hill *Caucasus* standeth the towne *Cadusi*, built likewise by the said *Alexander*. On this side all these regions lieth the coast of the riuer *Indus*. Then followes the region of the *Arianes*, all scorched and fenged with the parching heate of the Sunne, and inuironed about with desarts: howbeit, many shadowie vallies lie between to allay the exceeding heat. Well peopled it is about the two riuers especially, *Tonderos* and *Arysapes*. Therein stands the citie *Artaccana*. Being past it, the riuer *Arius* runneth vnder the city *Alexandria*, built by *Alexander* the Great. The towne contains in compass 30 stadia. Then come you to *Artacabane*, a citie as it is much more ancient, so it is also fairer by far, which by *Antiochus* the king was walled the second time, and enlarged to 50 stadia. The next in order is the nation of the *Dorifici*. The riuers *Pharnacotis* and *Ophradus*. *Prophasia*, a towne in *Zaraspasia*. The *Drangæ*, *Argetæ*, *Zarangæ*, and *Gedrusij*. Townes moreover, *Peucolais* and *Lymphorta*. After you are past their territory, you enter into the desarts of the *Mithoricanes*, and so to the riuer *Mauain*, and the nation of the *Augutturi*. The riuer *Borru*, the people called *Urbi*, the nauigable riuer *Ponomus*, which passeth through the marches of the *Pandanes*.ouer and besides, the riuer *Ceberon* within the country of the *Sorates*, which in the mouth thereof where it falleth into the sea, makes many bays and harbours. As you go farther, you come vpon the towne *Candigarma*, with the riuer *Cophes*: intowhich there runne other riuers that carry vessels, to wit, *Sadarus*, *Parafus*, and *Sodinus*. As for the country *Darius*, some would haue it to be a part of *Ariana*, and they set down the measure of them both together to be in length 120 miles, & in breadth lesse by half than *India*. Others haue set down that the country of the *Gedrusians* and *Scyrians* may contain 183 miles. Being passed which quarters,

quarters, you enter into the region of the Ichthyophagi, surnamed Oritæ or mountainers (who have a proper language by themselves, and speake not in the Indian tongue) which reaches on full for 200 miles. And beyond it you meet with the people of the Arabians, who likewise continue for other 200 miles. As for those Ichthyophagi before-named, *Alexander* by an expresse edict forbad them all to feed on fish. Being past them, you are in the deserts: and beyond them you come into Carmania, Persis, and Arabia. But before that we treat distinctly of these countries, I thinke it meet to set downe what *Onesicritus* (who having the conduct of a fleet vnder *Alexander* the great, failed from off India, about the Southerly coasts of Persis) reports according to those intelligences which came lately from king *Iuba*. In like maner those voiaiges of ours for these yeeres past, performed, by which euen at this day we are guided. Howbeit, in the reports made by *Onesicritus* and *Nearchus*, of their navigations, we finde neither the distance, ne yet the names of the severall rising places, after euery daies iournie. And to begin with the citie Xyleneopolis built by *Alexander*, from which they entred first into their voiage, it is not put down by them, either in what place it is situate, nor vpon what river. Yet these particulars following are by them reported worth remembrance: to wit, that in this voiage *Nearchus* founded a towne in those parts: that the river Nabrus runs thereby, and is able to beate great vessels: ouer-against which there is an Island 70 stadia within the sea. Moreouer, that *Leonatus* caused Alexandria to be built in the frontiers of that region, by direction and commendment from king *Alexander*, where the river Argenus enters into the sea, and yeelds a safe & commodious haue. Also that the river Tubernus is nauigable, along the banks whereof the Parites inhabit. And after them the Ichthyophagi, who tooke vp so long a traçt, that they were 20 daies sailing by their coasts. They make relation likewise of the Isle of the Sun, named also the couch or bed of the nimphs: This Island is red all ouer, and no liuing creature will liue therein, but is consumed, & perishes no man knoweth how, or vpon what cause. They speake besides of the nation of the Orians: as also of Hytanis a river in Carmania, which affordeth many baies and harbours, yea, and plentie of gold in the grauell and sand thereof. And herewith the first place wherein they obserued, that they had a sight of the North-pole star. As for the starre *Arcturus*, they affirmed, that they saw it not euery night, nor at any time all night long. Furthermore, that the country of the Achæmenides in Persia, reached thus farre. Ouer and besides, that as they trauelled, ordinarily they found good store of mines, wherein was digged for brasse, yron, Arsenicke or Sardaracha and Vermilion. And then they came to the cape of Carmania: from which to the coast ouer-against them of the Mare, a people in Arabia, the cut ouer sea is 50 miles. Vpon these coasts they discovered 3 Islands, whereof Organa onely is inhabited, by reason of fresh water within it, and from the continent it lieth about 25 miles. And foure Islands more they fell vpon, euen in the Persian gulf ouer-against Persia. And about these Islands they might see sea-adders & Serpents so monstrous great that as they came swimming toward them, they put the very feet in great fright, for there were among them some, 20 cubits long. Beyond it they met with the Island *Acrotadus*: likewise the *Gaurates* Isles, wherein the nation the Chiani doe inhabit. About the middle of this gulf or arme of the sea, the river *Hiperus* hath his course, able to beate great hulkes and ships of burden. Also the river *Sitiogagus*, vpon which a man may passe in 7 daies to *Pafargadia*. Also a river that is nauigable called *Phiristimus*, and an Island within it, but it is namelesse. As for the river *Granius* which runs through *Susiane*, it carries but small vessels. Along the coast on the right hand of this river dwell the *Deximontanes*, who dresse and prepare *Bitumen*. Then the come to the river *Oroatus*, with a dangerous haueu or mouth where it falls into the sea, vntill a man be guided by skillfull pilots: & full against this river there are discovered 2 little Islands. Past which, the sea is very low and shallow, full of shelles and sands, more like a meere and marsh water, than a sea. Howbeit there be certaine trenches or channels in it that draw deepe water, wherein they may without danger faile. Then met they with the mouth of the river *Euphrates*. Also the lake which the two rivers *Eulæus* and *Tigris* doe make, neere vnto *Characum*. And so from thence they arriued vpon the river *Tigris*, at *Susa*. And there an end of the navigation performed by *Onesicritus* and *Nearchus*. For after they had bene three months embarked and in their voiage vpon the sea, they found *Alexander* at *Susa* (where he feared and made solenne bankets) and that was 7 months after he parted from them at *Patalæ*. And thus much concerning the voiage of *Alexander* his fleet. Now afterwards from *Syagrus*, a Promontory in Arabia, it was counted vnto *Patalæ* 1332 miles, & held it was for certain then that,

A that the West wind with the people of that country call *Hypalus*, was thought most proper for to make faile to the same place. Howbeit the age ensuing discouered a shorter and safer cut, namely, if from the said promontorie or cape *Syagrus*, they let their course directly to the mouth of the river *Zizerus*, which maketh an harborough in India. And in truth this passage held a long time, vntill such time that in the end the merchants found out a more compendious and shorter course, and gained by their voiage to India: for euery yeere now they faile thither, and for feare of pirats and rousers that were wont very much to infect and annoy them, they vsed to embarke in their ships certaine companies of Archers. And seeing that all these seas are now discovered, and neuer before so certainly, I will not thinke much of my pains, to declare and shew, the whole course of our Indian voiaiges from out of *Ægypt*. And first and foremost this is a thing worthy to be noted and obserued of euery man, that there is not a yeere goeth ouer our heads, but it costs our State to furnish a voiage into India, 500 hundred thousand Sesterces, & fifty millions of Sesterces. For which the Indians sendeth backe againe commodities and merchandises of their owne, which being at Rome, are sold for an hundred times as much as they cost, or yeeld in the price an hundred fold gain. But to returne againe to our voiage, from Alexandria in *Ægypt*, it is two miles to *Lulopolis*: from whence vpon the river of *Nilus*, they faile 303 miles to *Coptus*, which may be done in 12 daies space, hauing the Etesian winds at the poupe. From *Coptus* they trauell forwards vpon Cammels backs: and for great default of water in those parts, there be certain fe places for bait, lodging, and watering.

C The first is called *Hydreuma* 32 miles from *Coptus*. The second one daies journey from thence in a certaine mountaine. The third watering place at another *Hydreuma*, 95 miles from *Coptus*. The fourth againe in a second mountaine. The fifth is at a third *Hydreuma* of *Apollo*, from *Coptus* 184 miles. Beyond which, the resting place is vpon another hill. And then to *Hydreuma* the new, from *Coptus* 234 miles. Another water towne there is, called *Hydreuma* the old, named also *Trogloditicum*, where two miles out of the port way lieth a garrison, keeping watch and ward both day & night: and foure miles distant it is from new *Hydreuma*. From whence they trauell to the towne *Berenice*, an haueu towne standing vpon the red sea, 258 miles from *Coptus*. But for as much as the journey all this way is for the most part performed in the night season, by reason of the excessive heat, & the trauellers are forced to rest all the day long, therefore twelve daies are set down for the whole voiage between *Coptus* and *Berenice*. The time then that they usually begin to set faile, is about Midsummer before the dog daies, or presently vpon the rising of the dog starre. And about the 30 daies end they arriue to *Ocelis* in Arabia, or els at *Cama*, within *Saba*, the country of incense. A third port there is besides called *Muza*, vnto which there is no resort of merchants out of India: neither is it in request but with merchants that adventure only for incense, drugs, & spices of Arabia. Howbeit peopled this country is within-forth, and hath diuers great townes. Of which, *Saphar* is the principall, and the kings seat: & another besides of good importance called *Sabe*. But for them that would make a voiage to the Indians, the most commodious place to set forward is *Ocelis*: for from thence, and with the West wind called *Hypalus*, they haue a passage of forty daies failing to the first towne of merchandise in India, called *Muziris*. Howbeit a port this is, not greatly in request, for the daunger of pirats and rousers, which keep ordinarily about a place called *Hydra*: and besides that, it is not richly stored and furnished with merchandise. And more than so, the harborough is farre from the town, so as they must charge and discharge their wares to and fro in little boats. At the time when I wrote this story, the king that reigned there, was named *Celebithras*. But another haueu there is more commodious, belonging to the *Necanidians*, which they call *Beacare*: the kings name at this present is *Pandion*: not far off is another town of merchandise within the firme land, called *Madufa*. As for that region, from whence they transport pepper, in small punts or trouges made of one peece of wood, it is named *Corona*. And yet of all these nations, haueus, and townes, there is not a name found in any of the former writers. By which it appeareth, that there hath bene great change and alteration in these places. But to come againe to India, our merchants returne from thence back in the beginning of our month December, which the *Ægyptians* call *Tybis*, or at farthest before the fixt day of the *Ægyptians* month *Marchiris*, and that is before the Ides of *January*: and by this reckoning they may passe to and fro, and make return within the compasse of one yeere. Now when they faile from India, they haue the Northeast wind *Vulturius* with them: and when they be entered once into the red sea, they

So as it appeareth that euery daies journey was about 34 miles.

South or Southwest. Now wil we return to our purposed discourse as touching Carmania. The coast wherof after the reckoning of *Nicarachus* may take in circuit 12050 miles. From the first marches thereof to the riuer *Sabis* is counted 100 miles. From whence all the way as far as to the riuer *Andaius*, the country is rich and plenteous, for in it are vineyards and come fields wel husbanded. This whole tract is called *Amuzia*. The chiefe townes of Carmania be *Zetis* and *Alexandria*. Vpon the marches of this realme the sea breaks into the land in two armes, which our countrymen call the red sea, and the Greekes *Erythrum*, of a king named *Erythras*: or as some thinke, because the sea by reason of the reflection and beating of the Sun beams, seemes of a reddish colour. There be that suppose this rednesse is occasioned of the sand and ground which is red: and others againe, that the very water is of the own nature so coloured.

CHAP. XXIV.

¶ The Persian and Arabian gulfs.

THIS red sea is diuided into two armes: that from the East is named the Persian gulf, being in compass 2500 miles, by the computation of *Eratophenes*.ouer againe this gulf, in Arabia (which lieth in length 1200 miles) on the other side another arme there is of it called the Arabian gulf, which runs into the Ocean *Azanius*. The mouth of the Persian gulf where it maketh entrance is 5 miles ouer, and some haue made it but 4: from which to the farthest point thereof, take a direct and straight measure by a line, and for certaine it is, that it containeth 1225 miles: and is fashioned directly like a mans head. *Ousefichrius* and *Nearachus* write, That from the riuer *Indus* to the Persian gulf, and so from thence to *Babylon* by the meeres and fens of the riuer *Euphrates*, it is 2500 miles. In an angle of Carmania inhabit the *Chelonophagi*, i. such as feed vpon the flesh of Tortoises, and the shells of them serue for roofes to couer their cottages. They inhabit all that coast along the riuer *Arbis*, euen to the very cape: rough they are, hairy all their body ouer but their heads, and weare no garment but fish skins.

CHAP. XXV.

¶ The Island *Cassandrus*: and the kingdomes vnder the Parthians.

WHEN you are past this tract of the *Chelonophagi*, directly toward India, there lieth fifty miles within the sea the Island *Cassandrus*, by report all desert and not inhabited: and neere to it, with a little arme of the sea between, another Island called *Stois*, wherein pearles are good chaffer, and yeeld gainfull trafficke. But to returne againe to Carmania, when you are beyond the vtmost cape thereof, you enter presently vpon the *Armozei*, who ioyne vpon the Carmanians. But some say that the *Arbi* are between both: and that their coast may containe in the whole 402 miles. There are to be seen the port or haue of the Macedonians, and the altars or columnes which *Alexander* erected vpon the very promontorie and vtmost cape. Where also be the riuers *Saganos*, *Daras*, and *Salfos*. Beyond which is the cape *Themiscas*, and the Isle *Aphrodisias* well peopled. Then beginneth the realme of *Perfis*, which extendeth to the riuer *Oroatus*, that diuides it from *Elymais*. ouer-against the coasts of *Perfis*, these Islands be discovered, *Philos*, *Cassandra*, and *Aratia*, with an exceeding high mountaine in it: and this Isle is held consecrated to *Neptune*. The very kingdome of *Perfis* Westward hath the coasts lying out in length 450 miles. The people are rich, and giuen to royall and superfluous expence in all things: and long since are become subiect to the Parthians, carrying their name. And seeing we are come to speake of them, we will briefly now mention their dominion and empire: the Parthians haue in all 18 realmes vnder them; for so they termed all their prouinces as they lie diuided about the two seas, as we haue before said: namely the red sea Southward, and the *Hircane* sea, toward the North. Of which, eleuen that lie about in the country, and are called the higher Prouinces, they take their beginning at the confines and marches of Armenia, and the coasts of the Caspians on the one side: and reach to the *Seythians*, whom they confront of the other side, with whom they conuerse and keepe company together as Equals. The other seuen are called the base or lower Realmes. As for the Parthians, their land was alwaies counted to ly at the foot and descent of those mountains wherof we haue so often spoken,

A spoken, which do enuironne and enclose all those nations. It confineth Eastward vpon the *Arij*, and Southward vpon Carmania and the *Arians*: on the West side it butteth vpon the *Pratites* and *Modes*: and on the North, boundeth vpon the realm of *Hircania*: compassed round about with deserts and mountaines. The vtmost nations of the Parthians before yee come to those deserts be called *Nomades*: and their chiefe townes seated toward the West, are *Ilaris* and *Calliope*, wherof we haue written before: but toward the Northeast, *Europum*; and Southeast *Mania*. In the heart and midland standeth the citie *Hecatomplos*, as also *Arfaeia*. And there likewise the noble region of *Nylsea* in *Parthyerum*: together with the famous city *Alexandropolis*, bearing the name of *Alexander* the first founder.

CHAP. XXVI.

Media, Mesopotamia, Babylon, and Seleucia:

REQUISIT now it is and needfull in this place to describe the posture and situation of the Medians kingdom, and to discover all those countries round about, as farre as to the Persian sea, to the end that the description of other regions hereafter to be mentioned, may the better be vnderstood. Wherein this first and formost is to be obserued, that the kingdome of Media on the one side or other confronteth both *Perfis* and *Parthia*, and casting forth a crooked and winding borne as it were toward the West, seemeth to enclose within that compass both the said realmes. Neuertheless, on the East side it confineth vpon the Parthians and *Caspians*: on the South, *Sittacene*, *Susiane*, and *Perfis*: Westward, *Adiabene*: and Northward, *Armenia*: as for the *Perfisians*, they alwaies confronted the red sea, whereupon it was called the Persian gulf. Howbeit, the maritime coast thereof is called *Cyropolis*, and that part which confineth vpon Media, *Elymais*. In this realme there is a strong fort called *Megala*, in the ascent of a steep high hill, so direct vpright, that a man must mount vp to it by steps and degrees, and otherwise the passage is very freight and narrow. And this way leadeth to *Persepolis* the head city of the whole kingdome, which *Alexander* the great caused to be raised. Moreouer in the frontiers of this Realme, standeth the city *Laodicea*, built by king *Antiochus*. From whence as you turn into the East, the strong fort or castle *Pasagarda* is seated, which the sages or wise men of *Perfia* called *Magi*, do hold, and therein is the tomb of *Cyrus*. Also the citie *Ecbatana* belonging to these sages, which *Darius* the king caused to be translated to the mountaines. Between the Parthians and the *Arians* lie out in length the *Parotacenes*. These nations and the riuer *Euphrates* serue to limit and bound the seuen lower realmes abouenamed. Now are we to discourse of the parts remainig behind of *Mesopotamia*; setting aside one point and corner thereof, as also the nations of Arabia, wherof we spake in the former booke. This *Mesopotamia* was in times past, belonging wholly to the *Assyrians*, dispersed into pettie villages and burghes, all saue *Babylon* & *Ninus*. The *Macedonians* were the first, that after it came vnder their hands reduced it into great cities, for the goodnesse and plenty of their soile and territorie. For now besides the abouenamed townes, it hath in it, *Seleucia*, *Laodicea*, and *Artemita*: likewise within the quarters of the *Arabians* named *Aroei* & *Mardani*, *Antiochea*: and that which being founded by *Nicanor*, gouernor of *Mesopotamia*, is called *Arabis*. Vpon these ioine the *Arabians*, but well within the country are the *Eldamarij*. And about them is the citie *Bura*, situated vpon the riuer *Pelloconta*: beyond which are the *Salmanes* and *Mascans* *Arabians*. Then there iointe to the *Gordians* those who are called *Aloni*, by whom the riuer *Zeris* is pasteth, and so discharged into *Tigris*. Neere vnto them are the *Azones* and *Silices* mountainer, together with the *Orentians*: vpon whom confronteth the city *Gaugamela* on the West side. Moreouer, there is *Sue* among the rocks: aboue which are the *Sylci* and *Clasitra*, through whom *Lycus* the riuer runneth out of Armenia. Also, toward the Southeast, *Abstris*, and the town *Azoehis*. Anon you come down into the plains & champaign country, where you meet with these towns, *Diofage*, *Positelia*, *Stratonicea*, & *Anthemus*. As for the city *Nicephorium*, as we haue already said, it is seated neere to the riuer *Euphrates*, where *Alexander* the great caused it to be founded, for the pleasant seat of the place, and the commodity of the country there adioining. Of the city *Apamia* we haue before spoken in the description of *Zeugma*: from which they that goe Eastward meet with a strong fortified town, in old time carrying a pourprise & compass of 65 stadia, called the royall pallace of their great dukes & potentates, named *Satrapæ*.

vnto which from all quarters men resorted to pay their imposts, customs, and tributes; but now it is come to be but a fort and castle of defence. But there continue still in their entire and as flourishing state as euer, the city Hebata and Oruros, to which by the fortunat conduct of Pompey the Great, the limits and bounds of the Roman empire were extended; and is from Zeugma 250 miles. Some writers report, that the river Euphrates was diuided by a gouernor of Mesopotamia, and one arme thereof brought to Gobaris, euen in that place where we said it parted in twain: which was done for feare lest one day or other the river with his violent streame should endanger the city of Babylon. They affirme also, that the Assyrians generally called it * Armalchar, which significth a royall riuer. Vpon this new arme of the riuer aforesaid, stood sometime Agani, one of the greatest towns of that region, which the Persians caused to be vnterly rased and destroyed.

As for the city of Babylon, the chiefe city of all the Chaldean nations, for a long time carried a great name ouer all the world: in regard whereof all the other parts of Mesopotamia and Assyria was named Babylonia: it contained within the walls 60 miles: the walls were 200 foot high, and 50 thick, reckoning to euery foot 3 fingers breadth more than our ordinary measure. Through the middest of this goodly great city passeth the river Euphrates: a wonderful piece of worke, if a man consider both the one and the other. As yet to this day the temple of *Iupiter Belus* there stands entire. This prince was the first inuenter of Astronomie. It is now decayed, and lieth waste and vnepeopled, for that the city Seleucia stands so neere it, which hath drawne from it all resort and traffique; and was to that end built by *Nicator* within 40 miles of it, in the very confluent where the new arm of Euphrates is brought by a ditch to meet with Tigris: notwithstanding it is named Babylonia, a free state at this day, and subiect to no man; howbeit they liue after the lawes and manners of the Macedonians. And by report, in this city there are 600000 citizens. As for the walls thereof, it is said they resemble an Eagle spreading her wings: and for the soile, there is not a terricior in all the East parts comparable to it in fertilitie. The Parthians in despight again of this city, and to do the like by it, as sometime was done to old Babylon, built the city Ctesiphon within three miles of it, in the tract called Chalontis, euen to dispeuple and impouerish it; which is now the head city of that kingdom. But when they could do little or no good thereby so disreited the said new Babylon, of late dayes *Vologesus* their king founded another city hard by called *Vologeso Certa*. Moreover, other cities there are besides in Mesopotamia, namely Hipparenum, a city likewise of the Chaldeans, and innobled for their learning as well as Babylon; situate vpon the riuer Narragon, which gaue the name vnto that city. Howbeit the Persians caused this Hipparenum to be dismantled, and the walls thereof to be demolished. There be also in this tract the Orchenes towards the South, from whence is come a third fort of the Chaldeans, called Orcheni. Being past this region, you meet with the Notites, Orthophants, and Graciophants. *Nearchus* and *Onesicritus*, who registred the voiage of *Alexander the Great* into India, report, That from the Persian sea to the city Babylon by the river Euphrates, is 412 miles. But the later and moderne Writers do count from Seleucia to the Persian gulf 490 miles. *K. Inabawriteth*, That from Babylon to Charax is 175 miles. Some affirme moreover, That beyond Babylon the river Euphrates doth maintaine one entire course, and kepeth one channel 87 miles, before he is diuided into several branches here and there, for to water the country: and that he holdeth on his course from his head to the sea for the space of 1200 miles. This varietie of Authors as touching the measure is the cause why a man may not so well resolve and conclude thereof, considering that euen the very Persians agree not about the dimensions of their Scenes and Parasanges, but haue diuers measures of them. Whereas the river Euphrates gieth ouer his owne channel, (which for the breadth thereof is a sufficient munition to it selfe) and beginneth to part into diuers branches, which is doth about the marches & confines of Charax, in all the tract neere adioyning, great danger there is of the Attalar, a theuish nation amongst the Arabians, who presently set vpon all passengers coming and going to and fro. When you are past this infamous and suspected Region, you shall enter into the Countrey of the Schenites. As for the Arabians which are called Nomades, they occupie all the coasts of the river Euphrates, as farre as to the Desarts of Syria. From the which place we haue said that hee turned, and tooke his way into the South, abandoning the desarts of Palmyrene. To conclude, from the beginning and head of Mesopotamia, it is counted to Seleucia, if you passe vpon the river Euphrates, 1225 miles:

A miles: and from the red sea, if you go by the river Tigris, 320 miles: from Zeugma 527 miles: and to Zeugma from Seleucia in Syria vpon the coast of our sea, is reckoned 175 miles. This is the very true and iust latitude there, of the firm land between the two seas, to wit, the Persian gulfie and the Syrian sea. As for the kingdom of Parthia, it may containe 944 miles. Finally, there is yet another towne of Mesopotamia vpon the banke of Tigris, neere the place where the riuers meet in one, called Digba.

CHAP. XXVII.

¶ The riuer Tigris.

B Eet also and conuenient it is to say somewhat of the river Tigris. It begins in the land of Armenia the greater, issuing out of a coast of our sea, is euidnt to be seen in the very plaine. The place beareth the name of Elongosine. The river it selfe so long as it runs slow and softly is named Diglito; but when it begins once to carry a more forcible streame it is called Tigris, for the swiftnesse thereof; which in the Medians language betokens a shaft. It runs vp into the lake Arethusa, which beareth vp afoote all that is cast into it, suffering nothing to sinke; and the vapors that arise out of it carry the sent of Nitre. In this lake there is but one kind of fish, and that entrench not into the channell of Tigris as it passeth through, nor more than any fishes swim out of Tigris into the water of the lake. In his course and colour both he is vnlike, and as he goes may be discerned from the other: and being once past the lake, and incountrith the great mountain Taurus, he loseth himself in a certain caue or hole in the ground, and so runs vnder the hilly, vntill on the other side thereof he breaketh forth again, and appears in his likeness, in a place called Zoroanda. That it is the same river it is euidnt by this, that he carrieth through with him, and sheweth in Zoroanda, whatsoeuer was cast into him before he hid himselfe in the caue aforesaid. After this second spring and rising of his he enters into another lake, and runneth through it likewise, named Thopites; and once again takes his way vnder the earth through certain blinde gutters, and 25 miles beyond he putteth forth his head about Nymphæum. *Claudius Caesar* reporteth, that in the countrey Arrhene, the river Tigris runs so neere the river Arsanica, that when they both swell, and their waters are out, they ioine both their streams together, yet so, as the water is not mingled: for Arsanica being the lighter of the twain, swimmeth and floteth ouer the other for the space wel-neere of 4 miles: but soon after they part asunder, and Arsanica turneth his course toward the river Euphrates, into which he entrencheth. But Tigris receiuing into him certain goodly great riuers out of Armenia, to wit, Partbenis, Agnice, and Pharion, & so diuiding the Arabians & Trocenes from the Adiabenes, and by this means making as it were an Island of Mesopotamia aforesaid, after he hath passed by and viewed the mountaines of the Gordians, neere vnto Apamia a towne of Mesene on this side Seleucia synnamed Babylonia, 125 miles: diuiding himselfe into two armes or channels, with the one he runneth Southward to Seleucia, watering as he goeth the country of Mesene; and with the other windeth Northward: he goeth on the backside of the said Mesene, and cutteth through the plains of the Cauchians. Now when these two branches are re-ynited again, the whole is called Pasitigris. After this, he taketh into him out of Media, the great riuer Coaspes: and so passing between Seleucia and Ctesiphon, as we haue said, he falls into the meeres and lakes of Chaldaea, which he furnissheth and replenissheth with water for the compasse of seuentie miles: which done, he issueth forth againe, gushing out with a mighty great and large streame, and running along the towne Charax, on the right hand thereof, he dischargeth himselfe into the Persian sea, carrying there a mouth ten miles ouer. Between the mouthes of these two riuers, Tigris & Euphrates, where they fall into the sea, were counted in old time 25 miles, or as some would haue it but seuen: and yet both of them were nauigable, and bare right great ships. But the Orcheniens and other neighbor inhabitants, long since turned the course of Euphrates aside to serue their owne turnes in watering their fields, and stopped the ordinarie passages thereof, in such as they forced him to run into Tigris, & not otherwise than in his channell to fall into the sea. The next country bordering vpon Tigris is called Parapontia, in the marches whereof is the city Mesene, whereof we haue spoken. The chiefe towne thereof is Dibitach: from thence you enter presently into the region Chalontis, ioyning hard vpon Ctesiphon, a rich country, beautified not only with rowes of date trees, but also with Olive, Apple,

resort of merchants. Moreover, the Hemnates and Analites, whose townes are Domada and E-
 rage: also the Thamusiens, with their towne Badanath: the Carreans, and their towne Charia-
 ti: the Achoali, and a city of theirs Phoda. Furthermore, the Minari, defended as some thinke
 from *Minos* king of Crete: whose citie Charmari hath 14 miles in compasse. Other townes like-
 wise be there standing a far off, and namely, Mariaba, Baramalacum, a town ywis of no mean ac-
 count: likewise Carnon, and Ramei, who are thought to come from *Rhadamanthus* the brother
 of *Minos*. Ouer and besides, the Homerites, with their towne Massala: the Hamirici, Gedranit-
 a, Anapra, Ilisanita, Bochilita, Sammei, and Amathe, with these townes Neffa and Cennel-
 scri. The Zamanens, with these townes, Saiaac, Scantate, and Bacafmani: the towne Rhiphear-
 ma, which in the Arabian tongue signifieth Barley: also the Antei, Rapi, Gyrci, and Marhatei.
 The Helmadenes, with the towne Ebode. The Agarturi in the mountaines, hauing a towne 20
 miles about, wherein is a fountaine called Emilchabales, that is as much to say, as The Ca-
 melstown. Ampelone, a colony of the Milesians: the towne Afrida: and the people Calingij,
 whose towne is named Mariaba, as much to say as, Lords of all. Towns moreover, Pallon & Mu-
 ranimal, neere vnto a riuer, by which men thinke that Euphrates springeth and breaketh forth
 about ground. Other nations besides, namely, Agrei and Ammonij: with a towne, Athenæ: and
 the Cauranari, which signifieth, Most rich in droues of cattell. Then the Caranites, Cesfanes,
 and Choanes. There were sometime also certaine townes in Arabia, held by Greeks, and name-
 ly, Arethusa, Lariffa, and Chalcis, which all in the end came to ruine and were destroyed in di-
 uers and sundry ways. The onely man among the Romans vntill this day that warred in those
 parts, was *Ælius Gallus* a knight of Rome. As for *Caius Caesar* the son of *Augustus* the Emperor,
 he did but looke only into Arabia, and no more: but *Gallus* wasted townes that were not once
 named by Authors that wrote before, namely Egra, Annetum, Essa, Magulum, Tamuracum,
 Laberia, and the aboue-named Marieba, which was in circuit six miles about: likewise Cari-
 peta, the farthest that he went vnto. As for all other matters, he made report vnto the Senate of
 Rome, according as he had found and discouered in those parts; to wit, that the Nomades liue
 of milke and vnsifon: the rest of the Arabians presse wine, like as the Indians do, out of dates:
 and oile of Sesama, a kinde of graine or pulse in those countries. That the Homerites country
 of all others is most populous and replenished with people: the Minæans haue plenteous and
 fruitfull fields, full of date trees and goodly horthyards stored with all sorts of fruit: but their
 principall riches lieth in cattell. The Cembanes and Arians are good warriors and martiall
 men, but the Chatramotites that way excell all the rest. The Carreans haue the largest territo-
 ries and most fertile fields for come. As for the Sabæans, their wealth lieth most vpon their
 woods and trees, that bring forth the sweet gums of Frankincense and myrre: also in mines of
 gold: hauing water at commandment to refresh their lands, and plenty besides of hony & wax.
 As concerning the sweet odours and spices that come from thence, we will speake thereof in a
 feuerall booke by it selfe. The Arabians weare miters or turbants ordinarily vpon their heads,
 or else go with their haire long and neuer cut it: as for their beards, they they shau, leaue only
 on their vpper lippe, which they let grow still: and yet some of them there be that suffer their
 beards to grow long and neuer cut them. But this one thing I maruell much at, that being such
 an infinit number of nations as they be, the one halfe of them liue by robberie and cheuing,
 howeouer the other liue by traffick and merchandise. Take them generally, they be exceeding
 rich, for with them the Romans and Parthians leaue exceeding sums of gold and siluer, for the
 commodities out of their woods and seas which they sell vnto them: but they themselves buy
 nothing of them againe. Now will we speake of the other coast opposite vnto Arabia. *Timof-
 theus* hath set downe, that the whole gulf or arm of the sea called Red, was from one end to the
 other foure daies failing: and from side to side, two daies: that the streights of the firth were
 feuen miles ouer. But *Eratosthenes* saith, that taking the measure at the very mouth, it is euerie
 way 1900 miles.

CHAP. XXIX.

¶ The gulfes of the Red Sea: likewise of the Trogloditicke and Ethiopian Seas.

A *Rtemidorus* auoucheth, that the Red Sea toward Arabia side, is 1450 miles: but on the
 coast of the Troglodites 1182, vntill you come to the citie Ptolemais. Most Geogra-
 phers haue set downe the breadth thereof to bee 462 miles: and that the mouth of it,
 where

A where it openeth wide, full against sun-rising in winter [i. South-west] some say, is 7 miles broad,
 and others 12. As for the posture (situation thereof, thus it lyeth: beyond the branch or arme
 thereof called Ælaniticus, there is another creeke which the Arabians call Æant, vpon which
 standeth the towne Heroon. In old time there was a city called Cambistu, betweene the Nelians
 and Marchandians, into which the sicke and feeble souldiers of our armie were conueied, as to
 a place of retreat and repose. Beyond which, you enter into the land of Tyra: and there is the
 port Dancon to be seene, from which *Sesostris* a king of Egypt, was the first that imagined and
 deuised to draw one arme of it with a channell nauigable, into Nilus, in that part where it run-
 neth to the place called Delta, and that for 62 miles space, which is between the said riuer and
 the red sea. This enterprize of his was followed by *Darius* king of the Persians: yea and by *Pto-
 lomeus* king of Egypt, second of that name, who made a channell 100 foot ouer, and 30 deep, for
 37 miles in length and an halfe, euen to the bitter fountaines. But this designe was interrup-
 ted and the ditch went no farther, for feare of a generall deluge and inundation: for found it
 was, that the red sea lay about the land of Egypt three cubits. Some alledge not that to be the
 cause, but this, namely, That if the sea were let into Nilus, the sweet water thereof (whereof they
 drinke only and of none else) should be corrupted thereby and marred. Yet neuertheless, al-
 though this worke went not forward, the way is well beaten all the country ouer betweene the
 Red sea, and the Egyptian, for trafficke: and three feuerall ordinarie waies there are between:
 the one from Pelusium ouer the sands; where, vnles there be reeds set vp pitched in the ground
 to giue guidance and direction, there would no path be found, for euer & anon the wind blow-
 eth the sand ouer the tracts of mens feet and couereth all. A second beginneth 2 miles beyond
 the mountaine Casius, which after 60 miles cometh into the former Pelusiacke way. (Vpon
 this great rode way, the Arabians called Autei, do inhabit.) The third taketh his head and be-
 ginning at Gereum, which they call Adipson, and holdeth on through the said Arabians, & is
 60 miles neerer way, but full of craggie hills and altogether without waters. All these foreaid
 waies lead to the city Arsinoe, built vpon the gulfes Charandra by *Ptolomeus Philadelphus*, and
 bare his sisters name: and verily hee was the first that discouered those parts, and searched nar-
 rowly into the region Trogloditicum: and the riuer that passeth by Arsinoe, he called Ptole-
 mæus. Within a litle of this place, there is a litle town named Ænnum; for which, some there
 be that write, Philotera. Beyond them, are the Azarei: Arabians of the wilder sort & halfe Tro-
 glodites, by reason they marry their wiues from out of the Troglodites countrey. Being past
 these coasts, you shall finde the Islands Sapyrene and Scytala: and within a litle thereof,
 deserts vntill you come to Myos-hormos, where there is a fountaine called Taduus, the mount
 Eos, the Island Lambe, many hauens besides, and Berenice a town, bearing the name of the mo-
 ther to *K. Ptolomeus Philadelphus*, to which there is a way lying from Coptos, as we haue said: &
 last of all the Arabians called Autei, and Gnebadei. Now it remaineth to speake of the region
 Trogloditicum, which the ancient men of old time called Michoe, & others Midoe: & therein
 standeth the mountaine Pentaactylos. Vpon the coast of this country, there lie to be seene cer-
 taine Islands called Stenæ-deira: and others no fewer in number named Halonessi: also Car-
 damine, and Topazos, which Island gaue the name to the precious stone called the Topaze.
E Then come you to an arme of the sea betweene two lands, full of pettie Islands, whereof that
 which is called Mareu, is well ferted with water sufficient: another, Eratonos, is altogether dry
 and vnprouided of fresh water. These Islands tooke name of two captains and gouernors there
 vnder the king. Within-forth farther into the firm land, inhabit the Candei, whom they call
 Ophiophagi, because they are wont to feed on Serpents: and in truth there is not another coun-
 try that breeds them more than it. *K. Iuba* who seemeth to haue taken great paines in the dili-
 gent perusing and discouery of these parts, omitted in all this tract (vnlesse there be some fault
 and defect in them that copied out his first originally) to speake of a second city named Bere-
 nice, with the addition of Panchryfos, as also of a third called Epidires, and yet renowned it is
 in regard of the place wherupon it is seated: for situate it is vpon a knap of land bearing far into
 the red sea, euen where the mouth of it is not about 4 miles & an halfe, from Arabia. Within
 the prospect of this tract there is the Island Cytis, which also bringeth forth good store of the
 Topaze stones. Beyond this quarter, nothing but woods and Forrests, where *K. Ptolomeus* sum-
 named *Philadelphus* built the city Ptolemais; onely for to chase and hunt the Elephant, neere to
 the lake Monolcus; and in regard of his game there, he named it Epi-theras. This is the verie
 country

country mentioned by me in the second booke: wherein for 45 daies before Mid-summer, or the entrance of the Sun into Cancer, and as many after, by the first houre of the day, that is to say, about noone, no shadowes are to be seen: which being once past, all the day after they fall into the South. As for other daies of the yere besides, they shew into the North: whereas in that citie Berenice which we mentioned first, vpon the very day only of the Sun-stead, at the sixth houre or noon-tide, the shadowes are cleane gone and none to be scene (for otherwise there is no alteration at all to be obserued throughout the yere) for the space of 600 miles all about Ptolemais. A strange & notable thing worth obseruation, that it should be so but in one houre all the yere long, and a matter that gaue great light and direction to the world, yea and ministered occasion to a singular inuention and subtil conclusion: for *Eratosthenes* vpon this vndoubted argument and demonstration of the diuersitie of shadowes, set in hand hereupon to take the measure of the whole globe of the earth, and put it downe in writing to all posteritie. Beyond this city Ptolemais, the sea changeth his name and is called Azaniam; ouer which the cape sheweth it selfe, which some haue written by the name of Hispalus; also, anon appeareth the lake Mandalum, and in it the Island Colocastis; but in the deep sea many more, wherein are taken many tortoises. Farther vpon this coast is the towne Suchæ, and then you may discouer in the sea the Island Daphnis, and the city Aduliton, built by certaine Egyptian slaues who ran away from their masters and took no leaue: verily this is the greatest and most frequented mart towne of all the Troglodites country, and put the Egyptians to them: and it is from Ptolemais 5 daies sailing. Thither is brought great store of yuorie, or the Elephants tooth, and of the horn of the Rhinoceros: there many a man haue plenty of the sea-horse hides, of tortoise shels, of little Monkeys or Marmosets: there also a man may be sped with bondslaues. A little beyond are the Æthiopiens, called Arotres: also the Islands named Alia: and besides them other Islands, namely, Bacchias, Antibacchias, and Stratonis: being past them, there is a gulf in the coast of Æthiopia, as yet not discouered or knowne by any name: a thing that may make vs maruel much, considering that our merchants search into farther corners than so. Also a promontory, wherein there is a fountaine of fresh water named Curios, much desired of the sailers that passe that way, and in great respect for the refreshing that it yeeldeth vnto them: beyond it, is the harbor or port of Iliis, distant from the towne of the Adulites aboue said, ten daies rowing with oares; and thither is the Troglodites myrthe brought, and there laid vp. Before this haven, there lie in the sea two Islands, named Pseudopyla: and as many farther within, called Pyra: in the one of them be certaine pillars of stones, ingrauen with strange and vknowne Letters. When you are past this haven, you come to an arme of the sea called Abalites: within it is the Island Diodori, and other lying desart and vnpeopled. Also along the continent, there is much wildernesse: but being past them, you come to the towne Gaza: the promontorie also & port Mossyllites, vnto which store of cinnamon and canell is brought. Thus far marched *K. Sefstris* with his army. Some writers make mention of one towne more in Æthiopia beyond all this, vpon the sea side, called Baradaza. *K. Iuba* would haue the Atlantick sea to begin at the promontorie or cape aboue named, Mossyllites: on which sea (as he saith) a man may saile very well with a West-ther, west-ward, by the coasts of his kingdomes of Mauritania or Marocco, as farre as to the coasts of Gibraltar called Gades; and sure he speaketh so confidently thereof, as I will not altogether discredit his resolution in this behalfe. From a promontorie of the Indians called Leptæara, and by others Drepanum, vnto the Isle of Malchu, he saith plainly, that by a straight and direct course it is 15 hundred miles, and neuer reckon those parts that are burnt with the Sun. From thence to a place called Sceneos, he affirmeth it is 25 miles: and from it to the Island Sadanum, 150 miles, and thus by this means he concludeth, that in all, to the open and knowne sea, it is 1885 miles. But all other writers besides him were of opinion, that there could not possibly be any sailing vpon it, for the exceeding heat of the Sun. Ouer and besides, the Arabians named Alcitæ, doe much harme and annoyance from out of the Islands which they hold, vnto merchants that traffike that way: for these Arabians, according as their name doth import, couple bottles made of good oxe leather, two by two together, and going vpon them with ease as it were a bridge vnder them, scoure the seas, and shooting their empoyoned arrowes, practise pyracie, to the great losse and mischiefe of merchants & sailers. The same *Iuba* writeth moreover, that there be certaine people of the Troglodites, named Therothoes, for their hunting of wilde beasts, of their exceeding and wonderful swiftnesse in chasing of Deere

vpon

- A vpon land: as the Ichthyophagi for coursing of fish in the sea, swimming as naturally as if they were water creatures. Moreover, he nameth other nations in those parts, as the Bargeni, Zage-res, Chalibes, Saxina, Syrees, Daemes and Domazanes. Furthermore, he affirmeth, that the people inhabiting along the sides of Nilus from Syene vnto Meroe, are not Æthiopiens, but Arabians, who for to seeke fresh water, approached Nilus; and there dwelt: also that the citie of the Sunne, which we said before in the description of Egypt, standeth not farre from Memphis, was first founded and built by the Arabians. Contrariwise, other Geographers there be, who affirme that the farther side or banke of Nilus is no part of Æthiopia, and they lay it as a dependant annexed to Affrick. But be it as it will, I will not greatly buse my head thereabout, but suffer every man to abound in his own fence, and haue his own way: only I will content my selfe with this, to set downe the townes on both sides thereof, in that order as they are declared vnto me. And first to begin with that side toward Arabia: after you are past Syene, enter you shall vpon the countrie of the Catadupi, and so forward into the land of the Syenites. Wherin these townes stand in order as followes: Tacomphon, which some haue called Thaire, Aranium, Sefanium, Sandura, Nafandum, Anadoma, Cumara, Beda and Bochiana, Leuphithorga, Tantara, Machindira, Noa, Gophoa, Gyltata, Megeda, Lea, Rhemnia, Nupia, Direa, Patara, Bagada, Dumana, Rhadata, wherein a golden cat is worshipped as a god. Boron in the midland part of the continent, and Mallos, the next towne to Meroe. Thus hath *Bion* digested and set them downe. But king *Iuba* hath raunged them otherwise in this manner. First, Megarichos a towne situate vpon a hill betwene Egypt and Æthiopia, which the Arabians vse to call Myson: next to it Tacomphon: then Aranium, Sefanium, Pide, Mamuda, and Corambis, nere vnto it a fountaine of liquid Bitumen: Hammodara, Proda, Parenta, Mama, Theffara, Gallæ, Zoron, Graucome, Emeum, Pidibora, Hebdome, comactometæ, and the Nomades, who ordinarily are encamped vnder tents and paulions. Cylte, Pemma, Gadagale, Palois, Primmis, Nupis, Dafelis, Paris, Gambrenes, Magafes, Segafama, Cranda, Denna, Cadeuna, Thena, Batha, Alana, Macum, Scammons, and Gora within an Island, Beyond which, Abala, Androcraus, Seres, Mallos & Agoce. And thus much on the side of Arabia. Now for Affrick side, they are in this wise reckoned. First, Tacomphos, according to the others name, or a parcell rather of the former: then, Magora, Sea, Edola, Pelenaria, Pyndis, Magula, Bauma, Linitima, Spynuma, Sydopta, Genfoa, Pindicitora, Eugo, Orfina, Suafa, Maunia, Rhuma, Vrbubuma, Mulona, which town the Greeks were wont to call, Hypaton, Pagoagas, Zanones, & there begin the Elephants to come in, Mamblia, Berrefa, Cexuma. There was moreouer a towne sometime named Epis, situate against Meroe: but raised it was and vtterly destroyed before that *Bion* wrote his Geography. See what cities and townes of name were recorded in times past to haue bin in those parts, vntil you come to the Ile Meroe. And yet at this day there is neither stick nor stone to be found of any of them in a manner on neither side. Only desarts and a vast wildernesse in stead of them, by report made vnto *Nero* the Emperor by the Prætorian soldiery, sent thither from him vnder the leading of a Tribune or Colonel, to discouer those quarters of Æthiopia, & to relate accordingly: at what time as among other his designs, that Prince intended an expedition with his army against the Æthiopiens. And yet before his time, euen in the daies of *Augustus Cæsar* of happy memory, the Romanes pierced thither with a power of armed men vnder the conduct of *Pub. Petronius*, a knight of Rome, and gouernour of Egypt, deputed by the said Emperour. Where he forced by assault and conquered all those townes in Æthiopia which he then found standing in this order following: namely, Pselcis, Primis, Abaccis, Phthuris, Cambusis, Attena, Stadi-fis, where the riuier Nilus runs down with such a mighty fall, that with the noise thereof the inhabitants there by lose their hearing and become deafe. Besides these he went also and sacked Napata. And albeit he marched forward till a great way into the countrie, euen 870 miles beyond Syene, yet this Romane armie of his laid not all wait in those parts, & left the country so desart as now it is. No, no: It was the Egyptians warres and not the Romanes that gaue the waite to Æthiopia: and albeit sometimes it woon and otherwhiles lollt, one time bare the scepter and ruled, another time vnderwent the yoke, and were subdued: yet was it of great name in the world and puissant, vntill the reigne of king *Memon*, who ruled at the time of the Trojan war: yea, and Svria was subiect vnto it, as also the coast of our sea in king *Cephus* daies, as appeareth by the fabulous tales that go as touching *Andromeda*. Semblably the Geographers varie and disagree much about the measure and dimension of Æthiopia. And first of all others, *Dalio*, al-

beit

that all Ethiopia, and take the land with it of *Prester Iehan* bordering vpon the red sea, containeth in length 270 miles: & in bredth, together with the higher Egypt, 120. Some Geographers haue taken the bredth in this manner. From *Miroe* to *Sirbitum*, 12 daies iourney vpon *Nilus*: from thence to the country of the *Daullians* another 12, and from them to the *Ethiopian Ocean* 6 daies. But in general all writers in a manner do resolute vpon this, that betwene *Ocean* and *Meroe*, it is 725 miles: and from thence to *Syene*, as much as we haue set downe before. As for the posture and situation of *Ethiopia*, it lies Southeast & Southwest. In the meridian South parts thereof, there be great woods of *Ebene* especially, alwaies greene. Toward the mids of this region, there is a mighty high mountain looking ouer the sea, that burns continually, which the *Greeks* call *Theon ochema*. The chariot of the gods: from the which it is counted foure daies iourney by sea to the promontory or cape called *Hesperion-Ceras*, which confines vpon *Africk*, neere to the *Hesperian Ethiopians*. Some writers hold, that this tract is beautified with pretty little hills, and those pleasantly clad & garnished with shadowie groues, wherein the *Ægipanes* and *Satyres* do conuerse.

CHAP. XXXI. The Islands in the *Ethiopian Sea*.

Ephorus, *Eudoxus*, and *Timosthenes*, do all agree in this, that there be very many Islands in all that sea. *Cliarchus* witnesseth, that report was made to *Alexander* the Great, of one about the rest, which was so rich and well monied, that for an ordinary horse the inhabitants would not stick to giue a talent of gold: also of another, wherein was found a sacred hill adorned with a goodly wood vpon it, where the trees distilled and dropped sweet water of a wonderfull odoriferous smell. Moreover, full against the *Persian gulf*, lieth the Isle named *Cerne*, opposite vnto *Ethiopia*, but how large it is, or how far off it beareth into the sea from the continent, is not certainly knowne: this only is reported, that the *Ethiopians* and none but they, are the inhabitants thereof. *Ephorus* writeth, that they who would saile thither from the red sea, are not able for extreme heate to passe beyond certain columns or pillars, for so they call the little Isles there. Howbeit *Polybius* auoucheth, that this Island *Cerne* where it lieth in the vtmost coast of the *Mauritanian* sea ouer-against the mountaine *Atlas*, is but 8 stadia from the land. And *Cornelius Nepos* affirmeth, that likewise it is not about a mile from the land, ouer-against *Carthage*: & besides, that it is not about two miles in circuit. There is mention made also by authors, of another Isle before the said mountain *Atlas*, named also therupon *Atlantis*. And fise daies sailing from it, appeare the deserts of the *Ethiopian Hesperians*, together with the fore-said cape, which we named *Hesperion-Ceras*, where the coasts of the land begin first to turn about their forefront to wind Westward, and regard the *Atlanticke* sea. Iust ouer-against this cape, as *Xenophon Lampiscenus* reporteth, lye the Islands called *Gorgates*, where sometimes the *Gorgones* kept their habitation, and 2 daies sailing they are thought to be from the firme land. *Hanno*, a great commander and generall of the *Carthaginians*, landed there with an army: who made this report from thence, That the women were all ouer their bodies hairy: as for the men, he could not catch one of them, so swift they were of foot that they escaped out of all sight: but he dead two of these *Gorgone* women and brought away their skins, which for a testimoniall of his being there, and for a wonder to posteritie, he hung vp in *Iunones* temple, where they were seen vntill *Carthage* was won and sacked. Beyond these Isles, there are by report, two more discovered, by the name of *Hesperides*. But so vncertaine are all the intelligences deliuered concerning these parts, that *Statius Scaevola* affirmeth, that it is 40 good daies sailing from the Islands of these *Gorgones* along the coast of *Atlas*, vnto the Isles of the *Hesperides*: and from thence to *Hesperion-Ceras*, but one. As little resolution and certaintie there is, as touching the Islands of *Mauritania*. In this only they all jumpe and accord, that *K. Iuba* discovered some few of them ouer-against the *Autolotes*, in which he meant and purposed to die *Gætulian* purple.

CHAP. XXXII.

Of the Islands *Fortunate*, or *Canarie*.

Some Authors there bewho think, that the Islands *Fortunate*, and certaine others besides them, are beyond the *Autolotes*: among whom, the same *Scaevola* aboue rehearsed was so bold, as to speake of their distances: and namely, that the Island *Iunonia* is from *Gades* 750 miles:

A 750 miles: and that from it Westward, the Isles *Pluvialia* and *Capraria*, are as much. Also that in the Island *Pluvialia* there is no fresh water, but only that which they haue by showrs of rain. He saith moreover, that from them to the *Fortunate Islands* are 250 miles; which lie 8 miles from the coast of *Mauritania* to the leir hand, called the coast of the *Sun*, or Valley of the sun, for that it is like a valley or hollow leuell flore of earth, whereupon also it is called *Planaria*, resembling an euen plain. And in very truth, this vally containeth in circuit 300 miles: wherein are trees to be seen that grow vp in height to 144 foot. As for the Islands named *Fortunate*, *Iuba* learned thus much by diligent inquisition, that they lie from the South neere to the West 625 miles from the Islands *Purpuraria*, where they die purple; so as to come thither, a man must saile 250 miles about the West and then for 75 miles more bend his course Eastward: the saith also, that the first of these Islands is called *Ombion*, wherein are to be seen no token or shew at all of houses. Also that among the mountains, it hath a lake or meere: and trees resembling the plant *Ferula*, out of which they presse water: that which issueth out of the black trees of that kinde, is bitter; but out of the whiter sort, sweet and potable. As for a second, he writeth that it is named *Iunonia*, wherein there is one little house or chappell made of stone: beyond it, but neere by, there is a third of the same name, but lesse than the other: and then you come to a fourth called *Capraria*, full of great Lizards. Within a kenning from these, lieth the Island *Niuarina*, which tooke this name of the snow that lieth there continually, and besides, it is full of smits and fogs. The next to it and the last of all, is *Canaria*, so called, by reason of a number of dogs of mighty bignesse, of which *K. Iuba* brought away two; & in this Island there are some marks remaining of buildings which giue testimonie that sometime it was inhabited and peopled. And as all these Islands generally do abound plentifully in fruitfull trees, & flying fowls of all sorts: so this about the rest named *Canaria*, is replenished with rowes of date trees that beare abundance of dates, and likewise with pine trees that yeeld store of Pine nuts. Furthermore he affirmeth, that there is great plenty of hony in it: that the riuers therein are well stored with fish, and the Sturgeon especially: in which there groweth the red *Papynus* as ordinarily as in *Nilus*. Howbeit in conclusion he saith, that these Isles are much annoied with great whales and such monsters of the sea, that daily are cast vpon the shore, which lie about ground & putrifie like carrion. Thus hauing at large gone through the description of the globe of the earth as well without as within, it remaineth now to knit vp briefly with the measure and compasse of the seas.

CHAP. XXXIII.

A Summarie of the earth, digested according to the dimensions thereof.

Polybius saith, that from the streights of *Gibraltar*, vnto the very mouth and firth of *Mæotis*, it is found by a direct and straight course to be 3437 miles and an halfe. Begin there again, and hold on a right course Eastward to *Sicily*, it is 1260 miles and an halfe. From thence forward to the Island *Creta*, 375 miles: forward to *Rhodes*, 146 miles and an halfe: to the *Chelidonia* Isles as much, and so to *Cyprus* 325 miles: from whence to *Seleucia Pieria* in *Syria* 115 miles. Which particulars being laid together, make by computation the grosse sum of 2340 miles. Howbeit, *Acrippa* counteth 3440 miles for all this distance aboue-said, beginning at the Straits of *Gibraltar* aboue-said, and carrying the length straight forward to the gulf of *Iffa*. In which reckoning of his, I wot not whether there be an error in the number, forasmuch as the same writer hath set down from the streit of *Messine* in *Sicilie* to *Alexandria* in *Egypt*, 1250 miles. As for the whole circuit that may be comprehending therein, all the gulphes and creekes before-named, from the same point where we first began as far as to the lake *Mæotis*, is 15600 miles. *Artemidorus* addeth thereto 756 miles. And the same Geographer writeth, that take the lake *Mæotis* to the rest, all cometh to 17390 miles. Loe, what the measure is of the seas taken by Philosophers and learned men, without armor and weapon in hand; of men I say, who haue not feared to hazard themselves boldly and prouoke Fortune, in traueling the seas so farre off. Now are we to compare respectiue the greatnesse of each part of the world in feuerall: notwithstanding that I shall finde much ado and difficulty enough therein, considering the disagreement of authors in that behalf. But most plainly shal this appeare which we seek for, by joining longitude & latitude together: according to which prescript rule to begin with

Europe, it may wel contain in largenes 8148 miles. Africk (taking the middle and mean computation between them all that haue set it downe) containeth in length 3748 miles. As for the bredth of so much as is known and inhabited, in no place where it is widest exceedeth it 250 miles. True it is, that *Agrippa* would haue it to contain 910 miles in breadth, beginning at the bounds of Cyrene, and so comprehending in this measure the desarts thereof as far as to the Garamants, so far as is knowne and discovered, and then the whole measure collected into one generall sum, amounteth to 4608 miles. As for Asia, confessed it is and resolved vpon by all Geographers, that in length it carrieth 63750 miles: and verily in bredth (if you account from the *Aethiopian* sea to *Alexandria* scituate vpon Nilus, so as your measure run through *Meroe* and *Syrene*) it taketh 1875 miles: whereby it appeareth evidently, that Europe is little wanting of halfe as big again as Asia: and the same Europa, is twife as much again as all Africa & a sixt part ouer. Reduce now all these sums together, it will be found cleare, that Europe is a third part of the whole earth, & an eight portion ouer and somwhat more: Asia, a fourth part, with an ouer-deale of 14: and Africk a fift part, with an ouer-plus of a sixtieth portion. To this calculation, we wil set to, as it were to boot, one subtil deuise & inuention more of the Greeks, which sheweth their singular wit (to the end we should omit nothing that may serue our turn in this Geographic of ours) and that is this: after that the posture and site of euery region is knowne and set downe, how a man may likewise come to the knowledge what societie and agreement there is between the one & the other, either by length of daies and nights, by the shadow at noon day, or by equality of climates of the world. To bring this about effectually, I must part and digest the whole earth into certain sections or euen portions, answerable to those in heauen; whereof (there be very many) which our Astronomers and Mathematicians call Circles; but the Greeks, Parallels.

CHAP. XXXIV.

¶ The diuision of the earth into Climates or lines Parallele, and equall shadows.

For to make an equall partition of the world, begin we wil at the Meridionall Indians, & go directly as far as Arabia, and the inhabitants of the red sea. Vnder this climat are comprehended the *Gedrosians*, *Perfians*, *Carmans*, and *Elimeans*: *Parthyene*, *Aria*, *Susiane*, *Mesopotomia*, *Seleucia* (synamed *Babylonia*), *Arabia*, so far as *Petra* inclusiuely, *Coele-Syria*, & *Palusium* in *Egypt*: the low Low-countries, which are called the tract of *Alexandria*: the maritime coasts of Africk: all the towns of *Cyrenaica*, *Thapsus*, *Adrumetum*, *Clupea*, *Carthage*, *Ytica*, both *Hippes*, *Numidia*, both realmes of *Mauritania*, the *Atlanticke* sea, and *Hercules* pillars. In all the circumference of this climat and parallele, at noon tide vpon an Equinoctiall day, the stile in the diall which they call Gnomon 7 foot long, casteth a shadow not aboue 4 foot. The longest night or day in this climate, is 14 houres: and contrariwise the shortest, ten. The second circle or parallele line, beginneth at the Indians Occidentall, and passeth through the mids of *Parthia*, *Persepolis*, the hithermost parts of *Perfis* (in respect of *Rome*) the hither coast of *Arabia*, *Iudaea*, and the borders neere vnto the mountaine *Libanus*. Vnder the same are contained also *Babylon*, *Iudaea*, *Samaria*, *Hierusalem*, *Afcalon*, *Ioppe*, *Casarea*, *Phoenice*, *Ptolemais*, *Sydon*, *Tyros*, *Berytus*, *Betrys*, *Tripolis*, *Byblus*, *Antiochia*, *Laodicea*, *Seleucia*, the Sea coasts of *Cilicia*, *Cyprus* the South part of *Candy*, *Cataonia*, *Cappadocia*, *Taurus*, *Amarnus*, *Iffus*, the *Cilician* straits, *Soli*, *Tarsus*, *Cyprus*, *Pisidia*, *Syde* in *Pamphilia*, *Lycania*, *Patara* in *Lycia*, *Xanthus*, *Caunus*, *Rhodus*, *Cous*, *Halicarnassus*, *Gnidus*, *Doris*, *Chius*, *Delus*, the mids of the *Cyclades*, *Gythium*, *Malca*, *Argos*, *Laconia*, *Elis*, *Olympia*, *Messene*, *Peloponnesus*, *Syracusa*, *Catane*, the mids of *Sicily*, the South part of *Sardinia*, *Cardei*, and *Gades*. In this climate the Gnomon of 100 inches, yeeldeth a shadow of 77 inches. The longest day hath Equinoctiall houres 14 & an half: with a 30 part ouer. Vnder the fourth circle or parallele lye they that are on the other side of Imaus, the South parts of *Cappadocia*, *Galaria*, *Myfia*, *Sardis*,

A *Sardis*, *Smyrna*, *Sipylus*, the mountaine *Tmolus* in *Lydia*, *Caria*, *Ionis*, *Trallis*, *Colophon*, *Ephesus*, *Miletus*, *Samos*, *Chios*, the *Icarian* sea, the *Iles Cyclades* lying Northward, *Athens*, *Megara*, *Corinth*, *Sicyon*, *Achaia*, *Patra*, *Isthmos*, *Epirus*, the North parts of *Sicily*, * *Narbo-nensis Gallia* toward the East, the maritime parts of *Spain* beyond new *Carthage*, and so into the West. To a Gnomon of 21 foot, the shadowes answer of 17 foot. The longest day is four-teen Equinoctiall houres, and two third parts of an houre. The 5 diuision containeth vnder it, from the entrance of the *Caspian* sea, *Bactra*, *Iberia*, *Armenia*, *Myfia*, *Phrygia*, *Hellepontus*, *Troas*, *Tenedus*, *Abydus*, *Scepsis*, *Ilium*, the hill *Ida*, *Cyzicum*, *Lampacum*, *Sinope*, *Anisum*, *Heraclea* in *Pontus*, *Paphlagonia*, *Lemnus*, *Imbrus*, *Thafus*, *Cassandria*, *Thessalia*, *Macedonia*, *Larissa*, *Amphipolis*, *Thessalonice*, *Pella*, *Edeffa*, *Berrea*, *Pharfalia*, *Carystum*, *Euboea*, *Boeotia*, *Chalcis*, *Delphi*, *Acarmania*, *Aetolia*, *Apollonia*, *Brundisium*, *Tarentum*, *Thuri*, *Locri*, *Rhegium*, *Lucani*, *Naples*, *Puteoli*, the *Tuscan* sea, *Corfica*, the *Baleare* *Iles*, the middle of *Spain*. A Gnomon of 7 foot giueth shadow fix foot. The longest day is 15 Equinoctiall houres. The sixt parallell comprifeth the city of *Rome*, and containeth withall the *Caspian* nations, *Caucasus*, the North parts of *Armenia*, *Apollonia* vpon *Rhindacus*, *Nicomedia*, *Nicra*, *Chalcedon*, *Bizantium*, *Lylimachia*, *Cherrhonesus*, the gulfe *Melane*, *Abdera*, *Samothracia*, *Maronea*, *Aenus*, *Bessica*, the midland parts of *Thracia*, *Poenia*, the *Illyrians*, *Dyrrhachium*, *Canusium*, the vmoost coasts of *Apulia*, *Campania*, *Hetruria*, *Pisice*, *Luna*, *Luca*, *Genua*, *Liguria*, *Antipolis*, *Maffilia*, *Narbon*, *Tarracon*, the middle of *Spain* called *Tarraconensis*, & so through *Lusitania*. C To a Gnomon of 9 foot, the shadow is answerable 8 foot. The longest day hath 15 Equinoctiall houres, and the 9 part of an houre, or the fix, as *Nigidius* is of opinion. The 7 diuision begins at the other coast of the *Caspian* sea, and falls vpon *Callatis*, *Bosphorus*, *Borysthenes*, *Tomos*, the backe parts of *Thracia*, the *Tribals* country, the rest of *Illyricum*, the *Adriaticke* sea, *Aquileia*, *Altinum*, *Venice*, *Viceria*, *Patauium*, *Verona*, *Cremona*, *Ravenna*, *Ancona*, *Picenum*, *Marfi*, *Peligni*, *Sabini*, *Vmbria*, *Ariminum*, *Bononia*, *Placentia*, *Mediolanum*, and all beyond *Apenninum*: also ouer the *Alps*, *Aquitane* in *Gaul*, *Vienna*, *Pyraeneum*, and *Celtiberia*. The Gnomon of 35 foot, casteth a shadow 36 foot in length; yet so, as in some part of the *Venetian* territorye, the shadow is equall to the Gnomon. The longest day is 15 Equinoctiall houres, and three fift parts of an houre. Hitherto haue we reported the labors in this point of ancient D Geographers, and what they haue reported. But the most diligent and exactest modern Writers that followed, haue assigned the rest of the earth not yet specified, to three other sections or climates. The first, from *Tanais* through the lake *Moeris* and the *Sarmatians*, vnto *Borysthenes*, and so by the *Dakes* and a part of *Germany*, containing therein *France* and the coasts of the Ocean, where the day is 16 houres long. A second, through the *Hyperboreans* and *Britain*, where the day is 17 houres long. Last of all is the *Scythian* parallell, from the *Rhiphaean* hills into *Thule*: wherein (as we said) it is day and night continually by turnes, for sixe moneths. The same writers haue set downe two parallell circles, before those points where the other began, and which we set downe. The one through the *Ilands* *Meroe* and *Ptolemais* vpon the red sea, built for the hunting of *Elephants*, where the longest daies are but 12 houres and an halfe: the second passing through *Syrene* in *Egypt*, where the day hath 13 houres. And the same authors haue put to euery one of the other circles, euen to the very last, half an houre more than the daies length than the old Geographers.

Thus much of the Earth.





THE SEVENTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS

SECVNDVS.

The Proeme.



Hus, as you see, we haue in the former books sufficiently treated of the vniuersall world, of the Lands, Regions, Nations, Seas, Islands, and renowned Cities therein contained. It remains now to discourse of the living creatures comprised within the same, and their natures: a point doubtlesse that would require as deepe a speculation as any part else thereof: whatsoeuer, if so be the spirit and minde of man were able to comprehend, and compass all things in the world. And to make a good entrance into this treatise and history, we thinke of right we ought to begin at Man, for whose sake it should seeme that Nature made and produced all other creatures besides: though this great fauour of hers, so bountifull and beneficiall in that respect, hath cost them full deare. Inasmuch as it is hard to iudge, whether in so doing she hath done the part of a kinde mother, or a hard and cruell step-Dame. For first and forme, of all other living creatures, man she hath brought forth all naked, and clothed him with the good and riches of others. To all the rest she hath giuen sufficient to clad them euery one according to their kinde: as namely, shells, gods, hard hides, prickles, shag, bristles, haire, downe feathers, quills, scales, and fleeces of wooll. The very trunks and stums of trees and plants she hath defended with bark and rinde, yea and the same sometimes double, against the iniuries of heate and cold: Man alone, poore wretch, she hath layed all naked vpon the bare earth, euen on his birth day, to cry and wraule presently from the very first houre that hee is borne in such sort, as among so many living creatures there is none subiect to shred teares and weepe like him. And verily to no babe or infant is it giuen once to laugh before he be forty daies old, and that is counted very early, and with the soonest. Moreover, so soone as he is entred in this manner to enjoy the light of the Sunne, see how he is immedately tyed and bound fast, and hath no member at libertie: a thing that is not practised vpon the yong whelpes of any beast among vs, be he neuer so wilde. The childe of man thus vtowardly borne, and who another day is to rule and command all other, see how he lieth bound hand and foot, weeping and crying, and beginning his life in miserie, as if he were to make amends and satisfaction by his punishment vnto Nature, for this one fault and trespass, that he is borne alive. O folly of all follies, euer to thinke (considering this simple beginning of ours) that we were sent into this world to live in pride, and carry our heads aloft! The first hope that we conceiue of our strength, the first gift that Time affoordeth vs, maketh vs no better yet than foure footed beasts. How long is it ere we can go alone? how long before we can prattle and speake, feed our selves, and chew our meat strongly? what a while continueth the mould and crowne of our heads to beate and pant, before our braine is well settled: the vndoubted marke and token that bestraiteth our exceeding great weaknesse above all other creatures? What should I say of the infirmities and sicknesses that do soone rise vpon our feeble bodies? what need I speake of so many medicines and remedies devised against these maladies: besides the new diseases that come euery day, able to checke and frustrate all our prouision of physicke whatsoeuer? As for all other living creatures, there is none, but by a secret instinct of nature knoweth his own good, and wherto he is made able: some make use of their swift feet, others of their slight wings, some are strong of limbe; others are apt to swim, and practise the same: man only knoweth nothing unless he be taught; hee can neither speake, nor goe, nor eate, otherwise than he is trained to it: and to be short, apt and good at nothing he is naturally, but to pule and cry. And hereupon it is, that some haue bene of this opinion,

A opinion, That better it had been, and simply best for a man, neuer to haue been borne, or else speedily to die. None but we doe sorrow and waile, none but we are giuen to excess and superfluitie infinitely in euery thing, and shew the same in euery member that we haue. Who but we againe are ambitious and vain-glourious? who but we are couctous and greedy of gathering good? we and none but we desire to liue long and neuer to die, are superstitious, carefull of our sepulture and buriall, yea and what shall betide vs when we are gone. Mans life is most frail of all others; and in least securitie he liueth: no creature lusteth more after euery thing than he: none feareth like vnto him, and is more troubled and amazed in his feight: and if he beset vpon anger, none more raging and wood than he. To conclud, all other living creatures liue orderly and well, after their owne kinde: we see them flicke and gather together, and ready to make head and stand against all others of a contrary kinde: the lions as fell, and savage as they be, fight not one with another: serpents sting, not serpents nor bite one another with their venomous teeth: nay the very monsters and huge fishes of the sea, war not among themselves in their owne kinde: but beleeue me, Man at mans hand receiveth most harme and mischief.

CHAP. I.

¶ The strange and wondrous shipes of sundry nations.



IN our Cosmographie and reports of nations and countries, we haue spoken in generall of all mankind, spread ouer the face of the whole earth: neither is it our purpose at this present to decipher particularly all their customes and manners of life, which were a difficult enterprize, considering how infinit they be, and as many in manner as there be societies and assemblies of men. Howbeit I thinke it good, not to ouer-passe all, but to make relation of some things concerning those people especially, who liue farthest remote from our seas; among whom I doubt not but I shall find such matter, as to most men will seeme both prodigious and incredible. And verily who euer beleeued that the Æthiopians had bin so blacke, before he saw them with his eyes, nay what is it, I pray you, that seemeth not a wonder at the first sight? How many things are judged impossible before they are seene done and effected? And certes, to speake a truth, The power and maiestie of Nature, in euery particular action of hers & small things, seemeth incredible, if a man consider the same seuerally, and enter not into a generall conceit of her wholly as she is. For to say nothing of the painted peacocks feathers, of the sundry spots of tygres, luzernes, and panthers, of the variable colours and markes of so many creatures besides: let vs come to one only point, which to speake of seemes but small, but being deeply weighed and considered, is a matter of exceeding great regard, and that is, The varietie of mens speech; so many tongues and diuers languages are amongst them in the world, that one stranger to another seemeth well-nere to be no man at all. But come to view and marke the varietie that appears in our face and visage, albeit there be not past ten parts or little more therein, see how among so many thousands as we are, you shall not find any two persons, who are not distinct in countenance and different one from another: a thing that no artificer nor painter (be he neuer so cunning and his craftmaster euery way) can performe, but in a few pictures, and take what heed he can with all his curious affection. And yet thus much must I aduertise the readers of this mine history, by the way, that I will not pawne my credit for many things that herein I shall deliuer, nor bind them to beleeue all I write as touching strange and foreign nations: refer them rather I will to mine authors, whom in all points (more doubtfull than the rest) I will cite and alledge, whom they may beleeue if they list: only let them not thinke much to follow the Greeke writers, who from time to time in this behalfe haue been more diligent in penning, and more curious in searching after antiquities.

CHAP. II.

¶ Of the Scythians, and the diuersitie of other nations.

That there bee Scythians, yea, and many kinds of them that feed ordinarily of mans flesh, we haue shewed already in our former discourses. A report haply that would be thought incredible, if we did not consider and thinke withall, how in the very middle and heart of the world, euen in Sicily and Italy, here hard by, there haue bene such monsters of men,

men, namely, the Cyclopes and Lystrigones: nay, if we were not credibly informed, that euen of late daies, and go no farther than to the other side of the Alpes, there be those that kill men for sacrifice after the manner of those Scythian people; & that wants not much of chewing and eating their flesh. Moreouer, neere vnto those Scythians that inhabit toward the pole Arctique, and not far from that climate which is vnder the very rising of the North-east wind, and about that famous caue or whole out of which that wind is said to issue, which place they call Gefclithron, [i. the cloister or key of the earth] the Arimaspians by report do dwell, who as we haue said before, are known by this marke, for hauing one eye only in the mids of their forehead, and these maintain war ordinarily about the metall mines of gold, especially with griffons, a kind of wilde beasts that flie, and vse to fetch gold out of the veins of those mines (as commonly it is receiued) which sauage beasts (as many authors haue recorded, and namely, *Hierodotus* & *Aristotle* the Proconne[sian, two writers of great fame] sturue as eagerly to keepe and hold those golden mines, as the Arimaspians to disfieste them thereof, and to get away the gold from them. About those, are other Scythians called Anthropophagi, where is a countrie named Abaramon, within a certain vaile of the mountain Imaus, wherein are found sauage & wild men, liuing and conuerſing vſually among the brut beasts, who haue their feet growing backward, & turned behind the calves of their legs, howbeit they run most swiftly. These kinde of men can endure to liue in no other aire nor in any climate else than their own, which is the reason that they cannot be drawne to come vnto other kings that border vpon them, nor could be brought vnto *Alexander* the great, as *Beton* hath reported, the marshall of that princes campe, & who also put downe his gists and iournies in writing. The former Anthropophagi or eaters of mans flesh, whom we haue placed about the North-pole, ten daies iourney by land about the river Borysthenes, vse to drink out of the skulls of mens heads, and to wear the scalpes haire & al, in stead of mandillions or stomachers before their breasts, according as *Isgonus* the Nicene witnesseth. The same writer affirmeth moreover, that in Albanie there be a sort of people borne with eies like owles, whereof the sight is fire red: who from their childhood are grey headed, and can see better by night than day. He reporteth also, that tenne daies iourney beyond Borysthenes, the Sauramates neuer eat but one meale of meat in three daies. *Crates* of Pergamus saith, That in Helleſpont about Parium there was a kind of men (whom he nameth Ophiogenes) that if one were stung with a serpent, with touching only, will ease the paine: and if they doe but lay their hands vpon the wound, are wont to draw forth all the venome out of the body. And *Varro* testifieth, that euen at this day there be some there who warish & cure the stinging of serpents with their spittle, but there are but few such, as he saith. *Agatharcides* writes, that in Affricke the Pſyllians (so called of king *Pſyllus*, from whose race they were descended, and whose sepulchre or tombe is at this day present to be seene in a part of the greater Syrtis) could do the like. These men had naturally that in their own bodies, which like a deadly bane and poyſon would kill all serpents: for the very aire & sent that breathed from them, was able to stupifie and strike them starke dead. And by this means they vsed to try the chastitie and honestie of their wines. For so soon as they were deliuered of children, their manner was to expose and present the silly babes new borne, vnto the most fell and cruell serpents they could find: for if they were not right, but gotten in adultery, the said serpents would not auoid & fly from them. This nation verily in general hath been defeated, & killed vp in manner all by the Nasamonos, who now inhabit those parts wherein they dwelt: howbeit a kind remains still of them, descended from those that made shift away and fled, or else were not present at the said bloody battell, but there are very few of them at this day left. The Marsians in Italy at this present continue with the like naturall vertue against serpents: whom being repured for to haue descended from ladie *Circes* son, the people in this regard do highly esteem, & are verily persuaded, that they haue in them the same faculty by kinde. And what great wonder is this, considering that all men carry about them that which is poyſon to serpents: for if it be true that is reported, they will no better abide the touching with mans spittle, than scalding water cast vpon them: but if it happen to light within their chawes, or mouth, especially if it come from a man that is fasting, it is present death. Beyond those Nasamonos, and their neighbours confining vpon them (the Machlyes) there be found ordinarily Hermaphrodites, called Androgyni, of a double nature, and resembling both sexes, male and female, who haue carnal knowledge one of another interchangeably by turns, as *Calliphanes* reports. *Aristotle* saith moreover, that on the right side of their breast they haue a little

the teat or nipple like a man, but on the left they haue a full pap of dug like a woman. In the same Affricke, both *Isgonus* and *Nymphodorus* doe auouch, there be certain houſes and families of foreracers, who, if they chance to bleſſe, praise, and speake good words, bewitch presently with all: inſomuch as theee therewith die, trees wither, and infants pine and winder away. *Isgonus* adds furthermore, That such like there be among the Triballians and Illyrians, who with their very eiesight can witche, yea, and kill those whom they look wily vpon any long time, especially if they be angered, and that their eies bewray their anger: and more subtile to this daunger be men growne, than children vnder foureteen yeares of age. This also is in them more notable and to be observed, that in either case they haue two lights or apples. Of this kind and property, as *Apollonides* mine author saith, there be certaine women in Scythia named Bithyæ. *Philarchus* witnesseth, That in Pontus also the whole race of the Thibians, and many others besides, haue the same quality, & doe the like: and known they are (saith he) by these markes. In one of their eies they haue two lights, in the other the print or resemblance of an horſe. He reports besides of these men, that they will neuer ſinke or drowne in the water, be they charged neuer ſomuch with weighty and heauy apparel. Not vnlike to these there are a people in Æthiopia called Pharmaces, whose sweat if it chance to touch a mans body, presently he falleth into a phtisick or consumption of the lungs. And *Cicero* a Roman writer here among vs testifieth, that generally all women that haue such double apples in their eies, haue a venomous sight, and doe hurt therewith. See how nature, hauing engrafted naturally in some men this vnkind appetite (like wild beasts) to feed commonly vpon the bowels and flesh of men, hath taken delight also & pleasure to giue them inbred poisons in their whole body, yea & venom in the very eies of some, that there should be no naughtineſſe in the world againe, but the same might be found in man. Not farre from Rome city, within the territory of the Falisci, there be some few houſes, & families called Hirpi, which at their ſolemne yearly sacrifice celebrated by them, in the honour of *Apollo* vpon the mount Soracte, walke vpon the pile of wood as it is on fire, in great liberty, and neuer a whit are burnt withall. For which cause it is ordained by an expresse arde or act of the Senat, that they should be priuiledged, and haue immunity of warfare and all other seruices whatſoeuer. Some men there be that haue certaine members and parts of their bodies naturally working strange and miraculous effects, and in some caſes medicinable. As for example, king *Pyrrhus*, whose great toe of his right foot was good for them that had big, ſwelled, or indurate ſpleenes, if he did but touch the parties diseased, with that toe. And they say moreover, that when the rest of his body was burnt (after the manner) in the funeral fire, that great toe the fire had no power to consume: so, that it was bestowed in a little caſe for the nones, and hung vp in the temple for a holy relique. But principally about all other countries, India and the whole tract of Æthiopia is full of these strange and miraculous things. And first & formost the beasts bred in India be very big, as it may appeare by their dogs, which for proportion are much greater than those in other parts. And trees grow there to that tallneſſe, that a man cannot shoot a shaft ouer them. The reason hereof is the goodneſſe and ſannetſe of the ground, the temperat constitution of the aire, and the abundance of water: which is the cause also that vnder one fig tree [beleeue it that liſt] there may certaine troups and squadrons of horſmen stand in couert, shaded with the boughes. And as for reeds, they be of such a length, that between every joint they will yeeld ſufficient to make boats able to receiue three men apiece, for to row therein at eaſe. There are to be seene many men there about five cubits tall: neuer are they known once to ſpit: troubled they are not with pain in the head, tooth-ach, or griefe of the eies; and ſeldome or neuer complaine they of any ſorance in other parts of the body, ſo hardy are they, and of ſo ſtrong a constitution thorough the moderate heat of the Sun. Ouér and besides among the Indians be certain Philoſophers, whom they call Gymnoſophiſts, who from the Sun riſing to the ſetting thereof are able to endure all the day long, looking full againſt the Sunne, without winking or once mouing their eies: & from morning to night can abide to ſtand ſometime vpon one leg, and ſometimes on the other in the ſand, as ſcalding hot as it is. Vpon a certaine mountaine named Milus, there be men whose feet grow the tother way backward, and of either foot they haue eight toes, as *Megalhenes* doth report. And in many other hills of that countrey, there is a kind of men with heads like dogs, clad all ouer with ſkins of wild beasts, who in lieu of ſpeech vse to bark: armed they are and well appointed with ſharp and trenchant nailes: they liue vpon the prey which they get by chaſing wild beasts, & fowling. *Ctesias* writes that

that there were discovered and knowne of them about 120000 in number. By whose report also, in a certaine country of India the women beare but once in their life, and their infants presently waxe grey so soone as they are borne into the world. Also, that there is a kind of people named Monocelli, that haue but one leg apeece, but they are most nimble, and hop wondrous swiftly. The same men are also called Sciopodes, for that in hottest season of the Summer, they ly along on their back, and defend themselves with their feet against the Suns heate: and these people as he saith are not farre from the Troglodites. Again, beyond these Westward, some there be without heads standing vpon their necks, who cary eies in their shoulders. Among the Westerne mountains of India the Satyres haunt, (the country wherein they be, is called the region of the Cartaduli) creatures of all other most swift in footmanhip: which one whiles run with all foure, other whiles vpon two feet only like men: but so light footed they are, that vnlesse they be very old and sick, they can neuer be taken. *Tauron* writeth, That the Choromandæ are a sauage and wild people: distinct voice and speech they haue none, but in stead thereof, they keep an horrible gnashing and hideous noise: rough they are and hairy all ouer their bodies, eies they haue red like the houlers, and toothed they be like dogs. *Eudoxus* saith, That in the Southern parts of India, the men kind haue feet a cubit long, but the women so short & smal, that thereupon they be called Struthopodes, i. Sparrow footed. *Megasthenes* is my Author, that among the Indian Nomades there is a kind of people, that in stead of noses haue only two smal holes, and after the manner of snakes they haue their legs & feet limmer, wherwith they crawl and creep, and named they are Syriatæ. In the vtmost marches of India, Eastward, about the source & head of the riuier Ganges, there is a nation called the Astomes, for that they haue no mouths: all hairy ouer the whole body, yet clothed with soft cotton and down that come from the leaues of trees: they liue only by the aire, and smelling to sweet odors, which they draw in at their nostrills. No meat nor drinke they take, only pleasant sauours from diuers and sundry roots, floures, and wild fruits growing in the woods they entertaine: and those they vse to cary about with them when they take any farre journey, because they would not misse their smelling. And yet if the sent be any thing strong and stinking, they are soone therewith ouercome, & dy withal. Higher in the country, and about these, even in the edge and skirts of the mountains, the Pygmæi Sythamæi are reported to be: called they are so, for that they are but a cubit * or three * shaftments (or spannes) high, that is to say, three times nine inches. The clime wherein they dwell is very wholsome, the aire healthy, and euer like to the temperature of the Spring: by reason that the mountains are on the North side of them, & beare off all cold blasts. And these pretty people *Homer* also hath reported to be much troubled & annoyed by cranes. The speech goeth, that in the Spring time they set out all of them in battell aray, mounted vpon the backe of rammes and goats, armed with bowes and arrowes, and so downe to the sea side they march, where they make foule worke among the egges & yong cranelings newly hatched, which they destroy without all pitty. Thus for three months this their journey and expedition continueth, and then they make an end of their valiant seruice: for otherwise if they should continue any longer, they were neuer able to withstand the new flights of this foule, grown to some strength and bignesse. As for their houses and cottages, made they are of clay or mud, fouls feathers, and birds egge shels. Howbeit, *Aristotle* writes, That these Pygmæans liue in hollow caues & holes vnder the ground. For all other matters he reports the same that all the rest. *Istogonus* saith, that certain Indians named Cyni, liue a hundred and fortie yeares. The like he thinketh of the Æthyopian Macrobij, and the Seres: also of them that dwell on the mount Atyos: and of these last rehearsed, the reason verily is rendred to be thus, because they feed of vipers flesh, & therefore is it that neither lice breed in their heads, nor other vermine in their cloths, for to hunt & annoy their bodies. *Onesicritus* affirmeth, That in those parts of India where there are no shadowes to be seene, the men are five cubits of stature, and two hand breadths ouer that: they liue 130 yeares, and neuer age for all that and seem old, but die then, as if they were in their middle and settled age. *Crates* of Pergamus nameth those Indians who liue about an hundred yeare, Gymnetes: but others there be, and those not a few, that call them Macrobij. *Ctesias* saith there is a race or kindred of the Indians named Pandore, inhabiting certaine vallies, who liue two hundred yeares: in their youthfull time the haire of their head is white, but as they grow to age, waxeth black. Contrariwise, others there be neer neighbours to the Macrobij, who exceed not fortie yeares, and their women beare but once in their life time. And this also is auouched by *Archides*,

Archides,

Archides, who affirmeth moreover, that all their feeding is vpon locusts, and that they are very quicke and swift of foot. *Clitarchus* and *Megasthenes* both name them Mandri, and thinke they haue 300 villages in their country. Moreover, that the women bring forth children at seven yeares of age, and wax old at forty. *Artemidorus* affirmeth, that in the Island Taprobana the people liue exceeding long without any malady or infirmite of the body. *Darius* maketh report, That certaine Indians ingender with beasts, of which generation are bred certaine monstrous mungrels halfe beasts and halfe men. Also, that the Calingian women of India conceiue with child at five yeares of age, and liue not about eight. In another tract of that country there be certaine men with long shagged tails, most swift and light of foot: and some againe that with their eares couer their whole body. The Orites are neighbours to the Indians, diuided onely from them by the riuier Arbis, who are acquainted with no other meate but fish, which they split and slice into pieces with their nailes, and roast them against the Sun, and then make bread thereof, as *Clitarchus* reporteth. *Crates* of Pergamus saith likewise, that the Troglodites about Ethyopia be swifter than horses: and that some Æthiopiens are about eight cubites high: and these are a kinde of Ethiopian Nomades, called Sybotæ, as he saith, dwelling along the riuier Astapus toward the North pole. As for the nation called Menifmini, they dwell from the Ocean sea twenty dayes journey, who liue of the milke of certain beasts that we call Cynocephales, hauing heads and snouts like dogs. And whole herds and flocks of the females they keepe and feed, killing the male of them all, saue onely to serue for maintenance of the breed. In the deserts of Africke ye shall meet oftentimes with Fairies, appearing in the shape of men and women, but they vanish soone away like fantastical delusions. See how Nature is disposed for the nones to deuise full wittily in this and such like pastimes to play with mankind, thereby not only to make her self merry, but to set vs a wondering at such strange miracles. And I assure you, thus dayly and hourly in a manner playeth she her part, that to recount euery one of her sports by themselves, no man is able with all his wit and memory. Let it suffice therefore to testifie and declare her power, that we haue set downe those prodigious and strange workes of hers shewed in whole nations: and then go forward to discourse of some particulars approved and knowne in man.

CHAP. III.

Of prodigious and monstrous births.

That women may bring forth three at one birth appears evidently by the example of the three twins *Horatij* and *Curiatij*. But to go about that number is reputed and commonly spoken to be monstrous, and to portend some mishap: but only in Egypt, where women are more than ordinary fruitful, by drinking of Nilus water, which is supposed to help generation. Of late yeares, and no longer since than in the later end of the reigne of *Augustus*, at Ostia there was a woman (a Commoners wife) deliuered at one birth of two boies & as many girls; but this was a most prodigious token, and portended no doubt the fauine that ensued soone after. In Peloponnesus there is found one woman that brought forth at foure births 30 Children, and the greater part of them all did well and liued. *Trogus* saith, that in Egypt it is an ordinarie thing for a woman to haue seuen at a birth. It falleth out moreover, that there come into the world children of both sexes, whom we call Hermophrodites. In old time they were knowne by the name of Androgyni, and reputed then for prodigious wonders, howeouer now men take delight and pleasure in them. *Pompey* the great, in his Theatre which hee adorned and beautified with singular ornaments and rare deuices of antique worke, as well for the admirable subiect and argument thereof, as the most curious and exquisite hand of cunning and skillfull artificers, among other images and pourtraicts there set vp, represented one *Enitiche* a Woman of Tralleis, who after she had in her life time borne thirty births, her corps was caried out by twenty of her children to the funerall fire to be burnt, according to the manner of that country. As for *Alcippe* she was deliuered of an Elephant, marie that was a monstrous and prodigious token, and foreshewed some heavy fortune that followed after. Also in the beginning of the Marrians war there was a bondwoman brought forth a Serpent. In sum, there be many misshapen monsters come that way into the world, of diuers and sundry formes: *Claudius Caesar* writeth, That in Theflie there was borne a monster called an Hippocentaure, that is, halfe

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a man

a man and halfe a horse, but it died the very same day. And verily after he came to weare the diadem, we our selues saw the like monster sent vnto him out of Egypt, embalmed and preferred in honey. Among many strange examples appearing vpon record in Chronicles, we read of a childe in Sagunt, the same year that it was forced and rased by *Anabal*, which so loone as it was come forth of the mothers wombe presently returned into it againe.

CHAP. IIII.

¶ Of the change of one Sex to another, and of Twins borne.

IT is no lie nor fable, that females may turne to be males: for we haue found it recorded, that in the yearly Chronicles called Annals, in the yere when *Publius Licinius Crassus*, and *C. Cassius Longinus* were Consuls, there was in Casinum a maid childe, vnder the very hand and tuition of her parents, without suspicion of being a changeling became a boy: and by an Ordinance of the Soothsayers called Aruspices, was confined to a certain desert Island, and thither conueyed, *Licinius Mutianus* reporteth, that he himselfe saw at Argos one named *Arescus*, who before time had to name *Arescusa*, and a married wife: but afterwards in processe of time came to haue a beard, and the generall parts testifying a man, and thereupon wedded a wife. Likewise (as he saith) he saw at Smyrna a boy changed into a girle. I my selfe am an eye witnesse, That in Affricke one *L. Cossicius* a citizen of Tiddrita, turned from a woman to be a man vpon the very marriage day, who liued at the time I wrote this booke. Moreover, it is obserued, that if women bring twins, it is great good hap if they all liue, but either the mother dieth in childbed, or one of the babes, if not both. But if it fortune that the twinnes be of both sexes, the one male, the other female, it is ten to one if they both escape. Moreover this is well knowne, that as women age sooner than men, and seeme old, so they grow to their maturitie more timely than men, and are apt from procreation before them. Last of all, when a woman goeth with childe, if it bee a man childe, it stirreth ofner in the wombe, and lieth commonly more to the right side: whereas the female mouth more seldom, and beareth to the left.

CHAP. V.

¶ The Generation of Man, the time of childe-birth from seuen moneths to eleuen, testified by many notable examples out of historie.

AN other creatures haue a set time limited by Nature, both of going with their yong, and also of bringing it forth, each one according to their kinde: Man only is borne all times of the yere, and there is no certaine time of his abode in the wombe after conception; for one cometh into the world at the seuen moneths end, another at the eighth; and so to the beginning of the ninth and tenth. But before the seuenth moneth there is no infant euer borne that liueth, And none are borne at seuen moneths end, ylesse they were conceived either in the very change of the moone, or within a day of it vnder or ouer. An ordinary thing it is in Egypt for women to go with yong eight moneths; and then to be deliuered. And euen in Italy also now adays children so borne liue and dowell: but this is against the common received opinion of all old writers. But there is no certainty to ground vpon in all these cases, for they alter diuers waies. Dame *Pellista* (the widow of *C. Herdianus*, wife afterwand to *Pomponius*, and last of all married to *Orfitus*, all right worshipfull citizens, and of most noble houses) had 4 children by her three husbands, to wit *Sempronius*, whom she bare at the seuenth moneth, *Sullius Rufus* at the eleuenth; and seuen moneths also she went with *Corbulo*, yet they liued all, and these two last came both to be Consuls. After all these sons, she bare a daughter, namely *Casonia* (wife to the Emperor *Caius Caligula*) at the eighth moneths end. They that are borne thus in this moneth haue much ado to liue, and are in great danger for forty dayes space: yea, and their mothers are very sickly, and subiect to fall into vntimely trauell all the fourth moneth and the eighth, and if they fall in labor and come before their time they die. *Masturius* writeth, that *L. Pappyrus*, the Pretor or Lord chief Iustice, when a second heire in remainder made claim, and put in plea for his inheritance of the goods, made an award, and gaue iudgement against him, in the behalfe of an Infant the right heire, borne after the decafe of his father; vpon this, That the mother came in and testified, how she was deliuered of that childe within thirteene moneths

A moneths after the death of the Testator: the reason was, because there is no definite time certain for women to go with childe.

CHAP. VI.

¶ Of Conceptions: and signes distynishing the sex in great bellied women before they are deliuered.

IF ten dayes after a woman hath had the company of a man shee feele an extraordinary ache in the head, and perceiue giddinesse in the brain as if all things went round; finde a dazling and mistinesse in the eyes, abhorring and loathing meat, and withall a turning and wambling in the stomacke; it is a signe that she is conceived, and beginneth to breed: if the goe with a boy better coloured will she be all the time, and deliuered with more ease, and by the 40 day she shall feele a kinde of motion and stirring in her wombe. But contrarie it falleth out in the breeding of a girle, she goeth more heauily with it, and findeth the burthen heauier, her legs and thighes about the share will swell a little. And ninetie dayes it will be before she absolutely perceiue any mouing of the infant. But be it male or female (three breeds, they put her to much paine and grievance when their haire beginneth to bud forth, and euer at the full of the Moone: and euen the very infants after they are borne are most amiss and farthest out of frame about that time. And verily great care must be had of a woman with child all the time she goeth therewith, both in her gate, and in euery thing else that can be named: for if women feed vpon ouer-fatt and powdered meat they will bring forth a child without nailes; and if they hold not their wind in their labor, longer it will be ere they be deliuered, and with more difficultie. Much yawning in the time of trauell is a deadly signe; like as to sneeze presently vpon conception threatneth abortion or a slip.

CHAP. VII.

¶ Of the conception and generation of Man.

I Am abashed much, and very sorry to thinke and consider what a poore and ticklish beginning man hath, the proudest creature of all others, when the smel only of the snuffe of a candle put out is the cause oft times that a woman falls into vntimely trauel. And yet see, these great tyrans, and such as delight only in carnage and bloudshed haue no better original. Thou then that presumest vpon thy bodily strength, thou that standest so much vpon Fortunes fauors, and hast thy hands full of her bountifull gifts, taking thy self not to be a foster-child and nurceling of hers, but a naturall son borne of her owne body: thou I say that art vpon euery good euermore, and settest thy minde vpon conquests and victories: thou that art vpon euery good successe and pleasant gale of prosperitie puffed vp with pride, and takest thy selfe for a god, neuer thinkest that thy life when it was hung vpon so single a thred, with so small a matter might haue miscarried. Nay more than that, euen at this day art thou in more danger than so, if thou chance to be but stung or bitten with the little tooth of a Serpent; or if but the verie kernell of a raisin go downe thy throat wrong, as it did with the poet *Anacreon*, which cost him his life. Or, as *Fabius* a Senator of Rome, and Lord chief Iustice besides, who in a draught of milke forsooke to swallow a small haire, which strangled him. Well then, thinke better of this point, for he verily that will euermore set before his eyes and remember the frailty of mans estate, shall liue in this world vprightly and in euen ballance, without inclining more to one side than vnto another.

CHAP. VIII.

¶ Of those that be called Agrippæ.

TO be borne with the feet forward is vnaturall and vnkinde: and such as come in that order into the world the Latines were wont to name *Agrippæ*, as if a man should say, born hardly and with much ado. And in this manner *M. Agrippa* (as they say) came forth of his mothers wombe, the only man almost known to haue brought any good fortune with him, and prospered in the world of all that euer were in that sort borne. And yet as happy as hee was,

and how well fouer he chieued in some respects, he was much pained with the gout, and passed all his youth and many a day after in bloody wars, and in danger of a thousand deaths. And having escaped all these harmfull perils, unfortunate he was in all his children, and especially in his two daughters the *Agrippina* both, who brought forth those wicked Imps so pernicious to the whole earth, namely *C. Caligula* and *Domitius Nero*, two Emperours, but two fiery flames to consume and waste all mankind. Moreouer, his infelicitie herein appeared, that he liued so short a time, dying as he did a strong and lusty man, in the 51 year of his age, tormented and vexed with the adulteries of his owne wife, oppressed with the heavy and intolerable seruitude that he was in vnder his wifes father. In which regards it seems he paid full deare for the preface of his vntoward birth and natiuitie. Moreouer, *Agrippina* hath left in writing, That her son *Nero* also, late Emperor, who all the time of his reign was a very enemy to all mankind, was borne with his feet forward. And in truth by the right order and course of Nature, a man is brought into the world with his head first, but is carried forth with his feet foremost.

CHAP. IX.

¶ Births cut out of the wombe.

BVt more fortunate are they a great deale whose birth costeth their mothers life, parting from them by means of incision: like as *Scipio Africanus* the former, who came into the world in that manner: and the first that euer was named *Caesar*, was so called for the like cause. And hereof comes the fore-name also of the *Caesars*. In like sort also was that *Manlius* borne who entred Carthage with an army.

CHAP. X.

¶ Who are Vopiscii.

THe Latines were wont to call him Vopiscus [or rather Opiscus] who being one of two twins, hapned to stay behinde in the wombe the full terme, when as the other miscarried by abortiue and vntimely birth. And in this case there chance right strange accidents, although they fall out very seldom.

CHAP. XI.

¶ Examples of many Infants at one birth.

Few creatures there be besides women, that seeke after the male, and can skill of their companie after they be once conceived with yong: one kind verily or two at the most there is knowne to conceiue double one vpon the other. We find in books written by Physicians, and in their records who haue studied such matters, and gathered obseruations, that there haue passed or bin cast away from a woman at one only slip, 12 distinct children: but when it falleth out that there is some pretty time betwixt two conceptions, both of them may carry their full time, and be borne with life, as appeared in *Hercules* and his brother *Iphiclus*; as also in that harlot who was deliuered of two infants, one like her owne husband, the other resembling the Adulterer: likewise in a Proconnesian bond-servant, who was in one day gotten with childe by her master, and also by his Bailie or Procurator, and being afterwards deliuered of two children, they bewrayed plainly who were their fathers. Moreouer, there was another who went her full time, euen nine moneths for one childe, but was deliuered of another at the five moneths end. Furthermore in another, who hauing dropped downe one childe at the end of seven moneths, by the end of the ninth came with two twinnes more.ouer and besides it is commonly seen, that children be not alwaies answerable to the parents in euery respect: for of perfect fathers and mothers who haue all their limmes, there are begotten children vnperfect and wanting some members: and contrariwise, parents there are maimed and defective in some part, who neuertheless beget children that are sound and entire, and with all that they should haue. It is seen also, that infants are at a default of those parts their parents misse: yea and they carry often times certaine marks, moles, blemishes, and skarres of their fathers and mothers,

As like as may be. Among the people called Dakes the children usually beare the marks imprinted in their armes, of them from whom they descend, euen to the fourth generation.

CHAP. XII.

¶ Examples of many that haue been very like and resembled one another.

IN the race and family of the *Lepidi* it is said there were three of them (not successiue one after another, but out of order after some intermission) who had euery one of them at their birth a little pannicle or thin skin growing ouer their eye. Some haue bin known to resemble their grandfathers, and of two twins one hath been like the father, the other the mother; but he that was borne a yere after hath bin so like his elder brother, as if he had bin one of the twins. Some women there be that bring all their children like to themselves; and others againe as like to their husbands: and some like neither the one nor the other. You shall haue Women bring all their daughters like to their fathers, and contrariwise their sounes like to themselves. The same is notable, and yet vndoubted true, of one *Nicæus* a famous Wrestler of Constantinople, hauing to his mother a woman begotten in adulterie by an *Ethiopian*, and yet with white skin nothing different from other women of that countrey, was himselfe black, and resembled his grandsire the *Ethiopian* aboue sayd. Certes, the cogitations and discourses of the minde make much for these similitudes and resemblances whereof we speake, and so likewise many other accidents and occurrent objects are thought to be very strong and effectuall therin, whether they come in sight, hearing, and calling to remembrance, or imaginations only conceived and deeply apprehended in the very act of generation, or the instant of conception. The wandring cogitation also and quick spirit either of father or mother, flying to and fro all on a sudden from one thing to another at the same time, is supposed to be one cause of this impression, that maketh either the forehead vniforme likeness, or confusion and varietie. And hereupon it cometh, and no maruell it is, that men are more vnlike one another, than other Creatures: for the nimble motions of the spirit, the quick thoughts, the agilitie of the minde, the varietie of discourse in our wits, imprinteth diuers formes, and many marks of sundry cogitations: whereas the imaginatiue facultie of other liuing creatures is immouable, & alwaies continueth in one: in all it is alike, and the same still in euery one, which causeth them alwaies to engender like to themselves, each one in their seuerall kindes. *Artenon* a mean man amongst the Commons, was so like in all points to *Antiochus* King of Syria, that *Laodicea* the Queen, after that *Antiochus* her husband was killed, serued her owne turne by the said *Artenon*, and made him play the part of *Antiochus*, vntill she had by his means, as in the Kings person, recommended whom she would, and made ouer the kingdom and crown in succession and reuerſion to whom she thought good. *Vibius* a poore commoner of Rome, and *Publicius* one newly of a bondslawe made a free-man, were both of them so like vnto *Pompey* the Great, that hardly the one could be discerned from the other, so liuely did they represent that good visage of his so full of honestie, so fully expressed they and resembled the singular maiestie of that countenance which appeared in *Pompeius* his forehead. The like cause it was that gaue his father also the syrnyme of *Menogenes*, his Cooke, albeit he was syrnamed already *Sirabo*, for his quint eyes: but hee would needs beare the name of a defect and infirmities euen in his bond-servant, for the loue he had vnto him by reason of his likeness. Sowa one of the *Scipio's* also syrnamed *Serapius* vpon the like occasion, after the name of one *Serapia*, who was but a base slawe of his, and no better than his swine heard, or dealer in buying and selling of swine. Another *Scipio* after him of the same house came to be syrnamed *Salutis*, because a certaine iester of that name was like vnto him. After the same manner one *Spinier*, a player of the second place or part, and *Pamphilus* another player of the third part, or in the third place, gaue their names to *Centulus* and *Metellus*, who both were Consuls together in one yere, for that they resembled them so truly. And certes mee thinkes this fell out very vntowardly, and was but a ridiculous pageant, and a very vnseemly shew vpon a stage, to see both Consuls liuely represented there at once in the persons of these two players. Contrariwise, *Rubrius* the stage player was syrnamed *Plancus*, because he was so like to *Plancus* the Orator. Again, *Barbuleius* and *Menogenes*, both players of Entreculdes, resembled *Curio* the father or the elder, and *Messala Censorius*, for all he had been Censor

that the one could not shift and anoid the synname of *Burbulcius*, and the other of *Monogenes*. G
There was in Sicily a certaine fisherman who resembled in all parts *Suria* the Pro-consull, not
only in visage and feature of the face, but also in mowing with his mouth when hee spake, in
drawing his tongue short, and in his buddle and thicke speech. *Casius Scaurus* that famous ora-
tor was reproched for being so like vnto *Mirmillo* a drouer or keeper of kine and oxen. *Toranius*
a merchant slave-seller, sold vnto *M. Antonius* (now one of the two great Triumvirs) two most
beautiful and sweet faced boyes, for twins, so like euere they one to the other, albeit the one was
borne in Asia, and the other beyond the Alps. But when *Antony* afterwards came to know the
same, and that this fraud and couenage was bewraied and detected by the language & speech
of the boyes, he fell into a furious fit of choler, and all to berated the foresaid *Toranius*. And
when among other challenges he charged him with the high price he made him pay (for they
cost him two hundred Sesterces, as for twins, when they were none such) the wily merchant be-
ing his craftmaster answered, That it was the cause why he held them so deare, and sold them
at so deare a rate: for (quoth he) it is no marvel at all that two brethren twins that lay both
together in one belly do resemble one the other; but that there should be any found borne as
these were in diuers countries, so like in all respects as they, he held it for a most rare and won-
derfull thing. This answer of his was deliuered in good time, and so fitly to the purpose, that
Antonie the great man, who neuer was well but when he outlawed citifens of Rome, and did
confiscat their goods, he I say that erewhile was all enraged and set vpon reuiling and reproch-
full termes, was not only appeased, but also contented so with his bargain, that he prised those
two boies as much as any thing else in all his wealth.

CHAP. XIII.

¶ The cause and manner of generation.

Some bodies there be by a secret of nature so disagreeing, that they are vnfit for generation
one with another. And yet as barren as they be so coupled together, fruitful they are e-
nough being ioyned with others. Such were *Augustus* the Emperor and his wife *Livia*. In
like manner some men there be as well as women, that can skill of getting and breeding none
but daughters: and others there be againe that are good at none but sonnes: and many times it
falleth out that folke haue sonnes and daughters both, but they by turnes, this yeare a son, the
next yeare a daughter, in order. So [*Cornelia*] the mother of the *Gracchi*, who for twelue child-
beds kept this course duly: and *Agrippina*, the wife of *Cesar Germanicus*, for nine, euere changing
from the male to the female. Some women are barren all their youth; and others again beare
but once in their whole life. Some neuer go their full time with their children; and such wo-
men, if peradventure by helpe of physicke or other good means, and choice keeping, they over-
come this infirmittie, bring daughters ordinarily and no other. The Emperor *Augustus* among
other singularities that he had by himselfe during his life, saw ere he died the nephew of his
niece, that is to say his progenie to the fourth degree of lineall descent: and that was *M. Scylla-
nus*, who hapned to be borne the same yeare that he departed out of this world. He hauing been
Consull, and afterward Lord Gouvernor of Asia, was poysoned by prince *Nero*, to the end that
he might thereby attaine to the empire. *Qu. Metellus Macedonicus* left behind him six children,
and by them eleuen nephewes: but daughters in law and sons in law, and of all such as called
him father, seuen. In the Chronicles of *Augustus Caesars* acts for his time, we finde vpon record,
that in his twelfth Consullship, when *L. Syllanus* was his companion and colleague in government,
vpon the eleuenth day of April, *C. Crispinus Helanus* a gentleman of Feslute, came with solemne
pompe into the Capitoll, attended vpon with his nine children, seuen sons and two daughters;
with 29 Nephewes the sonnes of his children, and 29 nephewes more, once remoued, who were
his sons nephewes, and twelue Nieces besides that were his childrens daughters, and with all
these solemnly sacrificed.

CHAP.

CHAP. XIII.

¶ Of the same matter more at large.

A Woman commonly is past childe-bearing after so yeares of her age. And for the most
part their monthly termes stay at forty. As for men, it is cleare and wel knowne, that king
Mastinuia when he was about 86 yeares old, begat a son whom he called *Methymathmar*; &
Cato Censorius that famous Censor begat another vpon the daughter of *Salonius* his vassal, when
he was past 80 yeares of age. And hereof it cometh, that the race which came of his other
children were surnamed *Luticini*, but the off-spring of this last sonne, *Salonini*, from whom *Cato*
Priscus (who slew himselfe at Vtica) is lineally descended. Morouer, it is not long since, that
dame *Cornelia* of the house and lineage of the *Scipio's*, bare vnto *Lu. Saurinnus* her husband (who
died whiles he was Prouost of the city of Rome) a son named *Volusius Saturninus*, and who after-
wards liued to be Consull, who was begotten when his father was 62 yeares old with the bet-
ter. To conclude, there haue beene among it meaner persons very many knowne to haue gotten
children after fourescore and fife.

CHAP. XV.

¶ Of Womens monethly sicknesses.

Of all liuing creatures a woman hath a flux of bloud euery moneth: and hereupon it is, that
in her wombe onely there are found a false conception called *Mola*, i. a Moone-calf; that
is to say, a lump of flesh without shape, without life, and so hard without, that vneth a knife
will enter and pierce it either with edge or point. Howbeit a kinde of mowing it hath, and stait
eth the course of her moneths: and sometime after the manner of a childe indeed, it costeth the
woman her life: otherwhiles it waxeth in her belly as the groweth, and ageth with her; now and
then also it slippeth and falleth from her with a laske and loosenesse of the guts. Such a thing
breeds likewise in the bellies of men, vpon the hardnesse of liuer or spleen, which the Physicians
call *Scurruis*, i. an hard wedge and cake vnder their short-ribs. And such an one had *Oppius Cato* a
nobleman of Rome, late Pretour. But to come againe to women, hardly can there be found a
thing more monstrous than is that flux & course of theirs. For if during the time of their sick-
nes, they happen to approach or go ouer a vessel of wine, be it neuer so new, it wil presently foure
if they touch any standing corne in the field, it wil wither and come to no good. Also let them
in this estate handle graffes, they will die vpon it: the herbes and young buds in a garden if they
do but passe by, will catch a blast, and burne away to nothing. Sit they vpon or vnder trees
whiles they are in this case, the fruit which hangeth vpon them will fall. Do they but fee them-
selues in a looking glasse, the cleare brightnesse thereof turneth into dimnesse, vpon their very
fight. Look they vpon a sword, knife, or any edged tooles, be it neuer so bright, it waxeth dusky,
if they doth also the liuely hue of yvorie. The very bees in the hie due die. Yron & Steele present-
ly take rust, yea, and brasse likewise, with a filthy, strong, and poysoned stink, if they lay but hand
thereupon. If dogs chance to taste of womens fleures, they run mad therewith; and if they bite
any thing afterwards, they leaue behinde them such a venome, that the wounds are incurable:
nay the very clammy slime Bitumen, which at certaine times of the yere floeth and swimmeth
vpon the lake of Sodoni, called *Asphaltes* in Iury, which otherwise of the owne nature is plie-
able enough, soft and gentle, and ready to follow what way a man would haue it, cannot be par-
ted and diuided asunder (for by reason of the viscositie, it cleaueth and sticketh like glue, and
hangeth all together, pluck as much as a man will at it) but only by a thred that is stained with
this venomous bloud: euen the silly Pismires (the least creatures of all others) hath a percei-
uance & fence of this poyson, as they say, for they cast aside & will no more come to that corn,
which they haue found by tast to be infected with this poyson. This malady, so venomous and
hurtfull as it is, followeth a woman still euery 30 daies, and at 3 moneths end, if it stay so long, it
cometh in great abundance. And as there be some women that haue it oftner than once a
month, so there are others again that neuer fee ought of it. But such lightly are barren, and ne-
ver bring children. For in very deed, it is the materiall substance of generation: and the mans
seed seereth in stead of a runnet to gather it round into a curd: which afterwards in proceesse of
time

time quickneth and grows to the form of a body; which is the cause that if women with childe have this flux of the monthes, their children are not long liued, or else they proue feeble, sickly and full of filthie humours, as *Nigidius* writeth.

CHAP. XVI.

¶ In like manner of births : and infants in the mothers wombe.

THe same *Nigidius* is of opinion, that a womans milke, nource to her owne child & giuing it sucke, will not corrupt and be naught for the babe, if she conceiue againe by the same man to whom she brought the former childe. Also it is held, that in the beginning & end of the foresaid menstrull fleures, a woman is very apt to conceiue. Moreover, it is commonly receiued for an infallible argument in women, that they are fruitfull and with childe, if when they annoint their eies with their owne spittle as with a medicine, the same appeare infected and to change the colour thereupon. Furthermore, doubtlesse it is, that childr: n bred their fore teeth in the seventh month after they are borne, and first those in the vpper chaw, for the most part: likewise that they shed the same teeth about the seventh yere of their age, & others come vp new in the place. Certaine it is also, that some children are borne into the world with teeth, as *M. Curius*, who thereupon was surnamed *Dentatus*, and *Cn. Papius Carbo*, both of them very great men and right honourable personages. In women the same was counted but an vnlucky thing, & prelaged some misfortune, especially in the daies of the KK. regiment in Rome: for when *Valeria* was borne toothed, the wizards and Soothsayers being consulted thereabout, answered out of their learning by way of Prophecie, That look into what citie she was caried to nource, (he should be the cause of the ruine and subuerfion thereof, whereupon had away three was and conueied to Sueffa Pometia, a city at that time most flourishing in wealth and riches: and it proved most true in the end, for that city was vtterly destroyed. *Cornelia* the mother of the *Gracchi* is sufficient to proue by her own example, that women are neuer borne for good whole genitall parts for procreation are growne together, and yeeld no entrance. Some children are borne with an entire whole bone that taketh vp all the gum, instead of a row of distinct teeth, as a son of *Prusias* king of the Bythinians, who had such a bone in his vpper chaw. This is to be obserued about teeth, that they onely check the fire and burn not to ashes with other parts of the body: and yet as inuincible as they are and able to resist the violence of the flame, they rot and become hollow with a little catarrhe or waterish rheume that droppeth and distilleth vpon them: white they may be made, with certaine mixtures and medicines called *Dentifices*. Some weare their teeth to the very stumps onely with vse of chawing; others againe loofe them first out of their head; they serue not onely to grind our meat for our daily food and nourishment, but necessary also they be for the framing of our speech. The fore-teeth stand in good stead to rule and moderate the voice by a certaine consent and tuneable accord, answering as it were to the stroke of the tongue: and according to that row and ranke of theirs wherein they are set, as they are broader or narrower, greater or smaller, they yeeld a distinction and varietie in our words, cutting and hewing them thicke and short, framing them pleasant, plaine, and ready, drawing them out at length, or smuddering and drowning them in the end: but when they bee once faine out of the head, man is bereaued of all means of good vtterance and explanation of his words. Moreover, there are some prelagages of good or bad fortune, gathered by the teeth: men ordinarily haue giuen them by nature 32 in all, except the nation of the *Turduli*. They that haue about this number, may make account (as it is thought) to liue the longer. As for women, they haue not so many: they that haue on the right side in the vpper iaw two eie-teeth, which the Latines call Dogs-teeth, may promise themselves the flattering fauors of Fortune, as it is well seene in *Agrippina* the mother of *Domitius Nero*: but contrariwise, the same teeth double in the left side aboue, is a signe of euill lucke. It is not the custome in any countrey to burne in a funeral fire the dead corps of any infant before his teeth be come vp; but hereof will we write more at large in the Anatomic of man, when wee shall discourse purposely of curie member and part of the body. *Zoroastres* was the onely man that euer wee could heare of, who laughed the same day that he was borne: his brain did so euidently pant and beat, that it would beare vp their hands that laid them vpon his head: a most certain prelage & fore-token of that great learning that afterward, he attained vnto. This also is held for certain and resolued vpon that a man at three yeres of age, is come to one moitie of his growth and height. As also this

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- A** is obserued for an vndoubted truth, that generally all men come short of the full stature in time past, and decrease stil euery day more than other: and seldome shall you see the son taller than his father; for the ardent heat of the elementarie fire (whereunto the world enclinet already now toward the later end, as sometimes it flood much vpon the waterie element) deuoureth and consumeth that plentiful humor and moisture of naturall feed, that engendreth all things: and this appeareth more euidently by these examples following. In *Crete*, it chanced that an hill claued asunder in an earth-quake, and in the chink thereof was found a body standing, 46 cubits high; some say it was the body of *Orion*; others, of *Otus*. We find in chronicles & records of good credit, that the body of *Orestes* being taken vp, by direction from the Oracles, was seven cubits long. And verily that great and famous poet *Homer*, who liued almost 1000 yeres ago, complained and gaue not ouer, That mens bodies were lesse of stature euen then, than in old time.
- B** The *Annales* set not downe the stature and bignesse of *Nevius Pollio*; but that he was a mighty gyant, appeareth by this that is written of him, namely, that it was taken for a wonderful strange thing, that in a great rout & presse of people that came running together vpon him, he had like to haue bin killed. The tallest man that hath bin seen in our age, was one named *Gabbara*, who in the daies of prince *Claudius* late Emperor, was brought out of Arabia, a nine foot high was hee, and as many inches. There were in the time of *Augustus Caesar* 2 others, named * *Pusio* and *Secundilla*, higher than *Gabbara* by halfe a foot, whose bodies were preferred and kept for a wonder in a charnell house or sepulchre within the gardens of the *Salustians*. Whiles the same *Augustus* fate as president, his niece *Iulia* had a little dwarfish fellow not about 2 foot and a hand breadth high, called *Conopas*, whom she set great store by and made much of: as also another the dwarfe named *Andromeda*, who sometime had been the slave of *Iulia* the princeesse, and by her made free.
- C** *M. Varro* reporteth, that *Manius Maximus*, and *M. Tullius*, were but two cubits high, & yet they gentlemen and knights of Rome: and in truth we our selues haue seen their bodies how they lie embalmed and chested, which testifieth no lesse. It is well knowne that there be some that naturally are neuer but a foot and a halfe high; others againe somewhat longer, and to this height they came in three yeres, which is the full course of their age, and then they die. Wee reade moreover in the *Chronicles*, that in *Salamis* one *Euthimenes* had a son, who in three yeres grew to be three cubits high, but he was in his gate slow and heauy, and in his wit as dull and blockish; howbeit in his time undergrowne he was, and his voice changed to be great, and at three
- D** yeres end died suddenly of a generall crampe or contraction of all the parts of his body. It is not long since I saw my selfe the like in all respects (sauiug that undergoing afore said) in a son of one *Cornelius Tacitus*, a Roman knight, and a procurator or general receiuer and Treasurer for the State in *Gaule Belgique*, such the Greeks call *Βασίλειος*, *Edtrapelos*; wee in Latine haue no name for them.

* Ten foot and an halfe.

* Such an one as little *Jobyn*, for so the nick-name fig. nieth.

CHAP. XVII.

¶ Certaine notable obseruations in bodies of men and women.

WE see tried by experience, that take measure of a man from the sole of the foot vp to the crowne of the head, so far it is between the ends of his two middle and longest fingers, when he stretcheth out his armes and hands to the full. As also, that some men and women be stronger of the right side than of the left: others againe that be as strong of one as the other; and there be, that are altogether left handed, and best with that hand; but that is seldome or neuer seene in women. Moreover, men weigh heauier than women; and in euerie kind of creature, dead bodies be more heauy than the quicke: and the same parties sleeping weigh more than waking. Finally, obserued it is, that the dead corps of a man floteth on the water with the face vpward; but contrariwise women swim groluing, as if Nature had provided to saue their honesty and couer their shame, euen when they are dead.

CHAP. XVIII.

¶ Examples of diners extraordinary cases in mans body.

WE haue heard, that some mens bones are folliid and massie, and so do liue without any marrow in them: you may know them by these signes, they neuer feelee thirst, nor put forth any sweat; and yet we know that a man may conquer and master his thirst if hee

list:

lift: for so a gentleman of Rome one *Iulius Vitor*, descended from the race of the Vocontians our allies; being false into a kind of droppe between the skin and the flesh during his minority and nonage, and forbidden by the Physicians to drink; so accustomed himselfe to obserue their direction, that naturally he could abide it in so much, that all his old age euen to his dying day he forbore his drink. Others also haue bin able to command and ouer-rule their nature in many cases, and breake themselves of diuers things.

CHAP. XIX.

¶ Strange natures and properties of diuers persons.

It is said, that *Craesus* (grandfather to that *Craesus* who was slaine in Parthia) was neuer known to laugh all his life time, and thereupon was called *Aglasmus*; and contrariwise, many haue bin found that neuer wept. Also that sage and renowned wise man *Socrates*, was seene alwaies to carry one and the selfe same countenance, neuer more merry and cheerefull nor more solemn and vnquiet, at one time than at another. But this obstinate constancy and firme carriage of the mind, turneth now and then in the end into a certain rigour and austerity of nature, so hard and inflexible that it cannot be ruled, and in very truth despoileth men of all affections; and such are called of the Greekes, *Apathes*, who had the experience of many such: and (that which is a marvellous matter) those especially that were the great pillars of philosophy and deep learned Clerks, namely *Diogenes* the Cinicke; *Pyrro*, *Heraclitus* and *Timo*; and as for him he was so far gone in his humor, that he seemed professedly to hate all mankind. But these were examples of a corrupt, peruerse, & froward nature. As for other things, there be sundry notable obseruations in many; as in *Antonia* the wife of *Drusus*, who as it was well knowne, neuer spit in *Pomponius* the poet, one that had sometimes bin Consul, who neuer belched. But as for such as naturally haue their bones not hollow, but whole and solid, they be very rare and seldom firme, and called they are in Latine *Cornici*, hard as home.

CHAP. XX.

¶ Of bodily strength and swiftnesse.

Varro in his treatise of prodigious and extraordinary strength, maketh report of one *Tritannus*, a man that of body was but little and lean withall, howbeit of incomparable strength, much renowned in the fence schoole, and namely, in handling the Samnites weapons, wearing their manner of armor, and performing their feats and masteries of great name. He maketh mention also of a sonne of his, a souldier, that serued vnder *Pompeius* the Great, who had all ouer his body, yea and throughout his armes and hands, some sinewes running straight out in length, others crossing ouerthwart latise-wise; and he saith moreover of him, that when an enemy out of the campe gaue him defiance and challenged him to a combat, he would neither put on defensive harness, ne yet arme his right hand with offensive weapon; but with naked hand made meanes to foile and ouercome him, and in the end when hee had caught hold of him, brought him away perforce into his own camp with one finger. *Iunius Valens* a captaine, pensioner or centurion of the gard-souldiers about *Augustus Caesar*, was wont alone to beare vp a charriot laden with certain hog heads or a butt of wine, vntill it was discharged thereof, & the wine drawne out: also his manner was with one hand to stay a coach against all the force of the horses straining and straining to the contrary; and to perform other wonderfull masteries, which are to be seen engrauen vpon his tombe, and therefore (qd. *Varro*) being called *Hercules Rusticellus*, he tooke vp his mule vpon his back and carried him away. *Fufius Salinius* hauing two hundred pound weights at his feet, and as many in his hands, and twice as much vpon his shoulders, went withall vp a paire of staires or a ladder. My selfe haue seene one named *Ashanatus*, do wonderfull strange matters in the open skew and face of the world, namely, to walke his stations vpon the stage with a cuirace of lead weighing 500 pound, booted besides with a pair of buskins or greiues about his legges that came to as much in weight. As for *Milo* the great wrestler of Crotone, when he stood firm vpon his feet, there was not a man could make him stir one foot; if he held a pomegranat fast within his hand, no man was able to fretch a finger of his and force it out at length. It was counted a great matter, that *Philippides* ran 1140 stadia, to

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A wit, from Athens to Lacedæmon in two daies, vntill *Lanista* a courtier of Lacedæmon, and *Philonides* footman to *Alexander* the great, ran between Sicyone and Olis in one day, 1200 stadia. But now verily at this day we see some in the grand cirque, able to indure in one day the running of 160 miles. And but a while agoe we are not ignorant, that when *Fonitus* & *Pispanus* were Consuls, a yong boy but 9 yeres old, between noon and euening ran 75 miles. And verily a man may wonder the more at this matter, and come to the full conceit thereof, if he do but consider, that it was counted an exceeding great iourney that *Tiberius Nero* made with three chariots (shifting from one to the other fresh) in a day and a night, riding post haste vnto his brother *Drusus* then lying sicke in Germany, and all that was but 200 miles.

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CHAP. XXI.

¶ Examples of good Eye-sight.

WE find in histories as incredible examples as any be, as touching quicknesse of Eye-sight. *Cicero* hath recorded, that the whole Poeme of *Homer* called *Ilias*, was written in a piece of parchment, which was able to be couched within a nut shel. The same writer maketh mention of one that could see and discern out-right 135 miles. And *M. Varro* nameth the man, and saith he was called *Strabo*, who affirmeth thus much moreouer of him, that during the Carthaginian war he was wont to stand and watch vpon *Lilybæum*, a cape in Sicily, to discover the enemies fleet looting out of the haue of Carthage, and was able to tel the very just number of the ships. *Calliocrates* vied to make Pismires and other such like little creatures, out of yvorie so artificially, that other men could not discern the parts of their body one from another. There was one *Myrmecides*, excellent in that kind of workmanship: who of the same matter wrought a chariot with foure wheelles and as many feedes, in so little roome, that a silly flie might couer all with her wings. Also he made a ship with all the tackling to it, no bigger than a little bee might hide it with her wings.

CHAP. XXII.

¶ Of Hearing.

AS for hearing, there is one example wonderfull. For the bruit of that battell, whereupon *Sybaris* was forced & sacked, was heard the very same day as far as *Olympia* in Greece. As touching the news of the Cimbrians defeate, as also the report and tidings of the victorie ouer the Persians, made by the Roman Castores, the same day that it was achieved, were held for diuine reuelations rather than humane reports, and the knowledge thereof came more by way of vision than otherwise.

CHAP. XXIII.

¶ Examples of Patience.

Many are the calamities of this life, incident to mankind, which haue afforded infinite trials of mens patience, in suffering paines in their body. Among others, for women, the example of *Lena* the courtisan, is most rare and singular, who for all the dolorous tortures that could be deuised, would neuer bewray *Harmodius* and *Aristogiton*, who slew the tyrannous king. And for men, *Anaxarchus* did the like, who being for such a cause examined vpon the racke, in the midst of his torments bit off his own tongue with his teeth, the only means whereby he might haply reticale and disclose the matter in question, and spit it in the face of the tyrant that put him to his torture.

CHAP. XXIV.

¶ Examples of Memorie.

AS touching memorie, the greatest gift of Nature, and most necessary of all others for this life, hard it is to iudge and say who of all others deserved the chiefe honor therein: considering how many men haue excelled, and woon much glory in that behalfe. King *Cyrus* was

was able to call every souldier that he had through his whole army by his owne name. *L. Scipio* could do the like by all the citizens of Rome. Semblably, *Cineas*, Embassador of king *Pyrrhus*, the very next day that he came to Rome, both knew and also saluted by name all the Senate, & the whole degrees of Gentlemen and Caualerie in the citie. *Mithridates* the king, reigned ouer two and twentie nations of diuers languages, and in so many tongues gaue lawes and ministred justice vnto them, without truchman: and when he was to make speech vnto them in publicke assembly respectfully to euery nation, he did performe it in their own tongue without interpreter. One *Charmides* or *Charmades*, a Grecian, was of so lingual a memory, that he was able to deliver, by heart the contents word for word of all the books that a man would call for out of any librarie, as if he read the same presently within book. At length the practise hereof was reduced into an art of Memory deuised and inuented first by *Simonides Melicus*, and afterwards brought to perfection and consummate by *Meirodorus Sepsius*, by which a man might learne to rehearse againe the fame words of any discourse whatsoeuer after once hearing: and yet there is not a thing in man so fraile and brittle againe as it, whether it be occasioned by discafe, by casual injuries or occurrences, or by feare, through which it faileth sometime in part, and otherwhiles decalieth generally, and is clean lost. One with the stroke of a stone, fell presently to forget his letters onely, and could read no more; otherwise his memorie serued him well enough. Another with a fall from the roofof a very high house, lost the remembrance of his owne mother, his next kinsfolks, friends, and neighbors. Another in a sicknesse of his, forgot his own seruants about him; and *Messala Corvinus* the great Orator, vpon the like occasion, forgot his own proper name. So fickle and slipperie is mans memorie: that oftentimes it aliaeth and goeth about to seeke it selfe, euen while a mans body is otherwise quiet and in health. But let sleep creepe at any time vpon vs, it seemeth to be vanquished, so as our poore spirit wandreth vp and downe to seeke where it is, and to recouer it againe.

CHAP. XXV.

¶ The praise of C. Iulius Caesar.

FOR vigor and quicknesse of spirit, I take it, that *C. Caesar* Dictatour, went beyond all men besides. I speake not now of his vertue and constancie, neither of his high reach and deep wit, whereby he apprehended the knowledge of all things vnder the cope of heauen, but of that agilitie of minde, that prompt and ready conceit of his, as nimble and adriue as the verie fire. I haue heard it reported of him, that he was wont to write, to reade, to indite letters, and withall to giue audience to suiters & heare their causes all at one instant. And being employed, as you know he was, in so great and important affairs, he ordinarily indited letters to foure secretaries or clerkes at once: and when he was free from other greater businesse, he would otherwise finde feuen of them work at one time. The same man in his daies fought 50 set battels with banners displaid against his enemies: in which point, he alone out-went *M. Marcellus*, who was seene 40 times faue one in the field. Besides the carnage of citizens that hee made in the ciuill wars when he obtained victory, he put to the sword 1192000 of his enemies, in one battell or other. And certes for mine owne part, I hold this for no speciall glory and commendation of his, considering the great iniurie done to mankind by this effusion of blood, which in some part he hath confessed himselfe, in that he hath forborne to set downe the ouerthrowes & blood-shed of his aduersaries (few fellow citizens) during the ciuill wars. Yet *Pompey* the great deserves honour more iustly for scouring the seas, and taking from the rousers 846 saile of ships. But to return againe to *Caesar*, quiet and aboue the qualities of worth before rehearsed, an especiall property of his owne he had, for clemency and mercy, wherein he so far forth surmounted all other men, that hee repented thereof in the end. As for his magnanimity, it was incomparable, and he left such a president behind him, as I forbid all men to match or second it. For to speake of his sumptuosities, of his largesses, of the magnificent shewes exhibited to the people, the exceeding cost & charges therein bestowed, with all the stately furniture thereto belonging, were a point of him that fauored such lauish expence and superfluities. But herein appeared his true hautinesse of mind indeed, and that vnmatchable spirit of his, that when vpon the battell at *Pharsalia*, as well the cofers & caskets with letters & other writings of *Pompey*, as also those of *Scipio's* before *Thapsus*, came into his hands, he was most true to them, and burnt all without reading one scrip or scrol.

CHAP.

CHAP. XXVI.

¶ The commendation of Pompey the great.

AS concerning all the titles and victorious triumphs of *Pompey* the great, wherein hee was equall in renowne and glory, not onely to the acts of *Alexander* the great, but also of *Hercules* in a manner, and god *Bacchus*: if I should make mention thereof in this place, it would redound not to the honour onely of that one man, but also to the grandeur and Maiestie of the Roman empire. In the first place then, after he had recovered Sicily, and reduced it vnder obedience (where his first rising was, and where hee began to shew himselfe in the quarrell of the Common weale, and to side with *Sylla*) hauing also conquered and subdued Africke, and raunged it vnder the obedience of Rome, where hee acquired the surname of *Magnum*, by reason of the great booty and pillage which hee brought from thence, being no higher of birth and calling, than a Roman gentleman or man of armes, entred with triumphant chariot into Rome: a thing that was neuer seene before in a man of that place and qualitie. Immediately after this, he made a voiage into the West, and hauing brought vnder obedience of the Romans 876 great townes, which hee forced by assault betweene the Alpes and the marches of Spaine, he erected trophies and triumphant columns vpon the mountain *Pyrenæus*, with the title and inscription of these victorious exploits, and neuer made one word of his victorie ouer *Sertorius*, so braue a mind hee carried with him. And after the ciuill troubles and broiles appeased & quenched (which drew after them all forreine wars) hee triumphed againe the second time, being as yet but a knight of Rome: so oftentimes a generall of command & conduct, before hee euer serued as soldier in the field. These famous deeds achieued, sent out hee was in another expedition, to scoure & cleere all the seas, and so forward into the East parts. From whence hee returned with more titles still of honor to his country, after the manner of those that winne victories at the solemne festiuall * Games; for as the victors vse not themselves to accept the chaplets and guirlands in their own names, but to be crowned therewith in the behalf of their natie countries: euen so, *Pompeius*, in that temple which hee caused to be built of the bootie and pillage woon from the enemies, and dedicated to * *Minerua*, entituled the citie with the whole honour, and attributed all to them in an inscription or table engrauen in this manner: *Pompeius the Great, Lord Generall, hauing finished the warres which continued thirtie yeares, during which hee had discomfited, put to flight, slaine, or receined to mercie vpon submission 2183000 men: sunk or taken 846 saile, woon and brought to his deuotion, of cities, townes and castles, to the number of 1538; subdued and put vnder subiection all lands and Nations betwene the lake *Mæotis* and the red sea, hath dedicated of right and good desert this temple to *Minerua*. This is the briefe and summario of his seruice in the East. As for the triumph, wherein hee rode the third day before the Calends of October, in the yeare wherein *M. Metellus* and *M. Pison* were Consuls, the tenure and title ran in this form: Whereas *Cn. Pompeius* hath cleared all the sea coasts from Pyrats and rousers, and thereby recouered vnto the people of Rome the lordship and soueraignetie of the seas; and withall subdued Pontus, Armenia, Paphlagonia, Cappadocia, Cilicia, Syria, the Scythians, Iudæa, and the Albanois: the Island Creta, and the Bastarnians, hath triumphed ouer them all, as also for the vanquishing of the 2 kings *Mithridates* and *Tigranes*. But the greatest glorie of all glories in him was this (as himselfe deliuered openly in a full assembly, at what time as hee discoursed of his owne exploits) That whereas Asia when hee receiued it, was the utmost frontier prouince and limit of the Roman Empire, hee left the same in the very heart & mids thereof, and so deliuered it vp to his country. Now if a man would let *Caesar* on the other side against him, & likewise rehearse his noble acts, who indeed of the two seemed greater in the sight of the world, hee had need verily to fetch a circuit about the world, and comprehend the whole globe thereof, which were an infinit piece of work, and in all reason impossible.*

CHAP. XXVII.

¶ The praise of Cato, the first of that name.

IN sundry other kindes of vertues many men haue diuersly excelled. But *Cato*, the first of the *Porcian* house, was thought to be the only person who was able to perform three things in the highest degree that are most commendable in a man. For first and forme he was a singular good

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Olympia Nici
mæa, Pythis,
Isthmia.

* Or Victoria.

Caracade, according to Cicero and Quintilian.

good Oratour: seeondly, a most braue capitaine and renowned commander in the field: and last of all, a right worthy Senatour and approued counsellor. And yet in my conceit, all these excellent parts seeme to haue shined more bright (although he came after the other) in *Scipio Aemilianus*. To say nothing of this blessed gift besides, that he was not hated and spighted of so many men, as *Cato* was. But if you will seeke for one especiall thing in *Cato* by himselfe, this is reported of him, That he was judicially called to his answer 44 times, and neuer was there man accused oftner than he, yet went he euer cleare away and was acquit.

CHAP. XXVIII.

¶ Of Valour and Fortitude.

AN endlesse peece of worke it were to know and set downe who bare the prize for valiancy, & namely if we admit the fabulous tales of poets. As for the poet *Ennius*, he had in greatest admiration, *T. Caelius Tencer*, and especially his brother: and in regard of thole two, he compiled the sixt booke of his Annales to the rest. But *L. Sicius Dentatus*, a Tribune of the Commons, not long after the banishment of the kings, when *Sp. Tarpeius* and *A. Asterius* were Consuls, by most voices surpasses in this kind, if it be true that a number of men report of him: namely, that he serued in 120 foughten fields: 8 times maintained combat with his enemy, giuing defiance, and euermore got the vpper hand: carrying before him the glorious markes of 45 skarres receiued by wounds, and neuer a one in the backe parts of his body. Moreouer, he woon the spoile of 34 feuerall enemies: and had giuen him of his captiues, for his prowesse and good seruice, 18 headlesse speares, 25 caparisons and furnitures of great horses, 83 chains, 60 bracelets for to adorne his arms: 26 crowns, or triumphant chaplets, whereof 14 were ciuick, for rescuing of Roman citizens in jeopardy of death, 8 of beaten gold, 3 other murraine, for mounting first ouer the enemies wall: and last of all, one obidional, for enforcing the enemy to leaue and breake vp his siege and depart: also with a stipend or pension. see out of the Exchequer & chamber of the city, and lastly, the prise or ransom of ten prisoners, with 20 oxen besides to make vp the reward: and in this glorious pompe and shew he followed nine captain Generals going before him, who by his means triumphed all. Ouer and besides (which I suppose was the worthiest act that euer he did) he accused in open court before the body of the people, one commander and great capitaine, named *T. Romulus* (notwithstanding he had bin a Consul) and conuicted him for his ill management and conduct of the wars. As for *Manlius Capitolinus*, he was as many honourable testimonies of valour, but that he lost them all againe, with that vnhappy end of his life that he made. Before he was full 17 yerres of age, hee had gained already two complete spoiles of his enemies. He was the first Roman knight or man of armes, that was honored with a mural crowne of gold for scaling ouer the wall in an assault: with six ciuicke chaplets for sauing the life of citizens six times out of the enemies hands. Moreouer, he receiued 37 gifts of the people for his good seruice, and carried the skars in the fore-part of his body of 33 wounds. He refused *P. Seruilius*, Generall of the Roman Cauallerie, & in the rescue was himselfe wounded for his labor, in shoulder and thigh both. About all other hardy acts, he alone guarded and defended the Capitoll, and thereby the whole State of Rome, against the Gauls a braue piece of seruice, but that he married all againe in aspiring to be king ouer the same. In these aboue-heard examples, certes vertue hath carried a great stroke, but yet fortune hath been the mightier, and preuailed more in the end. And in my iudgement verily, none may right & iustly prefer any man before *M. Sergius*, albeit *Catiline* his nephewes son discredited that name of his, & derogated much from the honor of his house. The second time that he went into the field and serued, his had was to lose his right hand: and in two other seruices hee was wounded no fewer than 23 times: by means whereof hee had little vse of either hand, and his feet stood him in no great stead. Howbeit, thus maimed and disabled as hee was for to be a souldiour, hee went many a time after to the warres, attended with one slaue onely, and performed his deuoiere. **M** Twise was he taken prisoner by *Annibal* (for he deale not I may tell you with ordinary enemies) and twice brake he prison and made escape, notwithstanding, that for twentie moneths space he was euery day ordinarily kept bound with chaines and fetters. Four times fought hee with his left hand onely, vntill two horses one after another, were killed vnder him. Then hee made himselfe a right hand of yron, which he fastened to his arme, and fighting with the help of it, he raised

A raised the siege from before Cremona, and saued Placentia. In France he forced 12 fortified camps of the enemies. All which exploits appeare vpon record in that Oration of his which he made in his Pretorship, at what time as his Collegues and companions in gouernement would not permit him to be at the solemne sacrifices, because he had a maim, and wanted a lim. But what heaps of crowns and chaplets, thinke you, would he haue gathered together, if he had bin committed and matched with any other enemies but *Annibal*? Certes, to know a man of worth indeed, much materiall it is to consider in what time hee liueth, and is imploied, for the proofe of his valour. For what store of ciuick coronets and garlands, yielded either the battell of Trebia and Ticinus, or of Thrasymenus the lake? What crowne could haue bin gained and woon at the iourney of Cannæ, where the best seruice was by good footmanship to flie & run away? To conclude, all others may vaunt verily, that they haue vanquished men; but *Sergius* may boast, that he hath conquered and overcome euen Fortune her selfe.

CHAP. XXIX.

¶ The commendation of some men for their quick wits.

WHO is able to make a muster as it were of them that haue been excellent in wit: so difficult a matter it is to run through so many kinds of sciences, and to take a survey of curious handi-works in such varietie, of most rare and singular artifices? Vnlesse haply we agree vpon this, and say, that *Homer* the Greeke poet excelled all other, considering either the subiect matter, or the happy fortune of his worke. And hereupon it was, that *Alexander* the Great (for in this so proud a censure and comparison, I shal do best to cite the iudgment of the highest, and of those that be not subiect to enuie) hauing found among the spoils of *Darius* the king, his persumier or casket of sweet ointments, and the same richly embellished with gold and costly pearls and precious stones, when his friends about him shewed him many vases whereto the said coffer or cabinet might be put vnto, considering that *Alexander* himselfe could not away with those delicate perfumes, being a warrior, and slurred with bearing armes, and following warfare: when, I say, his gallants about him could not resolute well what seruice to put it to: himselfe made no more ad but said thus, I will haue it to serue for a case of *Homers* bookes: judging hereby, that the most rare and precious worke proceeding from that so admirable a wit of man, should be bestowed and kept in the richest box and casket of all others: the same prince, in the forcing and sackage of the citie of Thebes, caused by expresse commandement, that the dwelling house & whole family of *Pindarus* the Poet should be spared. He built againe the native city wherein *Aristotle* the Philosopher was borne: and in so glorious a shew of his other worthy deeds, would needs intermingle this testimony of his bounty, in regard of that rare clerke who gaue light to all things in the world. The murderers of *Archilochus* the poet, the very Oracle of *Apollo* at Delphi disclosed and reuealed. When *Sophocles* the prince of all tragical Poets was dead in Athens, at what time as the citie was besieged by the Lacedæmonians, god *Bacchus* appeared sundry times by way of vision in a dreame to *Lysander* their king, admonishing him to suffer his delight, and him whom he set most store by, for to be entered: **E** Whereupon the king made diligent enquire who lately was departed this life in Athens: and by relation of the citizens founde out it out and perceiued who it was that the foresaid god meant, and so gaue them leave to bury *Sophocles* in peace, and to performe his funeralls without any molestation or impeachment.

CHAP. XXX.

¶ Of Plato, Ennius, Virgil, M. Varro, and M. Cicero.

DEnis the tyrant, borne otherwise to pride and cruelty, being aduertised of the coming and arriuall of *Plato*, that great clerke and prince of learning, sent out to meet him a ship adorned with goodly ribbands, and himselfe mounted vpon a charior drawn with foure white horses, receiued him as if he had bin a King, at the haue, when hee disbarked and came aland, *Isocrates* told one Oration that he made for 20 talents of gold. *Aeschines* that famous orator of Athens in his time, hauing at Rhodes rehearsed that acufatoric oration which he had made

made against *Demophilus*, read withall his aduerfaries defence againe; by occasion whereof he was confined to Rhodes, and there liued in banishment: and when the Rhodians that heard it wondred thereat; Nay (qd. *Aeschines*) you would haue marvelled much more at it, if you had heard the man himfelfe pronouncing it, & pleading *Vina voce*: yeelding thus as you fee a notable testimony of his aduerfary, in the time of his aduerfity. The Athenians exiled *Thucydides* their Generall Capitaine: but after he had written his Chronicle, they called him home again, wondering at the eloquence of the man, whose vertue and prowess they had before condemned. The KK. of Egypt and Macedonic gaue a fingular testimony how much they honoured *Menander* the Comick poet, in that they sent Embassadors for him, and a fleet to waite him for his more fecuritie: but he wan vnto himfelfe more fame and glory by his owne fetled iudgement, for that he esteemed more of his owne priuat study and following his book, than of all thofe fauours offered vnto him from great princes. Morouer, there haue bin great perfonages and men of high calling at Rome, who haue fhewed the like in token, how they esteemed and regarded the learned crew of forrein nations. *Cn. Pompeius* after he had difpatched the war againft *Mithridates*, intended to go and vifit *Pofidonius*, that renowned professor of learning; and when hee fhould enter into the mans houfe, gaue ftraight commandement to his Licors or Huifhers, that they fhould not (after their ordinary maner with all others) r'p at his dore; and this great warriour, vnto whom both the Eaft and Weft parts of the world had fubmitted, vailed boner, as it were, and bafed his armes and enfignes of ftate which his officers carried, before the veric dore of this Philofopher. *Cato*, fymnamed *Censorius*, vpon a time when there came to Rome that noble embaffage from Athens, confifting of three, the wifeft fages among them, when hee had heard *Carnades* fpeake (who was one of thofe three) gaue his opinion prefently, That thofe embaffadors were to be difpatched and fent away with all fpeed; for feare leaft if that man argued the cafe, it would be an hard peece of worke to found and find out the truth, fo pregnant were his reafons, and fo witty his difcourfes. But Lord! what a change is there now in mens manners and difpofitions! This *Cato*, the renowned Cenfor, both now and at all times elfe, could not abide to haue any Grecian within Italy, but alwaies gaue iudgement to them all in general to be expelled: but after him there comes his nephew once removed, or his nephewes fonne, who brought one of their Philofophers ouer with him, when he had bin military Tribune or knight marfhall: and another likewife vpon his embaffage to Cypres. And verily a wonder it is and a memorable thing to confider how thefe two *Catos* differed in another point: for the former of them could not away with the Greek tongue, the other that killed himfelfe at *Vtica*, esteemed it as highly. But to leaue ftrangers, let vs now fpeake of our own countreimen, fo renowned in this behalfe. *Scipio Africanus* the elder, gaue exprefle order, and commanded, That the ftatue of *Ennius* the poet fhould be fet ouer his tomb, to the end, that the great name and ftile of *Africanus*, or indeed the booty rather that hee had woun and carried away from a third part of the world, fhould in his monument vpon the reliques of his afhes be read together with the title of this poet. *Augustus Caesar* late Emperour, exprefly forbid that the Poeme of *Virgil* fhould be burned, notwithstanding that he by his laft wil and teftament on a modefty, gaue order to the contrary: by which means there grew more credit and authority vnto the Poet, than if himfelf had approued and allowed his owne verfes. *Asinius Pollio* was the firft that fet vp a publicke Library at Rome, raifed of the fpoile and pillage gained from the enemies. In the Library of which gentleman, was erected the image of *M. Varro*, euen whiles he liued: a thing that was great honor to *M. Varro* in mine opinion (confidering that amongft thofe fine wits, whereof a great number then flourifhed at Rome, his hap only was to haue the garland at the hands of a noble citizen and an excellent Orator befide: as that other nauall crowne gained him, which *Pompey* the Great beftowed vpon him for his good feruice in the pyrats war. Infinite examples more there are of vs Romans, if a man would feeke after them and fearch them out: for this only nation hath brought forth more excellent and accomplished men in euery kinde, than all the lands be fides of the whole world. But what a fin fhould I commit, if I proceeded farther and fpeake not of thee, O *M. Cicero*? and yet how fhould I poffibly write of thee according to thy worthineffe? would a man require a better prooffe of thy condigne praifes, than the moft honorable testimony of the whole body of that people in general, and the acts onely of thy Confufhip, chofen out of al other vertuous deeds throughout thy whole life? Thine eloquence was the caufe that all the Tribes renouued the law *Agraria*, as touching the diuifion of Lands among

A among the commons, albeit their greateft maintenance and nourifhment confifted therein. Through thy perfuafion they pardoned *Rofcius*, the firft author of that feditious bill and law, whereby the States and degrees of the city were placed diftinctly in their feats at the Theatre: they were content I fay, and tooke it well, that they were noted and pointed at for this difference in taking place and rowms, which he firft brought in. By means of thy orations, the children of profcript and outlawed perfons were afhamed and abafhed to fue for honorable dignities in common-wealethy witty head it was that put *Catiline* to flight, and banifhed him the city: thou, and none but thou didft out-law *M. Antonius*, and put him out of the protection of the State. All haile therefore, O *M. Tullius*, faire chieue thee, thou that firft was faluted by the name of *Pater patrie*, i. Father of thy country: firft that deferved triumph in thy long robe, & the laurel garland, for thy language: the only father indeed of eloquence & of the Latin tongue: and (as *Caesar* Dictator fometime thine enemy hath written of thee) haft deferved a crown aboue all other triumphs, by how much more praife-worthy it is, to haue amplified and fet out the bounds and limits of Roman wit and learning, than of Roman ground and dominion.

CHAP. XXXI.

¶ Of a certaine Maieftie in behauiour and carriage.

T Hofe, who among other gifts of the minde haue furpaffed other men in fage aduife and wifdome, were thereupon at Rome furnamed *Cato*, and *Cureuli*. In Greece, *Socrates* carried the name away from all the reft, being deemed by the Oracle of *Apollo Pythius*, the wifeft man of all others.

CHAP. XXXII.

¶ Of Authoritie.

A Gaine, *Chilo* the Lacedemonian was of fo great reputation among men, that his fayings were held for Oracles; and three precepts of his were written in letters of gold, & conſecrated in the temple of *Apollo* at Delphi: where the firft was this, *I know thy felfe*: the fecond, *Set thy minde too much on nothing*. The third, *Debt and Law are alwaies accompanied with mifery*. His hap was to die for ioy, vpon tidings that his fon wan the beft prize, and was crowned victour at the folemne game Olympia; and when he ſhould be interred, all Greece did him honour, and folemized his Funerals.

CHAP. XXXIII.

¶ Persons of a diuine ſpirit and heavenly nature.

A Mong women, *Sybilla* was excellent at diuination, and for a certaine fellowſhip and ſocietie with celeſtiall wights, of great name. As for men, among the Greeks, *Atlamus*: and with vs Romans, *Martius*, carried as great an opinion.

CHAP. XXXIV.

¶ Scipio Naſica.

E Scipio Naſica was iudged once by the Senat (ſworne to ſpeak without paſſion and affection) to be the beſt & honeſteſt man that euer was from the beginning of the world: howbeit the ſame man, as vpright as he was, ſuffered a repulſe and diſgrace at the peoples hands in his white Robe when he ſued for a dignity; and to conclude, in the end his hap was not to depart this life in his owne countrey, no more than it was the will of God that *Socrates* the wifeſt man (ſo deemed by the Oracle of *Apollo*) ſhould die out of priſon:

CHAP. XXXV.

¶ Of Chaſtite.

F Alpitia, daughter of *Paterculus*, and wife to *Fuluius Flaccus*, by al the voices in general of Roman dames, carried away the prize for continencie, and was elected out of the hundred principall matrons of Rome to dedicate and conſecrate the image of *Venus*, according to

and ordinance out of *Sybil* bookes. *Claudia* likewise, was by a religious and deuout experient proued to be such another, at what time as she brought the mother of the gods, *Cybele* to Rome.

CHAP. XXXVI.

¶ Of Pietie or kindnesse.

In all parts verily of the world, there haue been found infinite examples of naturall loue and affection, but one example thereof at Rome hath been knowne singular about all others, and incomparable. There was a poore young woman of the common sort, and therefore base and of no account, who lately had been in childbed, whose mother was condemned to perpetuall prison, and there lay, for some great offence that she had committed: this daughter of hers and young nourse aforesaid, obtained leaue to haue access vnto her mother, and euermore by the gaoler was narrowly searched for bringing to her any victuall, because her iudgment was to be furnished to death: thus she went and came so long, vntill at last she was found suckling of her mother with the milke of her breasts. This was reputed for such a strange and wondrous example, that the mother was releas'd and giuen to the daughter for her rare pietie and kindnes: both of them had a pension out of the city allowed them for their amaintenance for euer; and the place where this hapned was consecrated to *Pietie*: in so much, as when *C. Quintius* and *M. Acilius* were Consuls, there was a temple to her built, in the very place where this prison stood, iust whereas now standeth the Theatre of *Marcellus*. The father of the *Gracchi* happened to light vpon and take two serpents within his house, whereupon he sent out to the Sooth-sayers for to know, what this thing might presage; who made this answer, That if he would himselfe liue, the female snake should be killed; Nay marry (qd. he) not so, but rather kill the male; for my wife *Cornelia* is yong enough, and may haue more children. This said he, meaning to spare his wiues life, in consideration of the good he might do to the common-weale. And in truth; like as the wizards prophesied, so it fell out soone after, and their words tooke effect. *M. Lepidus* to entirely loued his wife *Apuleia*, that he died for very thought and griefe of heart, after shee was diuorced from him and turned away. *P. Rutilius* chanced to be somewhat ill at ease and sickish, but hearing of his brothers repulse, and that hee was put by his Consulship (for which he stood in suit) died suddenly for sorrow. *P. Catiens Philotimus* so loued his Lord and master, that notwithstanding he was by him made his sole heire of all that euer he had, yet for kind heart, cast himselfe into the funerall fire to be burnt with him.

CHAP. XXXVII.

¶ Of diuers excellent men in many Arts and Sciences, and namely in Astrologie, Grammer, and Geometrie.

In the skill and knowledge of sundry Sciences, an infinit number of men haue excelled; howbeit, we will but take the very floure of them all, and touch those only whom meet it is to be named for their speciall desert. In Astrologie, *Berosus* was most cunning; in so much as the Atheniens for his diuine predictions and prognostications, caused his statue with a golden tongue, to be erected in the publicke schoole of their Vniuersitie. For Grammer, *Apollodorus* was singular, and therefore was highly honored of the States of Greece, called *Amphiſtyones*. In Physicke, *Hippocrates* excelled, so far forth as by his skill hee foretold of a pestilence that should come out of *Sclauonia*; and for to cure and remedie the same, sent forth his disciples and schollers to all the cities about. In recompence of which good desert of his, all Greece by a publick decree ordained for him the like honors, as vnto *Hercules*. For the very same cunning and science, king *Ptoleme* gaue vnto *Cleombrotus* of Cea (at the solemne feast holden in the honour of the great mother of the gods) a hundred talents, and namely for curing the king *Antiochus*. *Critobolus* likewise acquired and got himselfe a great name, for drawing an arrow forth of king *Philips* eie, and curing the wound when he had don, so as the sight remained, & no blemish or deformity appeared. But *Aſclepiades* the Prusian, surpassed all others in this kind, who was the first author of that new sect which bare his name, reiect'd the embassadors, the large promises & fauors offered of *K. Mithridates*: found out the way and means to make wine whole some and medi-

A medicinable for sicke folke: and recovered a man to his former state of health, who was carried forth vpon his bier to be buried: and lastly he attained the greatest name; for laying a wager against fortune, and pawning his credit so farre as he should not be reputed a Phytician, in case he euer were known to be sicke or any way diseased. And in truth the wager hee woon; for his hap was to liue in health vntill he was very aged, and then to fall downe from a paire of staires, and so to die suddenly. A singular testimonie of skill and cunning *M. Marcellus* gaue vnto *Archimedes* that notable Geometrician and Engineer of *Syracusa*, who in the saccage and rifling of that city gaue expresse commendement concerning him alone, that no violence should be done vnto him: howbeit hee will faile of his execution, by occasion of a souldier, who in that hurly-burly slew him, not knowing who he was. Much commended and praised is *Ctesiphon* of *Gnosfos*, for his notable knowledge in Architecture, and namely for the wonderful frame of *Dianæ* Temple at *Ephesus*. *Philon* likewise was highly esteemed for making the *Arsenall* at *Athens*, able to receiue 1000 ships. *Ctesibius* also was much accounted of for deuising winde Instruments; and by means of certain engins to draw and send water to any place. *Diocorates* also the enginier eternised his name for casting the plot and deuising the modell of *Alexandria* in *Egypt*, at what time as *Alexander* the great founded it. To conclude, this mighty prince and commander *Alexander* straightly forbad by expresse edict, That no man should draw his portrait in colours but *Apelles* the painter: that none should engrauise his personage but *Pyrgoteles* the grauer: and last of all, that no workman should cast his image in bras, but *Lysippus* a Founder. In which three feats many Artisans haue excelled for their rare workmanthip.

CHAP. XXXVIII.

¶ Singular works of Artificers.

King *Attalus* cheapned one picture wrought by the *Arifides* Theban, and 100 talents for it. *Cesar* the Dictator offered to *Timomachus* eight talents for two pourtraies, to wit, of *Medea* and *Aiax*, which he meant to set vp and consecrate in the temple of *Venus Genetrix*. King *Candaulus* bought of *Bararchus* a painted table, wherein was drawne the defeature and destruction of the *Magnetes*, which tooke vp no great roome, and weighed out the poise thereof in good gold. King *Demetrius*, surnamed *Expugnator*, [i. the conqueror and great forcer of cities] forbore to set *Rhodes* on fire, because he would not burne one painted table the handiworke of *Protogenes*. *Praxiteles* was innobled for a rare Imager and cutter in stone and marble: he eternised his memoriall by making one image of *Venus* for the *Gnidians*, so liuely, that a certaine yong man became so amorous of it, and so doted thereon, that he went beside himselfe: which piece of worke was esteemed of such worth by *Nicomedes*, that whereas the *Gnidians* owed him a great sum of money, he would haue taken it for full payment of the whole debt. The statue of *Iupiter Olympius* is to be seen, and dayly commendeth the workman *Phidias*. *Iupiter* likewise *Capitolinus*, and *Diana* in *Ephesus* yeeld good testimonies of *Atenors* cunning: and the tooles or instruments of the said workmen were consecrated (for their exquisite making) vnto them in their temples, and there remaine.

CHAP. XXXIX.

¶ Of Seruants and Slaues.

I haue not knowne or heard to this day, of a man borne a slaue, that was prised so high as *Daphnis* the Grammarian was: for *Cn. Pſarencis* held him at 300700 Sesterces to *M. Scæurus* a great and principall man of Rome. Howbeit in this our age certain stage players haue gon beyond this price, and that not a little: many they were such as had bought out their freedom before, and were not then slaues. And no maruell, for we finde vpon record, that the great *A. G. Roscius* in former time might yerely dispend by the stage 500000 Sesterces. Vnto a man desire in this place to heare of the Treasurer and puruicer general of the army in *Armenia* for the late wars of King *Tyridates*, who was enfranchised by means of *Nero*, for 120000 Sesterces, but it was the war that cost thus much, and not the man. Like as *Sutorius Priscus* gaue vnto *Seianus* 3500 Sesterces for *Pezon* one of his gelded Eunuchs: For a man would say that this

was more to satisfie his filthy lust, than for any special beauty to be seen in the said *Person*. But he took the vantage of the time, and went cleare away with this impious villanie: for at what time as he bought him, the city was in perplexitie and sorrow, and no man for thinking of greater affaires and troubles, had any leisure to finde fault or say a word in reproofe of such enormities.

CHAP. XL.

¶ The excellencie of Nations.

Doubtlesse it is, and past all question, that of all Nations vnder the Sun, the Romans excell and are the only men for all kinde of vertues. But to determine who is the happiest man in all the world is about the reach of humane wit; considering that some take contentment and repose felicitie in this thing, others in that, and euery one measureth it according to his seuerall fancy and affection: but to say a truth, and iudge aright indeed, laying aside all the glowing flatteries of fortune, and without courting her to determin this point, There is no man to be counted happy in this world. Right well it is on our side, and Fortune dealeth in exceeding fauor with vs, if we may not iustly be called vnhappy: for put case there be no other miserie and calamitie besides, yet surely a man is euer in feare lest Fortune will frowne vpon him, and do him a shrewd turne one time or other: and admit this feare once, there can be no found happinesse and contentment in the minde. What shall I say moreouer than this, that no man is at all times wise and in his perfect wits? Would God that this were taken of most men for a Poets word only, and not a true saying indeed. But such is the vanity and folly of poore mortall men, that they flatter themselves, and are very witty to deceiue themselves, making their accounts and reckonings of good and euill fortune like to the Thracians, who by certain white and blacke stones which they cast into a certaine vessell, and there laid vp for the better proofe and triall of euery daies fortune; and at the last day and time of their death they fall to parting these stones one from another, and telling them apart, and according to the number of the white and blacke, giue iudgement and pronounce of each ones fortune. But what say they to this, that many times it falleth out, that the day marked with a white stone, for a good day, had in it the beginning & ouerture of some great misfortune and calamitie? How many men haue seemed to fall into Fortunes lap, and entred vpon great empires and dominions, which in the end turned to their afflictions and miseries? How many haue we seen ouerthrowne, punished extremely, and brought to vtter ruine, euen by means of their owne good parts and commendable gifts? Certes these be good things & great fauors, if a man could make full account to enioy them but one houre with contentment. But thus verily stands the case, and this is the ordinary course of this world: one day is the iudge of another, and the day of death iudgeth and determineth all: and therefore there is no trust in them, neither may wee assure our selues of any. To say nothing of this, that our good fortunes are not in number equal to our bad: and say there were as many of the one as of the other, Is there any one ioy to be weighed in true ballance against the least grief and sorrow that commeth? Foolish and sottish men that we are for all our curiositie! for we reckon our daies by tale and number, whereas we should ponder and peise them by weight.

CHAP. XLI.

¶ Of the highest tpe and pitch of felicity.

Lampido the Lacedemonian Lady is the only woman that euer was knowne to haue bene daughter to a King, a Kings wife, and mother to a King. Also *Pherenice* was known alone to be the daughter, sister, and mother to them that won the victorie and carried away the best prize at the Olympian games. In one house and race of the *Curices* there were known three excellent Orators one after another by descent from the father to the son. The only family and line of the *Fabij* afforded three Presidents of the Senat in course, one immediately vnder another, to wit, *M. Fabius Ambustus* the father, *Fabius Rullianus* the father, *Fabius Rullianus* the son, and *Q. Fabius Gerges* the nephew.

CHAP.

CHAP. XLII.

¶ Examples of Fortunes mutabilitie.

Infinite other examples we haue of the varietie and inconstancie of Fortune: for what great ioyes to speake of, gaue she euer, but vpon some mishap or other? Again, the greatest miseries and calamities that haue bin, haue they not ensued vpon the most ioyes and contents.

CHAP. XLIII.

¶ Of one twice outlawed and out of protection: as also of *Q. Metellus* and *L. Sylla*.

Fortune preferred for 36 yeares *M. Fidius* a Senator, outlawed by *Sylla*: yet hapned hee afterward to be outlawed the second time; for he out-liued *Sylla*, and continued vnto the time of *Marcus Antonius*: and for certain it is knowne, that by him hee was banished and outlawed againe, for no other reason but because he had been so before. time. So kind was Fortune to *P. Ventidius*, as that she would haue him to triumph alone ouer the Parthians: but shee had before time so good as played with him, when shee saw him led (being a boy) as prisoner in *Cn. Pompeius Strabo* his triumph for the defaturation and overthrow of the Asulanes. Although *Massinusa* testifieth, that he was so led in triumph as a slaue twice: *Cicero* saith, that hee was at first but a Mulictier, and draue mules laden with meale for the oven, to serue the campe. Many other affirme, that in his youth hee was a poore souldier, and serued as a footman in his single tresses and grieues. Moreover, such good fortune had *Babus Cornelius*, as to the senior Consull and declared Elef before his fellow: but before time he had bene in trouble, and iudicially accused, yea and a Iury was impanelled to go vpon him, so as he was in danger to be whipped, vpon their verdid. Well, this mans hap for all this was to be the first Roman Consull of Forreiners, and namely Islanders within the main Ocean: he (I say) attained to that honor, which our forefathers denied flatly to the Latines their neighbors. Among other notable examples, *L. Fulvius* may go for one, who was Consull of the Tuscans when they revolted and rebelled against the Romans: howbeit forsaking his owne citifens, and returning to Rome, was presently by the whole people aduanced to the same honour amongst them, and he was the man alone knowne to haue triumphed in Rome ouer them whose Consull he was, euen the same yere that he himselfe was as a Roman enemie in the field. *L. Sylla* was the only man vntill our time that challenged vnto himselfe the surname of *Felix*. But how was hee adopted as it were into this name, forsooth euen by shedding and spilling so much innocent blood of Roman citifens, and by waging war against his native country? And whereupon I pray you grounded he this happiness of his, and had so great an opinion thereof, if this were not it, that he was able to banish, that he was able to banish, confiscate, and put to death so many thousand citifens? O false and deceitfull interpretation, dangerous, vnhappy, and pernicious euen to posteritie and the time to come! For were not they more blessed and happy, who then fortune to lose their liues, at this day hatred and abhorreth? Moreover, was not his end more cruell and horrible than the sorrow of all those that by him were outlawed, and their goods forfeit: for his owne wretched body did eat, gnaw, and consume it selfe, and bred daily and hourly lothsome vermine to put the same to paine and torment. And say that he dissembled all this, and would not be knowne of it; and suppose we gaue credit that last dreame of his (wherein he lay as it were dead or in a trance) vpon which he gaue out this speech, that himselfe and none but he had the glory to surmount all enuy: yet in this one thing he plainly confessed that his felicitie came short & was defective, in that he had not time to consecrate the Capitoll Temple. *Q. Metellus* in that funeral oration of his which he made in praise and commendation (as the manner was) of *L. Metellus* his father, gaue these laudable reports of him, that he had been the soveraigne Pontife or high-Priest of Rome, twice Consull, Dictator, General of the horse, one of the fifteen Quindecmirs deputed for diuision of lands among the souldiers and Commons: and that in the first Punicke warre he shewed many Elephants in a triumph: moreover he left in writing, that hee had accomplished ten of the greatest and best points belonging to this life: in the seeking whereof

whereof and in attaining thereunto, all the great Sages of the world spend their whole life: for (saith he) his desire was, and he thereto aimed, namely, to be a most doubty and hardy warrior, an excellent orator, a right valiant captaine and commander: also, to haue the conduct, charge, and execution of the greatest and most important affaires, to be in the highest place of honor, to be singular in wisdom, to be accounted the principall and chiefe in Senat, to come to great riches by good and lawfull means, to leaue much faire issue behind him: and to conclude, to be simply the best man of all other, and the principall person in the city. To these perfections he (and none but he since Rome was Rome) attained. Now to confute this was a long and needlesse piece of worke, considering that one only mischance checked these fauors of Fortune, and fully disprooued all: for the very same *Metellus* became blinde in his old age, for hee lost his eyes in a skare-fire, at what time hee would haue saued and got away the *Palladium*, i. Image of *Minerva*, out of the temple of *Vesta*. His act I confesse was vertuous and memorable, but the event was ill for him and miserable. In regard whereof I know not how he should be called vnhappy and wretched: and yet I see not why he should be named happy and fortunate. This I must needs say in conclusion, that the people of Rome granted vnto him that priuiledge, that nener man in the world was knowne to haue, namely, to ride in his coach to the Senat house so oft as he saue at the councill table. A great prerogative I confesse, and most stately, but it was allowed him for want of his eyes.

CHAP. XLIV.

¶ Of another *Metellus*.

A Sonne likewise of this *Metellus*, who gaue out those commendations aforesaid of his father, may be put in the ranke of the most rare presidents of felicitie in this world: for besides the most honorable dignities and promotions hee was advanced vnto in his life time, and the glorious addition and synname of *Maccedonicus*, which he got in *Macedonie*; when he was dead, there attended vpon his dead corps at his funerals to inter him, foure of his sons, the one Pretor for the time being; the other three had been Consuls in their time: & of these three, two had triumphed in Rome, and the third had been Censor. These were points, I may tell you, of great note and regard, and few men are to be found in comparifon, that can come to any one of them. And yet see I in the very prime and floure of all these honors, it fortuned that *Catinius Labo*, synnamed *Macerio*, a Tribune or protector of the Commons (whom he before by vertue of his Censorship had displaced out of the Senat) waited his time when he returned about noone from *Mars* field, and seeing no man stirring in the market place, nor about the Capitoll, tooke him away perforce to the cliffe *Tarpeius*, with a full purpose to pitch him downe headlong from thence and to breake his necke. A number came running about him, of that crue and company which was wont to salute him by the name of Father; but not so soone as such a case required, considering this so sudden an occurrent: and when they were come, went but slowly about any rescue, and kept a soft pace, as if they had waited vpon some corps to a buriall; and to make resistance and withstand perforce the Tribune, armed as he was with his sacrosanct and inuioable authoritie, they had no warrant by Law: insomuch as hee was like to haue perished and come to a present mischance, euen for his vertue, and faithfull execution of his Censorship, had there not been one Tribune of ten found, hardly and with much adoe to step between and oppose himselfe against his Colleague, and so by good hap rescued him out of his clutches, and saued him as it were at the very pits brinke, enen from the vtter point of death. And yet he liued afterwards of the courtesie and liberalitie of other men: for why, All his goods from that day forward were seised as forfeit and confiscate, by that Tribune whom before time he had condemned: as if hee had not suffered punishment and sorrow enough at his hands, to haue his necke so wrythted by him, as that the blood issued out at his very eares. Certes for mine owne part I would reckon this for one of his crosses and calamities, That hee was an enemy to the later *Africanus Emilianus*, euen by the testimonie and confession of *Maccedonicus* himselfe: for after the death of the said *Africanus*, these were his words vnto his owne sonnes; Go your waies sirs and do honour to his Obsequies, for the funeral of a greater personage, and a better Citifsen, shall you neuer see. And this spake he to them when as they had conquered *Creta* and the *Baleare* Islands, and thereof were synnamed *Creticus* and *Balearius*, and

A and had worne the lawrell diadem in triumph; being himselfe already entituled with the stile of *Maccedonicus*, for the conquest of *Macedonie*. But if we consider and weigh that onely wrong and iniurie offered him by the Tribune, who is it that can iustly deeme him happy, being exposed as he was to the pleasure, mercy, and force of his enemy, far inferior to *Africanus*, and so to come to confusion? What were all his victories to this one disgrace? what honors and triumphant chariots strooke not Fortune downe with her foot, and ouerturned all againe, or at least wife set not back again with this her violent course, suffering a Roman Censor to be haled and tugged in the very heart of the city (the only way indeed to bring him to his death) to be harried I say vp to that capitoll hill there to make his end, whither aforesome hee ascended triumphant, but neuer committed that outrage vpon those prisoners and captiues whom hee lead in triumph, and for whose spoiles he triumphed, as to hale and pull them in that rude sort? And verily the greater was this outrage, and seemed the more heinous, in regard of the felicity that afterward ensued: considering, that this *Maccedonicus* was in danger to haue lost so great an honor as he had in his solemne and stately sepulture, namely when he was carried forth to his funeral fire by his triumphant children, as if he had triumphed once again at his buriall. In sum, that can be no sound and assured felicitie that is interrupted with any indignitie or disgrace whatsoever: much lesse by such an one as this was. To conclude, I wot not well whether there be more cause to glory for the modest carriage of men in those daies, or to grieve at the indignitie of the thing, in that among so many *Metelli* as there were, so audacious a villanie as this was of *Catinius* was neuer reuenged vnto this day.

CHAP. XLV.

¶ Of *Augustus Caesar* late Emperor.

A S touching the late Emperor *Augustus*, whom all the world rangeth in this ranke of most fortunat: if we consider the whole course of his life we shall find the wheele to haue turned often, and perceiue many changes of variable fortune. First, his owne vnclie by the mothers side put him by the Generalship of the horse; and notwithstanding all his earnest suite preferred *Lepidus* to that place before him: secondly, he was noted and thought hardly of for those outlawries of Roman citifsens, and thereby purchased himselfe much hatred and displeasure: tainted also he was for being one of those three in the Triumvirate, yoked and matched with wicked companions and most dangerous members to the weal publique: and this galled him the more, that in this fellowship, the Roman empire was not equally and indifferently parted among them three, but *Antonie* went away with the greatest share by odds. Also his ill fortune was in the battell before *Philippus* to fall sicke, to take his flight, and for three daies, diseased as he was, to lurke and lie hidden within a marsh: whereupon (as *Agrippa* and *Maecenas* confesse) he grew into a kinde of dropsie, so as his belly and sides were puffed up and swelled with a waterish humor, gotten and spread betwixt the flesh and the skin. Furthermore, he suffered shipwrecke in *Sicily*, and there likewise he was glad to skulk within a caue in the ground. What should I say, how when he was put to flight at sea, and the whole power of his enemies at his heeles, he besought *Proculus* in that great danger to rid him out of his life: how he was perplexed for the quarrels and contentions at *Perusium*: in what feare and agonie hee was in the battell of *Actium* (a towne of *Albanie*) as also for the issue of the Pannonian warre, for the fall of a bridge and a towne both. So many mutinies among his soldiers, so many dangerous diseases: the iealousie and suspicion that he had euermore of *Marcellus*: the reproch & shame he sustained for confining and banishing *Agrippa*: his life so many times laid for by poison and other secret traines: the death of his children, suspected to haue bin by indirect meanes: the double sorrow and grief of heart thereby, and not altogether for his childlesse estate. The adulterie of his owne daughter, and her purpose of taking his life away, detected and published to the World: the reprochfull departure and slipping aside of *Nero* the sonne of his Wife: another adulterie committed by one of his owne Nieces.ouer and aboue all this, thus many more crosses and troubles comming one in the necke of another: namely, want of pay for his soldiers, the rebellion of *Sclauonia*, the mustering of slaues and bond seruants to make vp his army, for want of other able youths to leuie vnto the warres: Pestilence in Rome Citie: famine and drought vniuersally throughout Italy: and that which more is, a deliberat purpose

and resolution of his to famish and pine himselfe to death, hauing to that end fasted 4 dayes and 4 nights, and in that time receiued into his body the greater part of his owne death. Besides, the ouerthrow and rout of *Paris* his forces, the foule staine and blemish to the touch of his honor and maiestie very neere: the putting away of *Posthumus Agrippa* after his adoption, and the misse that he had of him: after his banishment: then, the suspicion that hee conceived of *Fabius* for disclosing his secrets: adde hereto the opinion and conceit he tooke of his owne wife and *Tiberius*, which surpassed all his other cares. To conclude, that god, and he who I wot not whether obtained heauen, or deferred it more, departed this life, and left behinde him as heire to the crowne his enemies sonne.

CHAP. XLVI.

¶ *Whom the gods iudge most happy.*

I Cannot ouerpasse in this discourse and consideration the Oracles of Delphos, deliuered from that heauenly god to chasteife and repress as it were the folly and vanitie of men: and two there be which giue answer to the point in question after this manner: First, that *Phedrus*, who but a while before died in the seruice of his country, was most happy. Moreover, *Gyges* (the most puissant king in those daies of all the earth) sent a second time to know of the Oracle, who was the happiest man next him: and answer was made, That *Aglauus* *Rhopidius* was happier than the former. Now this *Aglauus* was a good honest man well slept in his yeares, dwelling in a very narrow corner of Arcadia, where he had a little house and land of his own, sufficient with the yearly commodities thereof to maintaine him plentifully with ease, out of which he neuer went, but employed himselfe in the tillage and husbandry thereof, to make the best benefit he could: in such sort that (as it appeared by that course of life) as he courted least, so he felt as little trouble and aduersitie while he liued.

CHAP. XLVII.

¶ *Who was canonised a god here upon earth liuing.*

By the ordinance and appointment of the same Oracle, as also by the ascent and approbation of *Iupiter* the soueraigne god, *Enthyus* the famous wrestler (who alwaies wan the best prize at Olympia saue once) was reputed and consecrated a god while he liued, and knew thereof: born he was at Locri in Italy, where one statue of his, as also another at Olympia, were both in one day stricken with lightning: whereat I see *Callimachus* wondred, as if nothing else were worthy admiration, and gaue order that he should be sacrificed vnto as a god: which was performed accordingly both while he liued, and after hee was dead. A thing that I maruell more at than any thing else, That the gods were therewith contented, and would permit such a dishonour to their maiestie.

CHAP. XLVIII.

¶ *Of the longest liues.*

The terme and length of mans life is vncertaine, not only by reason of the diuersity of climates, but also because Historians haue deliuered such varietie of mens ages, and euerie man by himselfe hath a severall time limited vnto him at the very day of his birth. *Hesiod* (the first writer, as I take it, who hath treated of this argument, and yet like a Poet) in his fabulous discourse touching the age of man saith forthwith, that a crow liues nine times as long as we; and harts or stags 4 times as long as hee, but Ravens thrice as long as they. As for his other reports touching the Nymphs and the bird *Phoenix*, they are more like poetical tales, than true relations. *Anacreon* the Poet maketh mention, that *Arganthionis* king of the Tartarians, liued 150 yeares: and *Cynarus* likewise King of the Cyprians ten yeares longer. *Theopompus* affirmeth, that *Epimenides* the Gnosian died when he was 157 yeares old. *Hellanicus* hath written, That amongst the Epians in *Ætolia* there be some that continue full two hundred yeares: and with him accordeth *Damiscus*: adding moreover, that there was one *Pitlorus* among them, a man of exceeding stature, mighty and strong withall, who liued three hundred yeares.

Ephorus

A *Ephorus* testifieth, that ordinarily the kings of Arcadia were 300 yeares old ere they died. *Alexander Cornelius* writeth of one *Dando* a Sclauonian, who liued 500 yeares. *Xenophon* in his treatise of old age, makes mention of a King of the Latines, or as some say, ouer a people vpon the sea coasts, who liued 600 yeares; and because he had not liued loud enough already, he goes on still and saith, that his son came to 800. All these strange reports proceed from the ignorance of the times past, and for want of knowledge how they made their account: for some reckoned the Summer for one yeare, and the Winter for another. There were againe that reckoned euery quarter for a yeare, as the Arcadians, whose yeare was but three monthes. Ye shall haue some, and namely the Egyptians, that count euery change or new Moon for a yeare: and therefore no maruell if some of them are said to liue 1000 yeares. But to passe from these vncertainties, to things confessed and doubtlesse. Held it is in maner for a certain truth, that *Arganthionis* King of Calis reigned full 80 yeares, and it is thought he was 40 yeares old when he came vnto the crowne. And as vndoubted true it is, that *Masani* sawe the crown 60 yeares. As also that *Gergius* the Sicilian liued vntill he was 108 yeares old. As for *Q. Fabius Maximus* (a Roman) hee continued Auguste 63 yeares. *M. Perenna*, and of late daies *L. Volusius Saturninus*, out liued all those Senators which late in counsell with them when they were Consuls, and whose opinions they were wont to aske. As for *Perenna*, when hee died, hee left but 7 of those Senators aliue, whom he had either chosen or re-elected in his Consorship: and he liued himselfe 98 yeares. Where by the way one thing commeth into my mind worth the noting, That one *Lustrum* or 5 yeares space there was, and neuer but one, in which there died not a Roman Senator, and that was from the time that *Flaccus* and *Albinus* the Censors finished their suruey, & solemnly purged the city after the order, to the coming in of the next new Censors; being from the foundation of Rome 579 yeares. *M. Valerius Corvinus* liued 100 yeares complete: between his first and sixth Consulate were 46 yeares; he tooke his seat vpon the yuorie chaire of estate, and was created a magistrate Curule 21 times; and no man else so often. *Marcus* the Pontife or four-raigne priest liued full as long as he.

To come now to women: *Luia* the wife of *Rutilius* liued 97 yeares with the better. *Statilia* a noble lady of Rome, in the time of *Claudius* the Emperour, was knowne to be 99 yeares of age. *Cicerons* wife *Terentia* out-liued her husband vntill she was 103 yeares old. *Clodia* wife to *Ostius*, went beyond her, and saw 115 yeares, & yet she had in her youth 15 children. *Lucretia* a common vice in a play, followed the stage and acted thereupon 100 yeares. Such another vice that plaid the foole & made sport between whiles in interludes, named *Galaria Copiola*, was brought againe to act her feats vpon the stage, when *Cn. Pompeius* and *Q. Sulpitius* were Consuls, at the solemne plaies vowed for the health of *Aug. Caesar* the Emperour, in the 104 yere of her age: the first time that euer she entered the stage, to shew prooff of her skill in that profession, was 91 yeares before, and then she was brought thither by *M. Pomponius* an *Ædile* of the Commons, in the yere that *C. Marius* and *Cn. Carbo* were Consuls. And once againe *Pompeius* the Great, at the solemne dedication of his stately Theatre, trained the old woman to the stage for to make a shew, to the wonder of the world. Moreover, *Asconius Pedianus* is mine Author, that one *Samula* liued 110 yeares; and therefore I maruell the lesse, that one *Stephanio* (who was the first of the long robe that brought dancing and footing vpon the stage) plaid his part & danced in both the Secular plaies, as well those that were set out by *Augustus* late Emperour, as which *Claudius* exhibited in his 4 Consulate, considering that between the one and the other there were but 63 yeares: and yet liued *Stephanio* many a day after. *Mutianus* witnesseth, that in *Temphis* (for so is the crest or pitch of the mountain *Tmolus* called) folke liued ordinarily 150 yeares. At that age *T. Fullo* *nus* of Bononia entred his name into the Subsidie book, at the time that *Cl. Caesar* held the generall tax: and that he was so old indeed, appeared truly as wel vpon record in the registers of office, by conferring and laying together feuerall payments by him made from time to time, as also by certain things he had seen and known done in his life time (for the Emperour had a speciall care and regard, that way to find out the truth.)

CHAP. XLIX. Of diuers Horoscopes or Nativities of men.

This point would require the conference and aduice of Astrologers: for *Epigenes* saith, it is not possible for a man to liue 122 yeares: and *Berosus* is of opinion, that one cannot passe 117. The proportion and reckoning holdeth still for good, which *Ptolemy* and *Nepesius* calcula-

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calculated and grounded vpon their Quadrant, which they call *Tetartemoria*, that is to say, the compasse in the Zodiacke of three figures: Oriental, which determine of the life or death of men, according to which account it is euident, that in the tract or clymat of Italy men may reach to 126. yeares. The aboue-named Astrologers affirmed, that a man could not possibly passe the space of 90 degrees from the Ascendent or erection of his natiuitie (which they call Anaphoras) and that euen this course through the degrees of three figures, is many times interrupted and cut short, either by the opposition and encounter of some wicked planets, or by the maligne aspects of them or the Sun. On the other side, *Alepiades* and his sect affirme, that the length of our life proceedeth from the influence of the [fixed] stars: but as touching the vermost terme thereof they set downe nothing definitively: many thus much they say, That the fewer sort of men liue any long time; for that the greatest number by far haue their natiuitie incident and liable to the dangerous houres and time, either of the moones occurrence (as in her Quadrature, Opposition, and Sextile aspect) or of daies according to the number of seven or nine (which are daily and nightly marked and obserued): whereupon ensueth the rule of the dangerous graduall yeares, called *Clymaeterike*: and such as are in that wise borne, lightly liue not aboue 54 yeares. And here we may see by the doubtfulnesse and incertitude of this science of Astrologie, how vncertain this whole matter is which we haue in hand. Moreover, wee found the contrarie by experience and many examples; and namely in the last taxation, numbring, and review of the prouinces subiect to Rome within Italy, that was taken vnder the *Cæsars Vespasians*, the father and the sonne, both Emperors and Censors. And here we need not to search euery corner, and to ranke euery place very narrowly; we will onely giue instance and set downe the examples of the one moiety thereof, namely that tract which lieth betwixt the Appennine and the Po. At Parma three men were found that liued sixe score yeares: at Brixels, one that liued 125 yeares: at Plaifance one elder by a yeare: at Faveria there was one woman 132 yeares old: at Bononie, *T. Terentius* the sonne of *Marcus*; and at Arimium, *M. Aponius*, reckoned each of them 150 yeares. *Tertullus* was knowne to be 137 yeares old. About Plaifance there is a towne situate vpon the hills, named *Velleiacium*, wherein six men brought a certificate, that they had liued an hundred yeares apiece: foure likewise came in with a note of an hundred and twenty yeares: one, of an hundred and fourteene, namely *M. Mutius*, son of *Marcus*, named *Galerius felix*. But because we will not dwell long in a matter so euident and commonly confessed: in the review taken of the eighth region of Italy, there were found in the rolle 54 persons of an hundred yeares of age: 57 of an hundred and ten: two, of 125: foure of 130: as many that were 135 or 137 yeares old: and last of all, three men of an hundred and fortie. But let vs leaue these ages, and consider awhile another inconstant variety in the nature of mortall men: *Homer* reporteth, that *Heitor* and *Polydamus* were borne both in one night, men so different in nature and qualitie. Whiles *C. Marius* was Consull, and *Cn. Carbo* with him, who had beene twice before Consull, the fifth day before the calends of Iune, *M. Caelius Rufus* and *C. Licinius Calvus* were borne vpon a day, and both of them verily proued great Orators: but they sped not alike, but mightily differed one from another in the end. And this is a thing feen daily to happen throughout the World, considering that in one houre kings and beggars are borne, likewise lords and slaues.

CHAP. L.

¶ Sundry examples of diuers Diseases.

P^{pb.} Cornelius Rufus, who was Consull together with *M. Curius*, dreamed that he had lost his sight, and it proued true indeed, for in his sleep he became blind & neuer saw again. Contrariwise *Phalerus*, [or *Iason Phereus*] being giuen ouer by the Physitions for an impostume he had in his chest, in dispaire of all health (purposing to kill himselfe for to be rid out of his paine) stabbed his breast with a knife: but he found this deadly enemy to be his onely Physition. *Q. Fabius Maximus* being long sicke of a quartane Ague, stricke a battell with the People of Sauoy and Auvergne neere the riuer Isara, vpon the sixth day before the Ides of August, wherein

A wherein he slew of his enemies 13000. and therewith was deliuered from his feuer, and neuer had it after. Certes this gift of life that we haue from nature, be it more or, lesse, is fragile & vncertain; and say that it be giuen to any in largest measure, it is but scant yet, and very short, yea and of but small vs, if wee consider the whole course thereof from the beginning to the end. For first, if we count our repose and sleep in the night season, a man can be truly said to liue but halfe his life; for surely a good moiety and halfe daie thereof which is spent in sleeping, may be likened well to death: and if he cannot sleep, it is a pain of all pains, and a very punishment. I reckon not in this place the yeares of our infancie, which age is void of reason and sense, ne yet of old age, which the longer it continueth, the more are they plagued that be in it. What should I speake of so many kindes of dangers, so many diseases, so many feares, so many penurie cares, so many prayers for death, as that in manner we pray for nothing oftner? In which regards how can a man be said to liue the while? and therefore Nature knoweth not what better thing to giue a man than short life. First and foremost, the senses wax dull, the members and limmes grow benumbed, the eye sight decayeth betimes, the hearing followeth loose after, then faile the supporters, the teeth also and the very instruments that serue for our food and nourishment: and yet forsooth all this time so full of griefe & infirmities is counted a part of our life. Hereupon it is taken for a miraculous example, and that to which again we cannot find a fellow, that *Xenophilus* the musitian liued 105 yeares, without any sicknesse or defect in all his body. For all other men, beleeue me, are vexed at certain houres (like as no other creatures besides) with the pestiferous heats and shaking colds of the feuer in euery ioynt, sinew, and muscle of the body, which go and come, keeping their times in their seuerall fits, not for certain houres in the day, nor day only, but from one day to another, and from night to night; one while euery third day or night, otherwhiles euery fourth, yea and sometime a whole year together. Moreover, what is it but a very disease, to know the time and houre of a mans death, and so to die forsooth in wisdom? For maladies there be in which Nature hath set down certain rules and lawes: namely, a quartaine feuer neuer lightly begins in the shortest daies of the year, neither in the month of winter [to wit, December, Ianuarie, Februarie.] Some diseases are not incident to those that are aboue 60 yeares of age: others againe do end and passe away when youths begin to be vndergrowne, and especially this is obserued in yong maidens. Moreover, old folke of all other are least subiect to take the plague. Furthermore, sicknesse there be that follow this region or that, assailing and infecting the inhabitants generally therein. There be some againe that surprize and take hold of seruants only, both all and some: others touch the best persons alone of the highest calling, and so from degree to degree. But in this place obserued vually it is by experience, That a pestilence beginning in the South parts, goeth alwaies towards the West, and neuer lightly but in winter, neither continueth it aboue three moneths.

CHAP. LI.

¶ Of the signes of death.

Now let vs take a view of deadly tokens in sicknes: in rage and furious madnesse, to laugh is a mortall signe: in frenzie, wherein men are bestraught of their right wits, to take care of the skirts, fringes, and welts of their garments, that they be in good order; to keepe a fumbling and pleiting of the bed-clothes, the neglect of such things as would trouble them in their sleepe, and breake it: the voluntarie letting go of their water; prognosticate death. A man may see death also in the eyes and nose most certainly of all other parts: as also in the manner of lying, as namely when the patient lieth alwaies on his backe with his face vpward. We gather signes also by the vneuen stroke of the arterie; as also when the pulse beatech so vnder the physitions hand as if he felt an ant creeping vnder it. Other signes also there be, which *Hippocrates* the prince and chief of all Physitions hath very well obserued and set down. Now whereas there be an infinite number of signes that preface death: there is not one knowne than can assure a man certainly of life and health. For *Cato* that famous Censor, writing to his sonne as touching this argument, hath deliuered, as it were out of an Oracle, That there is an obseruation of death to be collected euen in them that are in the most perfect health: for (saith hee) youth resembling age, is a certaine signe of vntimely death or short life. As for diseases, they are

are so innumerable, that *Pherecydes* of the Island Syros died of a great quantity of Lice that came crawling out of his body. Some are knowne to be neuer free from the Ague, as *C. Metcenas*. The same man for three yeares before hee died neuer laid his cies together for sleepe a minute of an houre. *Antipater Sidonius* the Poet, once a yeare during his life had an ague fit vpon his birth day: he liued for all that to be an old man, and vpon the day of his natiuitie died in such a fit.

CHAP. LII.

¶ Of such as were carried forth vpon the Biers to be buried, and reuined againe.

A *Viola*, one that had bin Consul, came again to himselfe when he was cast or put into the funerall fire to be burnt: but because the flame was so strong that no man could come neere to recouer him, he was burnt quick. The like accident befell to *Lu. Lamia*, Pretor lately before. As for *C. Aelius Tiberio*, that he was brought alieue again from the like fire, after he had bin Pretor of Rome, both *Messala Rufus* and many besides constantly affirme. See how it goeth with mortall men: see, I say, our vncertaine state and condition, and how we are born, exposed, and subiect to these and such like occasions of fortune: in so much as in the case of man there is no assurance at all, no not in his death. We reade in Chronicles, that the ghost of *Hermotimus Clazomenius* was wont vnto to abandon his body for a time, and wandering vp and downe into far countries, vnto to bring him newes from remote places, of such things as could not possibly be knowne vnlesse it had bin present there: and all the while his body lay as halfe dead, in a trance. This manner it continued so long, vntill the *Cantharidæ*, who were his mortall enemies, tooke his body vpon a time in that extasie, and burnt it to ashes; and by that means disappointed his poore soule when it came backe againe, of that sheath, as it were, or case where the meane to bestow her selfe. Moreouer, we finde in records, that the spirit or ghost of *Arifbas* in the Island *Proconnesus*, was seen evidently to fly out of his mouth in forme of a Rauens, and many a like tale followeth thereupon. For surely I take it to be no better than a fable, which is in like manner reported of *Epimenides* the Gnosian, namely, that when he was a boy, he being for heate and trauell in his journey all wearie, laid him downe in a certain caue, where he slept 57 yeares. At length he wakened as it were vpon the next morning, and wondred at such a sudden change of euery thing he saw in the world, as if hee had taken but one nights sleepe. Hereupon, forsooth, in as many daies after as he slept yeares, he waxed old. Howbeit he liued in all 175 yeares. But to returne to our former discourse, women of all others by reason of their sex are most subiect to this danger, to be reputed for dead when there is life in them: and namely because of the disease of the matrice called the rising of the Mother: which if it be brought againe, and settled straight in the place, they soone recouer and take breath againe. Not impertinent to this treatise is that notable and elegant booke among the Greeks compiled by *Heraclides*, where he writeth of a woman that for a seuen-night lay for dead, and fetched not her breath sensibly, who in the end was raised againe to life. Moreouer *Parro* reporteth, that vpon a time when the twenty deputy Commissioners were diuiding lands in the territory of *Capua*, there was one there carried forth vpon his bier to be burnt, and came home again vpon his feet. Also, that the like hapned at *Aquinum*. Likewise, that in Rome one *Corfidius*, who had married his owne Aunt by the mothers side, after he had taken order for his funerals, and set out a certaine allowance therefore, seemed to yeeld vp his ghost and die: howbeit hee reuined againe, and it was his chance to carry him forth indeed vnto buriall, who had provided the furniture before for his funerall. This *Parro* writeth besides of other miraculous matters, which verily are worth the rehearsal at large. One of them is this: Two brethren there were, by birth and calling gentlemen of Rome, whereof the elder, named *Corfidius*, hapned in all appearance to die: and when his last will and testament was once opened and published, the younger brother (who was his heire) was very busie and ready to set forward his funerall. In the mean time the man who seemed dead fell to clap one hand against another, and therewith raised the seruants in the house: when they were come about him, he recounted vnto them, that he was come from his younger brother, who had recommended his daughter to his tuition and guardenage: and moreouer, had shewed and declared vnto him, in what place he had secretly hidden certain gold

A gold vnder the ground, without the priuie of any man; requesting him withall to imploy that funerall prouision which he had prepared for him, about his own buriall and sepulture. As he was relating this matter, his brothers seruitors came in great haile to this elder brothers house, and brought word their master was departed this life: and the treasure before said was found in the place accordingly. And verily there is nothing more common in our daily speech, than of these diuinations; but they are not to be weighed in equall ballance with these, nor to be reported or credited all so confidently, for so much as for the most part they are mere lies, as we will proue by one notable example. In the Sicilian voyage it fortuned that *Gabinus*, one of the brauest seruitors that *Cæsar* had at sea, was taken prisoner by *Sex. Pompeius*, and by commandement from him his head was stricken off in a manner, and scarce hung to the neck by the skin, and so lay he all day long vpon the sands in the shore. When it grew toward euenig, and that a great companie were flockt about him, he fetched a great groane, and requested that *Pompeius* would come vnto him, or at leastwise send some one of his deare familiars that were neere vnto him. And why? Come I am (quoth he) from the infernal spirits beneath, and haue a message to deliuer vnto him. Then *Pompeius* sent diuers of his friends to the man, vnto whom *Gabinus* related in this manner: That the infernal gods were well pleased with the iust quarrell and cause of *Pompeius*, and therefore he should haue as good issue therof as he could wish. This quoth he, was I charged and commanded to deliuer. And for a better prooue of the truth in effect, so soon as I haue done mine errand I shall forthwith yeeld vp the ghost. And so it hapned indeed. Histories alio make mention of them that haue appeared after they were committed to earth. But our purpose is to write of Natures works, and not to prosecute such miraculous end prodigious matters.

CHAP. LIII.

¶ Of sudden Deaths.

A S for sudden death, that is to say, the greatest felicitie and happines that can befall man, many examples wee haue thereof that alwaies seeme strange and marvellous; howbeit they are common. *Verrus* hath set forth a number of them, but I will keepe within a meane, and make choice of them all. Besides *Chilon* the Lacedemonian, of whom we spake before, the died suddenly for very ioy, *Sophocles* the poet, and *Demis* a king or tyrant of Sicily: both of them vpon tydings brought vnto them, that they had won the best prize among the tragical Poets. Presently after that famous defeat at Cannæ, a mother died immediately vpon the sight of her son alieue, whom by a false messenger she heard to haue bin slain in that battell. *Diodesius* a great professed Logician, for very shame that hee could not presently afoile a frivolous question, nor answer to some demands propounded by *Sitilo*, frowncd and neuer came again. Without any apparent cause at all that could be seen, diuers haue left their life: namely two of the *Cæsars*, the one Pretor for the time being, the other who had borne that dignity, the father of *Cæsar* the Dictator: both of them in the morning when they were new risen, and putting on their shooes, the one at Pise, the former at Rome. In like manner *Q. Fabius Maximus* in his very Consulship, vpon the last day of December, [which was the last alio of his magistracie, had hee liued longer] in whose place *Rebilius* made sute to be Consul for a very few houres that remained of that yere. Semblably *C. Fulcinius Gurgius* a Senator, All of them in perfect health, solistie and well liking that they thought to go forth presently, and of nothing less than to dy before. *Q. Amylius Lepidus*, euen as he was going out of his bed chamber, hit his great toe against the dore fill, and therewith died. *C. Aufidius* was gotten forth of his house, and as he was going to the Senat, stumbled with his foot in the Comitium or common place of assemblies, and died in the place. Moreouer, a certain Embassador of the Rhodians, who had to the great admiration of all that were present, pleaded their cause before the Senat, in the very entry of the Councell house, as he was going forth, fell downe dead and neuer spake word. *Cn. Babius Pamphilus*, who had bin Pretor, died suddenly as he was asking a boy what it was a clocke. *A. Pomponius*, so soon as he had worshipped the gods in the Capitoll, and said his Oracions, immediately died. So did *M. Iuuentius Talla* the Consul, as hee was offering sacrifice. And *Caius Serullius Pansa*, as hee stood at a shop in the market place about eight of the clocke in the morning, leaning vpon his brother *P. Pansa* his shoulders. *Babius* the Iudge, as hee was adiouing

ning the day of ones appearance in the court. *M. Terentius Corax*, whiles he was writing letters in the market place. No longer since than the very last yeare, a Knight of Rome, as hee was talking with another that had been Consul, and rounding him in the eare, fell downe starke dead. And this hapned before the yvorie statue of *Apollo*, which stands in the Forum of *Augustus*. But about all others it is strange, that *C. Iulius* a Surgeon should die as he was dressing of a fore eie with a salve, and drawing his instrument along the eye. What should I say of *L. Manlius Torquatus*, a man who had bin sometime Consul, whose hap was to die sitting at supper, even reaching for a cake or wafer upon the boord. *L. Durus Valla* the phyfition died whiles hee was drinking a potion of mede or sweet honied wine. *Appius Aufimius* being come out of the Baine, after he had drunk a draught of honied wine, as he was supping off a rare egge died. *P. Quintius Scapula* as he was at supper in *Aquillius Gallus* his house. *Dicimus Sausimus* the Scribe, as he sate at dinner in his owne house. *Cornelius Gallus*, one who had bin Lord Pretor, and *T. Aethorius* a Roman Knight, died both in the very act of *Venus*, whiles they lay vpon women. The like befall in our daies to two gentlemen of Rome, who died both as they were dealing contrary to nature with one and the same counterfeit lester named *Mithycus*, a youth in those daies of surpassing beauty. But of all others, *M. Oflus Hilarus*, an actor and plaier in comedies, as it is reported by ancient writers, died most secure of death, & with the greatest circumstances about it: for after he had much delighted the people, & made them sport to their contentment on his birth day, he kept a feast at home in his house; and when supper was set forth vpon the table, hee called for a messe of hot broth in a pottinger to drinke off; and withall casting his eye vpon the maske or visor he put on that day, fitted it for his visage, and tooke off the chaplet or garland from his bare head, and set it thereupon: in this habit, disguised as he sate, hee was starke dead and key cold before any man perceived it: vntill he that leaned next vnto him at the boord put him in minde of his portage that it cooled, and making no answer, they found in what case he was.

These examples all be of happy deaths: but contrariwise there be an infinite number that are as miserable & vnfortunat. *L. Domitius*, a man descended of a myst noble house and parentage, being vanquished by *Cæsar* before *Marcellus*, and taken prisoner at *Corfinium* by the same *Cæsar*; for very irksomnesse of his tedious life, poisoned himselfe: but after he had drunke the poison, repented of that which he had done, and did all that ever hee could to liue still, but in vaine. We finde vpon record in the publique registers, that when *Felix* one of the carnation or flesh-coloured liuery that ranne with chariots in the great cirque or shew-place was had forth dead to be burnt, one of his fauorits and consorts flung himselfe into his funeral fire for company. A frivoliuous and small matter it is to speake of; but they of the other part that sided with the aduerser faction of other liueries, because this act should not turne to the honor and credit of their concurrent the active Chariotier above named, gaue it out and said, that this his friend and wel-willer did not do it for any loue he bare him, but that his head was intoxicated with the strong fauor of the incense and odors that were in the fire, and so being beside himselfe, wist not what he did. Not long before this chanced, *M. Lepidus*, a gentleman of Rome descended of a most noble family, who (as is above said) died for thought and griefe of heart that hee had divorced his wife, was by the violent force of the flame cast forth of the funeral fire; & because of the extreme heat thereof, no man could come neere to lay his corps again in the place where it was & should be: they were faine to make another fire hard by of dry vine cuttings, and such like sticks, and so he was burnt bare and naked as he was.

CHAP. LIIII.

Of Buriall or Sepulture.

TO burne the bodies of the dead hath bin no ancient custome among the Romans: the manner was in old time to inter them. But after they were giuen once to vnderstand, that the corpses of men slain in the wars as far off, and buried in those parts, were taken forth of the earth again, ordained it was to burne them. And yet many families kept them still to the old guise and ceremonie of committing their dead to the earth: as namely the house of the *Cornelii*, whereof there was not one by report burned before *L. Sylla* the Dictator, and he willed it expressly, and provided for it before hand, for feare himselfe should be so serued as *C. Marius* was, whose corps he caused to be digged vp after it was buried. Now in Latine he is said to be

A be *sepultus*, that is bestowed or buried any way, it makes no matter how: but *humatus* properly, who is interred only, or committed to the earth.

CHAP. LV.

Of the Ghosts, or spirits of men departed.

After men are buried, great diuersitie there is in opinion, what is become of their souls & ghosts, wandering some this way, and others that. But this is generally held, that in what estate they were before men were born, in the same they remain when they are dead. For neither body nor soule hath any more sence after our dying day, than they had before the day of our natiuitie. But such is the folly & vanitie of men, that it extendeth still euen to the future time; yea, and in the very time of death flattereth it selfe with fond imaginations, and dreaming of I know not what life after this: for some attribute immortality to the soule: others deuise a certain transfiguration thereof; & there be again who suppose, that the ghosts sequestred from the body, haue sence; whereupon they do them honour and worship, making a god of him that is not so much as a man. As if the maner of mens breathing differed from that of other liuing creatures; or as if there were not to be found many other things in the VVorld, that liue much longer than men, and yet no man iudgeth in them the like immortality. But shew me what is the substance and body as it were of the soule by it selfe? what kind of matter is it apart from the body? where lieth her cogitation that she hath? how is her seeing, how is her hearing perceived? what toucheth she? nay, what doth she at all? How is she employed; or if there be in her sence and hath her abiding place as there be without the same? But I would know where shee titude of souls like shadows would there be, in so many ages, as well past as to come; how surely these be but fantastical, toolish, and childish roies; deuised by men that would faine liue alwaies, and neuer make an end. The like foolery there is in preferring the bodies of dead men: & the vanity of *Democritus* is no lesse, who promised a resurrection thereof, and yet himselfe could neuer rise again. And what a folly is this of all follies to thinke (in a mischief) that death should be the way to a second life; what repose and rest should euermore men haue that are borne of a woman, if their soules should remain in heauen above with sence, whiles their shadows tarried beneath among the infernall wights? Certes, these sweet inducements and pleasing persuasions, this foolish credulitie and light beliefe, marreth the benefit of the best gift of Nature, to wnder what shall betide him the time to come. For if it be sweet and pleasant to liue, what pleasure and contentment can one haue, that hath once liued, and now doth not. But how much more ease and greater securitie were it for each man to beleue himselfe in this point, to gather reasons, and to ground his resolution and assurance vpon the experience that he had before hee was borne.

CHAP. LVI.

Of the first inventors of diuers things.

Before we depart from this discourse of mens nature, me thinks it were meet and convenient to shew their sundry inventions, and what each man hath deuised in this world. In the first place, prince *Bacchus* brought vp buying and selling: he it was also that deuised the diadem that royall ensigne and ornament, and the manner of triumph. Dame *Ceres* was the first that shewed the way of sowing corne, whereas before-time men liued of mast. She taught also how to grind corne, to knead dough, and make bread thereof, in the land of Attica, Italy, and Sicily; for which benefit to mankind, repured the sea a goddesse. She it was that beganne to make lawes, howsoeuer others haue thought, that *Rhadamanthus* was the first law giuer. As for Letters, I am of opinion, that they were in Assyria from the beginning, time out of mind; but some thinke, and namely *Gellius*, that they were deuised by *Mercurie* in Egypt: but others say they came first from Syria. True it is that *Cadmus* brought with him into Greece from Phoenice to the number of sixteen, vnto which *Palamedes* in the time of the Trojan war added foure more in these characters following, *ε, κ, ρ, σ*. And after him *Simonides Melicus* came with other

four, to wit, *z. n. t. a.*, the force of all which letters we acknowledge and see evidently expressed in our Latine Alphabet. *Arifotle* is rather of mind, that there were 18 letters in the Greeke Alphabet from the beginning, namely, *α. β. γ. δ. ε. ζ. η. θ. ι. κ. λ. μ. ν. ο. π. ρ. σ. τ. θ.*, and that the other two *ϕ* and *χ*, were set to by *Epicharmus*, and not by *Palamedes*. *Anticlistides* writeth, That one in Egypt named *Menon*, was the inventor of letters, fiftene yeares before the time of *Phoroneus*, the most antient king of Greece, and he goeth about to prove the same by antient records and monuments out of histories. Contrariwise, *Epigonus*, an author as renowned, and of as good credit as any other, sheweth, That among the Babylonians there were found Ephemerides containing the observation of the stars, for 720 yeares, written in bricks and tiles: and they that speake of least, to wit, *Berosus* and *Critodemus*, report the like for 480 yeares. Whereby it appeareth evidently, that letters were alwaies in use, time out of mind. The first that brought the Alphabet into Latium or Italy, were the Pelasgians. *Euryalus* and *Hyperbius*, two brethren at Athens, caused the first bricke and tile-kils, yea, and houses thereof to be made, whereas before their time men dwelt in holes and caues within the ground. *Gellius* is of opinion, that *Doxius* the sonne of *Calus*, deuised the first houles that were made of earth and cley: taking his patterne from Swallowes and Martins nests. *Cecrops* founded the first towne that euer was, and called it after his owne name *Cecropia*: which at this day is the castle or citadell in Athens. Some will haue that Argos was built before it, by king *Phoroneus*. And others againe, that Sycone was before them both. And the Egyptians asseme, That long before that, their city Diopolis was founded. *Cimyr*, the sonne of *Agriops* deuised tiling and flatting of houses first, as also found out the brasse mines, both within the Isle Cyprus. He inuented also pinfers, hammers, yron crowes, and the Anuill or Stithe. *Danaus* sunk the first pits for wels in Greece, which then was called Argos Dipfion; & sailed out of Egypt thither, for that purpose. *Cadmus* at Thebes (or, as *Theophrastus* saith) in Phoenice, found out stone quarries first. *Thrasion* was the first builder of towne walls, of towers & fortresses, the Cyclops, as *Arifotle* thinketh: but the Tyrrinians according to *Theophrastus*. Weaving was the inuention of the Egyptians; and dying wool, of the Lydians in Sardis. *Closter* the son of *Arachne* taught the first making of the spindle for woollen yeards: and *Arachne* her selfe was the first spinner of flax thred, the weauer of linnen, and of nets. *Niceus* the Megarean deuised the fullers craft. *Bacchus* shewed the art of sowing, as wel for tailors as Corvines and hoomakers. The Egyptians would haue the skill of physicke to haue bin first among them; but others asseme, That *Arabus* the son of *Babylon* & *Apollo*, was the author thereof. The first Herbarist and Apothecarie, renowned for the knowledge of simples, & composition of medicines, was *Chiron*, son of *Saturne* & *Phyllira*. *Arifotle* thinketh, that *Lyds* the Seythian taught the feat of casting and melting brasse, with the tempering also of the same: howbeit, *Theophrastus* saith it was *Delas* the Phrygian. As for the forges & furnaces of brasse, some think the Chalybes deuised, others attribute that to the Cyclopes. The discovery of the yron and steel mines, as also the working in them, was the inuention (as *Hesiodus* saith) of those in Crete, who were called *Dactyli Idæi*. Likewise of siluer, *Erichthonius* the Athenian beareth the name, or (after some) *Aceus*. The gold mines, together with the melting and trying thereof, *Cadmus* the Phoenician first found out neere the mountain Pangarus: but there be that giue the praise hereof to *Thous* & *Aeacides* in Panchaia: or els to *Sel* the son of *Oceanus*, to whom *Gellius* attributeth the inuention of Physick, and making hony. *Midacritus* was the first man that brought lead out of the Island Cassiteris. And the Cyclopes inuented first the yron-smiths forge. *Corabus* the Athenian deuised the potters craft, shewing how to cast earthen vessels in moulds, & bake them in furnaces. And therein, *Anacharsis* the Seythian, or after some, *Hyperbius* the Corinthian, inuented the cast of turning the roundel or globe. Carpenters art was the inuention of *Dedalus*, as also the tools thereto belonging, to wit, the saw, the chip-axe, and bacheet, the plumb line, the auger and wimble, the strong glew, as also fish-glew, and stone. Sautre. As for the rule & square, the leuell, the turners instrument, and the key, *Theodoros Samius* deuised them. *Phidon* the Argive, or *Palamedes* as *Gellius* rather thinketh, found out measures and weights. *Pyrrades* the son of *Clix*, deuised the way to strike fire first out of the flint, and *Prometheus*, the means to preferre & keep it in a stalk of *Ferula*, or Fennell gyant. The Phrygians inuented first the wagon & chariot with foure wheeles. As for trafficke and merchandise, the Carthaginians had the first honour thereof. *Eumolpus* the Athenian was of name for planting, pruning, and cutting vines: also for setting and grafting trees. *Staphylus* the sonne of *Silenus* taught men how to delay wine with

A with water. *Arifotle* the Athenian inuented the making of oyle oliue, as also the presse & mill thereto belonging. The same man taught the cast of drawing hony out of the combs. *Bucyges* the Athenian, or as others would haue it, *Triptolemus*, yoked oxen first for tillage of the ground, and deuised the plough. The Egyptians were the first of al men that were gouerned by the monarchy, and the Athenians, by a popular state. After the reigne of *Theseus*, the first king or tyrant was *Phalaris*, at Agrigentum in Sicily. The Lacedaemonians brought in bondage and slavery, first. The first iudgement that passed for life and death, was in the court Ariopagus at Athens. The first battell that euer was fought, was between the Africans and Egyptians; & the same performed by bastons, clubs, & coustaues, which they call *Phalangæ*. Shields, bucklers, and targets were deuised by *Praxus* and *Anisus*, when they warred one against the other: or els by *Calchus* the son of *Athamas*. *Midias* of Messene made the first cuirace. And the Lacedaemonians, the mourian, the sword, and the speare. The Carians deuised the grieues, the crests, and pennaches upon helmets. *Scythes* the son of *Iupiter*, deuised bow & arrows: although some say that *Perfus* the son of *Perfus* inuented arrows. The Aetolians inuented the lance and the pike: the dart with a loup, *Atolus* the son of *Mars*, deuised. As for the light iaculins, and the Partuifanes, *Tyrrhenus* brought them first into vse: & *Penhefites* the Amazon-queene, the gleiue, bill, battell-axe, and halbard. *Pisces* found out the bore-speare and chasing staffe. Among engines of artillery, the Cretes inuented the Scorpion or croffe-bow: the Syrians, the Catapult: the Phoenicians the ballist or brake, and the sling. *Pyscus* the Tyrrhenian brought vp the vse of the brassen trumpet: and *Aricnon Clozomenius* of the pauois, mantiles, targuet-roofs, for the assault of cities. The engine to batter walls (called sometime the horle, and now is named the ram) was the deuise of *Epeus* at Troy. *Bellerophon* shewed first how to ride on horseback. *Peletronius* inuented saddle, bridle, and other furniture for the horse. The Thessalians called Centaures, inhabiting neere to the mountain Pelius, were the first that fought on horseback. The Phrygians deuised first to driue and draw a chariot with two horses. *Erichthonius*, with foure. *Palamedes* inuented (during the Trojan war) the manner of setting an army in battell array: also the giuing of signall, the priuie watch-word, the Corps de guard, the watch and ward. In the time of the said war, *Simon* deuised the sentinels and watch-towers, as also the espiall. *Lycanor* was the first maker of truce. *Theseus* of leagues and alliances. *Car*, of whom Caria tooke the name, obserued first the flight and cry of birds, and thereby gaue prelagas and fore-tokens. *Orpheus* went farther in this skil, and tooke marks from other beasts. *Dolphus* pried into beasts inwards, and thereby foretold things to come. *Amphiarus* was the first that had knowledge in Pyromancie, & gathered signs by speculation of fire: like as *Tyresias* the Thebane, by the feeding and gesture of birds. *Amphichyon* gaue the interpretation of strange and prodigious sights, as also of dreames. *Atlas* the son of *Libya* (or as some say, the Egyptians; & as others, the Assyrians) inuented Astrology: & in that science *Anaximander* deuised the Sphere. As for the knowledge & destination of the winds *Aeolus* the son of *Hellen*, he professed it first. *Amphion* brought musike first into the world. The flute and the single pipe or recorder were the inuentions of *Pan*, the son of *Mercurie*. The crooked cornet, *Midias* in Phrygia deuised. And in the same country, *Marsyas* inuented the double fluit. But *Amphion* taught first to sing and play to the Lydian measures: *Thamyris* as the Thracian to the Dorian; and *Marsyas* of Phrygia to the Phrygian. *Amphion* likewise (or as some say, *Orpheus*, and after others *Linus*) plaied first vpon the Citterne or the Lute. *Terpander* put seuen strings more vnto it: *Simonides* added thereto an eighth; and *Timotheus* the ninth. *Thamyris* was the first that plaied vpon the stringed instrument, Lute Cittern, or harpe, without song: & *Amphion* sung withal, or according to some, *Linus*. *Terpander* was the first that set songs for the fore-said stringed instrument. And *Dardanius* the Thracian began first vocall musike to the pipe. The Curets taught to daunce in armour; and *Pyrrhus* the Morisk, in order of battell: and both these were taken vp first in Crete. The heroicke or hexametre verse we acknowledge to haue come first from the Oracle of *Pythius Apollo*. But about the original of Poemes & Poetry, there is a great question among authors. And it is probably gathered by histories, that there were Poets before the time of this Trojan war. *Phereclides* of Syros, in the daies of king *Cyrus*, inuented first the writing in prose. *Cadmus* the Milesian wrote Chronicles, and compiled the first history. *Lycan* hath the report of setting out the first publicke games, and prouing of matters & feats of strength of actiuiety, in Acadia. To *Asclepius* in Iolcum we are beholden for the first Solemnities and games at funerals: and after him to *Theseus*, in the streights of Isthmus. *Hercules* instituted

instituted the exercise of wrestlers and champions at Olympia: and *Pythius* was the first plaier at tennis. *Gyges* the Lydian gaue the first prooue of painting and limning, in *Aegypt*: but in Greece, *Euchir* a cousin of *Dadalus* was the first painter, as *Aristotle* suppoeth; but after *Theophrastus*, it was *Polygnotus* the Athenian. *Danaus* was the first that sailed with a ship, and so he passed the seas from *Egypt* to Greece; for before that time they vsed but troughs or flat planks, deuised by *K. Erythra* to crosse from one Island to another in the red sea. But we meet with some writers who affirme, that the Troians and Myrians were the first sailers, and deuised nauigation before them in Hellefpont, when they set out a voiage against the Thracians. And euen at this day in the British ocean, there be made certaine wicker boats of twigs couered with leather and stitched round about: in Nilus, of paper, cane-reed and rushes. *Philostephanus* withnessteth, that *Iason* first vsed the long ship or gally; but *Egefas* saith, that it was *Paralus*; *Cretas* attributes it to *Scymraus*; *Saphianus* to *Scymraus*; and *Archimachus*, to *Aegcon*. *Damastes* testifieth, that the *Erythraians* made the Bireme or gally with two banks of oares. *Thucydides* writeth that *Aminocles* the Corinthian built the first Trireme with three rows of oars to a side. *Aristotle* saith, that the Carthaginians were the first that set to sea the Quadrireme with 4 ranks of oares to a side: and *Nesichtbon* the Salaminian, set afores the first Quinqueme with 5 course of oares on either side. *Zenagoras* of Syracusa brought vp those of six; and so from it to those of ten, *Mnesigeon* was the inuenter. It is said, that *Alexander* the Great built gallies for 12 banks to a side: and *Philostephanus* reporteth, that *Ptolema* surnamed *Soter*, rose to fifteen: *Demetrius* the son of *Antigonus*, to thirty; *Ptolema Philadelphus*, to forty; and *Ptolema Philopator* surnamed *Tryphon*, to fifty. As for ships of burthen and merchandize, as hoyes, &c. *Hippus* Tyrian inuented them. The Cyrenians made frigates; the Phoenicians, the bark; the Rhodians, the Pinace and Brigantine: and last of all the Cyprians made the hulke and great carrack. The Phoenicians were the first that in sailing, obserued the course of the stars. The Copans deuised the oare: the Plateans inuented the broad and flat end thereof: *Icarus* the sailes: *Dadalus* the mast and the crosse saile-yard. The vessels for transporting of horses, were the inuention of the Samians, or else of *Pericles* the Athenien. The Thasij had the honour for framing the long ships couered with hatch: for before time they fought only from out of the hin-decke in the poupe, and the fore-castle in the proe. Then came *Pisus* the Tyrrhene, and armed the stem and beake-head of the shippe with sharpe tines and pikes of brasle: *Eupalamus* deuised the anchor: *Anacharsis* made it first with two teeth or floukes: the grasping hookes and the yron hands were the deuise of *Pericles* the Athenien, and finally, *Typhus* inuented the help of the helme, for the Pylot to steere & rule the ship. The first that set out an Armada to the sea for fight was *Achinos*. The first that killed beafts was *Hyperbius* the son of *Mars*: and *Prometheus* ventured to slay an oxe or a Beuise.

CHAP. LVII.

¶ Wherein appeared first the generall agreement of all Nations.

THE secret consent of all countries was shewed first in this, That they should vniuersally in all places vse the Ionian letters.

CHAP. LVIII.

¶ Of Antique Letters.

THE old characters of Greeke letters, were the same in manner that the Latine be in these daies; and this appeareth sufficiently by an antique table of brasle which came from the temple at Delphos, the which at this day is in the great library of the Palatium dedicated to *Minerva*, by the liberality of the Emperors, with this or such like inscription vpon it, *Nauicrates* (the son) of *Tisamenus* an Athenien, caused this table to be made and set vp to the noble virgin *Minerva*.

CHAP. LIX.

¶ When Barbers were first scene at Rome.

THE next thing that all people of the world agreed in, was to entertain Barbers, but it was late first ere they were in any request at Rome. The first that entered Italy came out of Sicillie, and it was in the 454 yeare after the foundation of Rome. Brought in they were by

A by *P. Titinius Mena*, as *Varro* doth report; for before time they neuer cut their haire. The first that was shauen euery day was *Scipio Africanus*; and after him commeth *Augustus* the Emperour, who euenmore vsed the rasor.

CHAP. LX.

¶ Of Horologies or Dials, when they were first deuised.

THE third vniuersal accord of all nations, was in the obseruation how the houres went; and this was a point grounded vpon good reason: but at what time, and by whom this was deuised in Greece, we haue declared in the second booke of this work; & long it was before this order came vp at Rome, as well as the vse of the Barber. In the 12 tables of Romane lawes, there is no mention at all made but of East and West; after certain yeeres the noon-stead point in the South quarter also was obserued, and the Consuls bedle or crier pronounced noon, when standing at the hall or chamber of the councill, he beheld the Sun in that wise betwene the pulpit called *Rostra*, and the *Grecoastasis* [which was a place where foreine embassadours gaue their attendance:] but when that the same sun inclined downward from the colume named *Moenia*, to the common gaole or prison, then he gaue warning of the last quarter of the day, and so pronounced. But this obseruation would serue but vpon cleere daies, when the sun shined: and yet there was no other means to know how the day went, untill the first Punicke war. *Fabius Velsalis* writeth, that *L. Papyrius Cursor*, 12 yeeres before the war with *Pyrrhus*, was the first, that for to do the Romans a pleasure, set vp a sun-dyall to know what it was a clocke, vpon the temple of *Quirinus* at the dedication thereof, when his father had vowed it before him. Howbeit mine author sheweth not either the reason of the making of that diall, or the workman; yet from whence it was brought, nor in what writer he found it so written. *M. Varro* reporteth, that the first diall was set vp in the common market place, vpon a colume neere the forefild *Rostra*, in the time of the first Punicke war, by *M. Valerius Messala* the Consull, presently after the taking of Catana in Sicily, from whence it was brought; thirty yeeres after the report that goeth of the foresaid quadrant and diall of *Papyrius*; namely, in the yeare after the foundation of the city 477. And albeit the strokes and lines of this Horologe or diall agreed not fit with the houres, yet were the people ruled and went by it for an hundred yeeres saue one, euen untill *Martius Philippus* (who together with *L. Paulus* was Censor) set another by it, framed & made more exquisitely according to Art. And this piece of work among other good acts done by the Censor during his office, was highly accepted of the people as a singular gift of his. Yet for all this, if it were a close and cloudy day wherein the Sun shone not out, men knew not what it was a clocke certainly; and thus it continued fve yeeres more. Then at last, *Scipio Nasica* being Censor with *Lenas*, made the deuise first to diuide the houres both of day and night equally, by water, distilling and dropping out one vessell into another. And this manner of Horologe or water-clocke, he dedicated in the end within house, and that was in the 595 yeere from the building of Rome. Thus you see how long it was, that the people of Rome could not certainly tell how the day passed. Thus much concerning the Nature of man: let vs returne now to discourse of other liuing creatures; and first of land-beafts.





THE EIGHTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS
SECVNDVS.

CHAP. I.

¶ Of landbeasts. The praise of Elephants: their wit and understanding.



Asse we now to treat of other living creatures, and first of land-beasts: among which, the Elephant is the greatest, and commeth neereft in wit and capacite, to men; for they vnderstand the language of that country wherein they are bred, they do whatsoeuer they are commanded, they remember what duties they be taught, and withall take a pleasure and delight both in loue and also in glory, nay more than all this, they embrace goodnesse, honestie, prudence, and equitie (rare qualities I may tel you to be found in men) and withall haue in religious reuerence (with a kinde of deuotion) not only the stars and planets, but the sun and moon they also worship. And in very truth, writers there be who report thus much of them. That when the new moon beginneth to appeare fresh and bright, they come downe by whole herds to a certaine riuer named Amelus, in the desarts and forests of Mauritania, where after that they are washed and solemnly purified by sprinkling and dashing themselves all ouer with the water, & haue saluted and adored after their manner that planer, they returne again into the woods & chafes, carrying before them their yong calves that be wearied and tired. Moreover, they are thought to haue a sense and vnderstanding of religion & conscience in others; for when they are to passe the seas into another country, they wil not embarke before they be induced thereto by an oath of their gouernors and rulers, that they shall returne again: and fene there haue bin diuers of them, being enfeebled by sicknesse (for as big and huge as they be, subiect they are to grieuous maladies) to lie vpon their backs, casting and flinging herbes vp toward heauen, as if they had procured and set the earth to pray for them. Now for their docility and aptnesse to learne any thing, the king they adore, they kneele before him, and offer vnto him garlands and chaplets of floures and green herbes. To conclude, the lesser sort of them, which they call Bastards, serue the Indians in good stead to eare and plough their ground.

CHAP. II.

¶ When Elephants were put to draw first.

The first time that euer they were knowne to draw at Rome, was in the triumph of Pompey the Great, after he had subdued Africke, for then were two of them put in geeres to his triumphant chariot. But long before that, it is said that Father Bacchus hauing conquered India, did the like when he triumphed for his conquest. Howbeit, in that triumph of Pompey, Proculus affirmeth, That coupled, as they were, two in one yoke, they could not possibly go in at the gates of Rome. In the late solemnity of tournois & sword-fight at the sharp, which Germanicus Caesar exhibited to gratifie the people, the elephants were seen to shew pastime with leaping & keeping a flir, as if they danced, after a rude and disorderly manner. A common thing it

was

Plinies Natrall History.

A was among them to sling weapons & darts in the aire so strongly, that the winds had no power against them; to flourish also before hand; yea, and to encounter and meet together in fight like sword-fencers; and to make good sport in a kinde of Moriske dance: and afterwards to go on ropes and cords: to carry (four together) one of them laid at ease in a litter, resembling the manner of women newly brought a bed: last of all, some of them were so nimble and well practised, that they would enter into an hall or dining place where the tables were set full of guests, and passe among them so gently and daintily, weighing as it were their feet in their going, so as they would not hurt or touch any of the company as they were drinking.

CHAP. III.

¶ The docilitie of Elephants.

This is knowne for certaine, that vpon a time there was an Elephant among the rest, not so good of capacity, to take out his lesions, and learn that which was taught him: and being beaten and beaten again for that blockish and dull head of his, was found studying and conning those feats in the night, which he had bin learning in the day time. But one of the greatest wonders of them was this, that they could mount vp and clime against a rope, but more wonderful, that they should slide downe again with their heads downward. *Mutianus*, a man who had in his time bin thrice Consul, reporteth thus much of one of them, that he had learned to make the Greeke characters, and was wont to write in that language thus much, *Thus haue I written, and made an offering of the Celticke spoiles*. Likewise hee saith, that himselfe saw at Puteoli, a certain ship discharged of Elephants embarked therein; and when they should be set ashore, and forced to go forth of the vessel, to which purpose there was a bridge made for them to passe ouer, they were affrighted at the length thereof, bearing out so far from the land into the water: and therefore to deceiue themselves, that the way might not seeme so long, went backward with their tails to the banke, and their heads toward the sea. They are ware, & know full well that their only riches (for loue of which, men lay wait for them) lieth in their armes and weapons that Nature hath giuen them: king *Tuba* calleth them their hornes: but *Herodotus*, who wrote long before him, and the custome of speech, hath tearmed them much better, teeth. And therefore when they are shed and fallen off, either for age, or by some casualtie, the Elephants themselves hide them within the ground. And this in truth is the only yuorie for all the rest, yea, and these teeth also so far as lay couered within the flesh, is of no price, and taken for no better than bone. And yet of late daies, for great scarcitie & want of the right teeth, men haue bin glad to cut and saw their bones into plates, and make yuorie therof. For hardly can we now come by teeth of any bignes, vnlesse we haue them out of India. For all the rest that might be gotten in this part of the world between vs and them, hath bin imploied in superfluities only, and serued for wanton toies. You may know yong Elephants by the whitenes of these teeth: and a speciall care and regard haue these beasts of them aboute all. They looke to one of them alwaies, that the point be sharp, and therefore they forbear to occlude it, least it should bee blunt against they come to fight: the other they vse ordinarily, either to get vp roots out of the earth, or to cast down any banks or mures that stand in their way. When they chance to be enaïroned and compassed round about with hunters, they set foremost in the rank to be seen, those of the heard that haue the least teeth: to the end, that their price might not be thought worth the hazard and venture in chafe for them. But afterwards, when they see the hunters eager, and themselves ouermatched and weary, they breake them with running against the hard trees, and leaping them behind, escape by this ranfome as it were, out of their hands.

CHAP. IIII.

¶ The clemencie of Elephants: their foresight and knowledge of their owne dangers: also the fell fiercenesse of the Tygre.

Wonder it is in many of these creatures, that they should thus know wherefore they are hunted, and withall take heed & beware of all their dangers. It is said, that if an elephant chance to meet with a man wandering simply out of his way in the wilderness, hee will mildly and gently let him in the right way again. But if he perceiue a mans fresh footing, before he espie the man, he wil quake and tremble for feare of being forelaide & surprised: he wil

flay

stay from farther following the sent, look about him euery way, snuffe and puffe for very anger. Neither will he tread vpon the tract of a mans foot, but dig it out of the earth, and giue it the next Elephant vnto him, and he againe to him that followeth, and so from one to another passeth this intelligence and message as it were, to the vtmost rank behind. Then the whole heard makes a stand, and cast round about to retorne backward, and withall put themselves in bartel array: so long continueth that strong virulent smel of mens feet, and runneth through them all, notwithstanding for the most part they be not bare but shod. Semblably, the Tigresse also, how fierce and cruell she be to other wilde beasts, & careth not a whit for a very Elephant; if shee happen to haue a sight of a mans footing, presently, by report, carieth away her young whelpes, and is gon. But how cometh she to this knowledge of a man? where saw he him euer before, whom thus she feareth? for surely such wild woods & forests are not much trauelled & frequented by men. Set case, that they may wel wonder at the strange sight and nouelty of their tracts, which are so feldome seen, how know they that they are to be feared? Nay, what should be the reason, that they dread to see a man indeed, being as they are, far bigger, much stronger, and swifter by many degrees than a man? Certes, herein is to be seen the wonderfull worke of Nature, and her mightie power, that the greatest, the most fell and sauage beasts that be, hauing neuer seen that which they ought to feare, should incontinently haue the sence and conceit, why the same is to be feared.

CHAP. V.

¶ The vnderstanding and memorie of Elephants.

THe Elephants march alwaies in troups. The eldest of them leadeth the vaward, like a captain, and the next to him in age, cometh behind with the conduct of the arrear-guard. When they are to passe ouer any riuer, they put formost the least of al their company, for feare, that if the bigger should enter first, they would, as they trod in the channell, make the water to swell and rise, and so cause the fould to be more deepe. *Antipater* writeth, that *K. Antiochus* had two Elephants, which he vsed in his wars about all the rest, and famous they were for their surnames, which they knew well enough, and wist when any man called them thereby: and verily, *Cato* reciting in his Annals the names of the principall captaine Elephants, hath left in writing, That the Elephant which fought most lustily in the point of the Punick war, had to name *Surus*, by the same token, that the one of his teeth was gone. When *Antiochus* on a time would haue founded the fould of a certaine riuer, by putting the Elephants before, *Ajax* refused to take the water, who otherwise at all times was wont to lead the way. Vherupon the king pronounced with a loud voice, That look which Elephant passed to the other side, he should be the captain and chiefe. Then *Patroclus* gaue the venture: & for his labor had a rich harness and caparison giuen him, & was all trapped in siluer (a thing wherein they take most delight) and made besides the foueraigne of all the rest. But the other that was disgraced thus, and had lost his place, would neuer eat any meat after, but died for very shame of such a reprochfull ignominy. For among other qualities, marvellous faithfull they are: for if one of them be ouermatched & vanquished in fight, he will neuer after abide the voice & braying of the conqueror, but in token of submission, giueth him a turfe of earth, with veruaine or grasse vpon it. Vpon a kind of shamefaced modesty, they neuer are seen to ingender together, but perform that act in some couert & secret corner. They go to rut, the male at 5 yeres of age, the female not before he is 10 yeres old. And this they do euery third yere: and they continue therein foue daies in the yere (as they say) and not aboute: for vpon the sixth day they all to wash themselves ouer in the running riuer: & before they be thus purified, return not to the heard. After they haue taken one to another once, they neuer change: neither fall they out and fight about their femalls, as other creatures do most deadly and mortally. And this is not for want of loue and hot affection that way: for reported it is of one Elephant, that he cast a fancy and was enamoured vpon a wench in *Egypt* that sold neseagies & garlands of floures. And lest any man should thinke that hee had no reason thereto, it was no ordinary maiden, but so amiable, as that *Aristophanes* the excellent Grammarian, was wonderfully in loue with her. Another therewas, so kind and full of loue, that he sanished a youth in the army of *Pholomau*, that scarce had neuer an haire vpon his face, and so entirely he loued him, that what day soeuer he saw him not, he would forbeare his

meat

A meat, and eat nothing. *K. tuba* likewise reporteth also of an Elephant that made court to another woman, who made and sold sweet ointments and perfumes. All these testified their loue and kindnes, by these tokens: joy they would at the sight of them, and looke pleasantly vpon them: make toward them they would (after their rude and homely manner) by all means of flatterie: and especially in this, that they would saue whatsoeuer people cast to them for to eat, and lay the same full kindly in their laps and bosomes. But no marvel it is that they should loue who are so good of memorie. For the same *tuba* saith, That an Elephant tooke knowledge and acquaintance of one man in his old age, and after many a yere, who in his youth had bin his ruler and gouernor. He affirmeth also, that they haue by a secret diuine instinct, a certain sence of iustice and righteous dealing. For when *K. Baechus* meant to be reuenged of 30 Elephants, that he had caused to be bound vnto stakes, and set other 30 to run vpon them, appointing also certain men among to pricke and prouoke them thereto, yet for all that, could not one of them be brought for to execute this butcherie, nor be ministers of anothers crueltie.

CHAP. VI.

¶ When Elephants were first seen in Italy.

THe first time that Elephants were seen in Italy, was during the war of *K. Pyrrhus*; & they called them by the name of *Luca boues*, i. Lucane oxen, because they had the first sight of them in the Lucans countrie, and it was in the 472 yere after the cities foundation. But in Rome it was seuen yeres after ere they were seen, and then they were shewed in a triumph. But in the yere 502, a number of them were seen at Rome by occasion of the victorie of *L. Metellus Pontifex* ouer the Carthaginians: which Elephants were taken in Sicilie. For 1400 of them were conueied ouer vpon planks and flat bottomes, which were laied vpon ranks of great stuns and pipes set thicke one by another. *Verrius* saith, that they were caused to fight in the great cirque or show place, and were killed there with shot of darts and iaelins for want of better counsel, and because they knew not well what to do with them: for neither were they willing to haue them kept and nourished, ne yet to be bestowed vpon any kings. *L. P. sc* saith they were brought out only into the shew place or cirque aforesaid, and for to make them more contemptible were chased round about it by certaine fellows hired thereto, hauing for that purpose certain flaues and perches, not pointed with iron, but headed with bals like foiles. But what became of them afterward, those Authours make no mention: who were of opinion that they were not killed.

CHAP. VII.

¶ Their fights and combats.

Much renowned is the fight of one Roman with an Elephant, at what time as *Annibal* forced those captiues whom he had taken of our men, to skirmish one against another to the vtterance. For the only Roman that remained vnlaine at that vnatural conflict, he would needs match with an Elephant, and see the combat himselfe, assuring him vpon his word, that if he could kil the beast, he should be dismissed and sent home with life & liberty. So this prisoner entred into single fight with the Elephant, & to the great hearts griefe of the Carthaginians flew him out-right. *Annibal* then sent him away indeed according to promise and covenant; but considering better the consequence of this matter, and namely, that if this combat were once by him bruted abroad, the beasts would be lesse regarded, and their seruice in the wars not esteemed; made after him certaine light horsemen to overtake him vpon the way to cut his throat, to making him sure for telling tales. Their long snout or trunk which the Latins call *Proboscis*, may be easily cut off, as it appeared by experience in the wars against *K. Pyrrhus*. *Festus* writeth, That the first sight of them in Rome, was exhibited in the grand Cirque, during the time that *Claudius Pulcher* was *Edile Curule*, when *M. Antonius* and *A. Posthumus* were Consuls: in the 650 yere after the citie of Rome was built. In like manner, 20 yeres after, when the *Luculli* were *Ediles Curule*, there was represented a combat between bulls and Elephants. Also in the second Consulship of *P. Pompeius* at the dedication of the temple to *Venus Victroress*, 20 of them, or as some write, 17 fought in the great Cirque. In which solemnitie

the Getalians were set to lance darts and jaelins against them. But among all the rest, one Elephant did wonders: for when his legs and feet were shot and sticke full of darts, he crept vpon his knees, and neuer staid til he was gotten among the companies of the said Getalians, where he caught from them their targets and bucklers perforce, flung them aloft into the aire, which as they fell, turned round, as if they had bin trundled by art, & not hurled & thrown with violence by the beasts in their furious anger: and this made a goodly sight, and did great pleasure to the beholders. And as strange a thing as that was seen in another of them, whose fortune was to be killed out of hand with one shot: for the dart was so driuen, that it entered vnder the eie, and pierced as far as to the vitall parts of the head, euen the ventricles of the brain. Whereupon all the rest at once assailed to break forth and get away, not without a great hurry & trouble among the people, notwithstanding they were without the lists, and those set round about with yron grates and bars. [And for this cause *Cæsar* the Dictatour, when afterwards hee was to exhibit the like show before the people, cast a ditch round about the place, letting in the water and so made a more thereof: which prince *Nero* afterwards stopped vp, for to make more room for the knights and men of armes.] But those Elephants of *Pompey* being past all hope of escaping and going elcure away, after a most pittifull manner and rufull plight that cannot bee expressed, seemed to make mone vnto the multitude, craving mercie and pittie, with grievous plaints and lamentations, bewailing their hard state and wofull case: in such sort, that the peoples hearts earned again at this piteous sight, and with tears in their eies, for very compassion, rose vp all at once from beholding this pageant, without regard of the person of *Pompey* that great General and Commander, without respect of his magnificence and stately shew, of his munificence and liberality, where he thought to haue woun great applause and honor at their hands; but in lieu thereof fell to cursing of him, and wishing all those plagues and misfortunes to light vpon his head, which soon after ensued accordingly. Moreover, *Cæsar* the Dictatour in his third Consulship exhibited another sight of them, and brought forth 20 to maintain skirmish against 500 footmen: and a second time he set out 20 more, with wooden turrets vpon their backs, containing 60 defendants apiece: and he opposed against them 500 footmen, and as many horse. After all this, *Claudius* and *Nero* the Emperors brought them forth one by one into single fight, with approued, expert, and accomplished fencers, at the end of all the other solemnities when they had done their prizes. This beast, by report of all writers, is so gentle to all others that are but weak, and not so strong as himselfe, that if he passe through a flock or heard of smaller cattell, it will with the nose or trunk which serueth in stead of his hand, remoue and turn aside whatsoeuer beast commeth in his way, for feare he should go ouer them, and so crush and tread vnder his foot any of them, ere it were aware. And neuer do they any hurt, vnlesse they be prouoked thereto. Alwaies walke they by troups together, and worst of all other can they away with wandering alone, but loue company exceeding well. If it fortune that they be inuironed with horsemen, look how many of their fellows be feeble, weary, or wounded, those they take into the mids of their squadron: and as if there were marshalled and ordered by a Sergeant of a band, or heard the direction of some General, so skillfully and as it were with guidance of reason, do they maintain fight by turns, and succede one after another in their course. The wild sort of them, after they be taken, are soonest brought to be tame and gentle, with the iuice or decoction of husked barley.

CHAP. VIII.

¶ The manner of taking Elephants:

The Indians are wont to take Elephants in this manner: the gouernor diueth one of them that are tame, into the chafe and forrests, and when he can meet with one of them alone, or single him from the heard, he all to beate the wilde beast till he hath made him wearie, and then he mounteth vpon him & ruleth him as well as the former. In Africk they catch them in great ditches which they make for that purpose: into which, if one of them chance to wander astray from his fellows, all the rest immediately come to succour him; they heap together a deale of boughs, they rol down blocks & stones, and whatsoeuer may serue to raise a banke, and with all that euer they can do, labor to plucke him out. Before time, when they meant to make them tractable, their maner was, by a troupe of horsemen to driue or train them by little & little

a long

A long way in a certain lawn or vally, made by mans hand for the nones, ere they were aware, and when they were inclosed within ditches or banks, there they would keep them from meat so long, vntill for very hunger they would be glad to come to hand for food: & by this they might know they were gentle and tame enough to be taken, if they would meckly take a branch of a bow presented and offered vnto them. But now adies, since they seek after them for their teeth sake, they make no more ado but shoot at their legges, which otherwise naturally are tender enough and the softest part of their whole body. The Troglodites, a people bounding vpon Æthiopia, who liue only vpon the venison of Elephants flesh, vse to clime trees that be neer their walk, and there take a stand: from thence (letting all the heard to passe quietly vnder the trees) they leap down vpon the buttocks of the himmolt: then he that doth this feat, with his left hand laith fast hold vpon his taile, and sets his feet and legs fast in the flanke of the left side, and so hanging and bending backward with his body, he cutteth the ham-strings of one of his legges with a good keen bil or hatchet that he hath of purpose in his right hand: which done, the Elephant beginneth to slack his pace, by reason that one of his legs is wounded: the man then maketh shift to get away and alighteth on foot, and for a farwell he hougheth the sinews likewise of the other ham; and all this doth he in a trice with wonderful agility and nimbleness. Others haue a safer way than this, but it is more subtil and deceitfull: they set or stick in the ground a great way off, mighty great bows ready bent; to hold these fast, they chuse certain tall lusty, and strong fellows, and as many others as sufficient as they, to draw with all their might and maine the bayd fowes against the other, and so they let flie against the poore Elephants as they passe by, iaelins and bore-spears, as if they shot shafts, and stick them therewith, and so follow them by their blood. Of these beasts, the femals are much more fearfull than the male kind.

CHAP. IX.

¶ The manner of taming Elephants:

AS furious and raging mad as they be sometime, they are tamed with hunger and stripes: but men had need to haue the help of other Elephants that are tame already, to restrain the vnuly beast with strong chains: of all times, when they go to rut they are most out of order and starke wood, down go the Indian stables and beast stals then, which they ouerturne with their teeth, and therefore they keep them from entering into that fit, and separate the femals apart from the males, making their parks and enclosures afunder, as they doe by other beasts. The tamed sort of them serue in the wars, and carry little castles or turrets with armed souldiers, to enter the squadrons and battalions of the enemies: and for the most part, all the serue in the wars of the East, is performed by them, and they especially determine the quarrell: these be they that breake the ranks, beare down armed men that are in the way, and stampe them vnder foot. These terrible beasts (as outrageous otherwise as they seeme) are frightened with the least grunting that is of a swine: be they wounded at any time or put into a fright, backward alwaies they go, and do as much mischief to their own side: that way, as to their enemies. The African Elephants are afraid of the Indian, and dare not look vpon them; for in truth the Indian Elephants be far bigger.

CHAP. X.

¶ How they breed and bring forth their young: and of their nature otherwise.

The common sort of men thinke, that they go with young ten yeres: but *Aristotle* saith that they go but two yeres, and that they breed but once and no more in their life, and bring not about one at a time: also that they liue commonly by course of nature 200 yeres, and some of them 300. Their youthfull time and strength of age beginneth when they be 60 yeres old: they loue riuers above all things, and lightly ye shall haue them euermore wandering about waters; and yet by reason otherwise of their big and vnwealdie bodies, swim they cannot. Of all things they can worst away with cold, and that is it they are most subiect vnto, and feeble greatest inconuenience by: troubled they be also with the collick, and ventosities, as also with the flux of the belly: other maladies they feele nor. I find it written in histories, that if

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they

they drinke oile, the arrows and darts which stick in their bodies will come forth and fall off : G but the more that they sweate, the sooner will they take hold and abide in still the faster. The eating of earth breeds the consumption in them, vntlesse they feed and chew often therof: they deuoure stones also. As for the trunks and bodies of trees, it is the best meat they haue, & therein take they most delight. If the date trees be too high that they cannot reach the fruit, they will ouerturn them with their forehead, and when they lie along, eat the dates. They chew and eat their meat with their mouth: but they breathe, drink, and smell, with their trunk, which not improperly is called their hand. Of all other liuing creatures, they cannot abide a mouffe or a rat, and if they perceiue that their prouender lying in the manger, tall and sent neuer so little of them, they refuse it and wil not touch it. They are mightily tormented with paine, if they chance in their drinking to swallow down an horleech (which worm, I obserue, they begin now to call a blood-sucker): for so soon as the horleech hath settled fast in his wind-pipe, he putteth him to intolerable pains. Their hide or skin of their back is most tough & hard, but in the belly, soft & tender: couered their skin is neither with haire nor bristle, no nor so much as in their taile, which might serue them in good stead to driue away the busie & troublesome flie (for as vast & huge a beast as he is, the flie hantheth & stingeth him) but sul their skin is of crosse wrinkles lattise wise, & besides that, the smell thereof is able to draw and allure such vermin to it: & therefore when they are laid stretched along, and perceiue the flies by whole swarms settled on their skin, suddenly they draw those cranies and creuises together close, and so crush them all to death. This serues them in stead of taile, main, and long haire. Their teeth beare a very high price, and they yeeld the matter of greatest request, and most commendable, for to make the statues and images of the gods: but such is the superfluity and excesse of men, that they haue deuised another thing in them to commend, for they find forsooth a special dainty tast in the hard callous substance of that which they call their hand: for no other reason (I beleue) but because they haue a conceit that they eat yvorie, when they chew this gristle of their trunk. In temples are to be seen Elephants teeth of the greatest size: howbeit in the marches of Africke where it confineth vpon Ethiopia, they make of yuory the very principals and corner posts of their houses: also with the Elephants tooth they make mounds & pales both to inclose their grounds, and also to keep in their beasts within park, if it be true that *Polybius* reporteth, from the testimony of king *Guliffa*.

CHAP. XI.

¶ Where the Elephants are bred : how the Dragons and they disagree.

Elephants breed in that part of Africke which lieth beyond the deserts and wilderness of the Syrtes: also in Mauritania: they are found also amongst the Ethiopians and Troglodytes, as hath beene said : but India bringeth forth the biggest, as also the dragons that are continually at variance with them, & euermore fighting, and those of such greatnesse, that they can easily clasp and wind round about the Elephants, and withall tye them fast with a knot. In this conflict they die, both the one and the other: the Elephant he falls downe dead as conquered, and with his heauy weight crusheth and squeaseth the dragon that is wound and wreathed about him.

CHAP. XII.

¶ The wittinesse and policie in these creatures.

Wonderfull is the wit and subtilty that dumbe creatures haue, and how they shift for themselves and annoy their enemies, which is the only difficulty that they haue to arise & grow to so great an heighth and excesse of bignes. The dragon therefore spying the Elephant when he goeth to reliefe, assaileth him from an high tree and launceth himselfe vpon him; but the Elephant knowing well enough he is not able to withstand his windings & knittings about him, seeketh to come close to some trees or hard rocks, and so for to crush and squise the dragon between him and them: the dragons were hereof, entangle and snarle his feet & legs first with their taile: the Elephants on the other side, vndo those knots with their trunk as with a hand: but to preuent that againe, the Dragons put in their heads into their snout, and so

A so stop their wind, and withall fret and gnaw the tenderest parts they find there. Now in case these two mortall enemies chance to re-incounter on the way, they bristle & bridle one against another, and addresse themselves to fight; but the chiefe thing the dragons make at is the eie, whereby it comes to passe, that many times the Elephants are found blinde, pined for hunger, and worn away, and after much languishing, for very anguish and sorrow die of their venom. What reason should a man alledge of this so mortall warre betweene them, if it be not a very sport of Nature, and pleasure that she takes, in matching these two so great enemies together, and so euen and equal in each respect? But some report this mutual war betweene them after another sort, and that the occasion thereof ariseth from a naturall cause: for (say they) the Elephants blood is exceeding cold, and therefore the dragons be wonderful desirous thereof to refresh and coole themselves therewith during the parching hot season of the yeare. And to this purpose they ly vnder the water, waiting their time to take the Elephants at a vantage when they are drinking; where they catch fast hold first of their trunk, and they haue not so soone clasped and intangled it with their taile, but they set their venomous teeth in the Elephants eare (the onely part of all their body which they cannot reach vnto with their trunk) and so bite it hard: now these dragons are so big withal, that they are able to receiue all the elephants blood: thus are they sucked dry vntill they fall downe dead: and the dragons also, drunke with their blood, are squeesed vnder them, and so dy together.

CHAP. XIII.

¶ Of Dragons.

C IN Ethiopia there be as great dragons bred as in India, namely 20 cubits long: but I maruell much at this one thing, that king *Inba* should think they are crested. They are bred most in a country of Ethiopia where the *Aschæi* inhabit. It is reported, that vpon their coast they are innwrappd foure or fise of them one within another, like to a hurdle or lattise-work, and thus passe the seas to find out better pasturage in Arabia, cutting the waues, and bearing their heads aloft, which serue them in stead of sailes.

CHAP. XIV.

¶ Of monstrous great Serpents, and namely of those called Boas.

D *Megasthenes* writeth, that there be serpents amongst the Indians growne to that bignesse, that they are able to swallow stags or bulls all whole. *Metrodorus* saith, that about the riuer *Rhyndacus* in Pontus, there be serpents that catch and deuoure the fowles of the aire, be they neuer so swift winged, and soare they neuer so high. Well knowne it is, that *Attilius Regulus*, General vnder the Romans during the wars against the Carthaginians, assailed a Serpent neere the riuer *Bagrada*, which carried in length 120 foot; and before hee could conquer him was driuen to discharge vpon him arrows, quarrels, stones, bullets, and such like shot, out of brakes, slings, and other engines of artillery, as if he had giuen the assault to some strong warlike towne: the prooffe whereof was to be seen by the marks remaining in his skin and chawes; E which vntill the war of *Numantia* remained in a temple or conspicuous place of Rome. And this is the more credible, for that we see in Italy other serpents named *Box*, so big and huge, that in the daies of the Emperor *Claudius* there was one of them killed in the Vatican, within the belly whereof there was found an infant all whole. This serpent liueth at the first of kins milk, and therof takes the name *Box*. As for other beasts which ordinarily of late are brought from all parts into Italy, and oftentimes haue there been seen, needlesse it is for me to describe their formes in particular curiously.

CHAP. XV.

¶ Of Scythian beasts, and those which are bred in the North parts.

F Very few sauage beasts are ingendred in Scythia for want of trees & pasturage. Few likewise in Germany bordering vpon it. Howbeit that country brings forth certaine kinds of goodly great wild beastes: to wit, the *Bifontes*, mained with a collar like Lions: and the *Vri*,

Vri,a mighty strong beast and a swift, which the ignorant people call Buffles, whereas indeed the Buttle is bred in Africke, and somewhat resembles a calfe rather, or stag. The Northernne regions bring forth wilde horses, which there are found in great troupes : like as in Asia and in Africk there are to be seen wild Asses. Moreover, a certain beast called the Alce, very like to a horse, but that his eares are longer, and his necke also with two markes distinguishing them a-funder. Moreover, in the Island of Scandinavia there is a beast called Machlis, not much vnlike the Alce aboue-named : common he is there, & much talk we haue heard of him, howbeit in these parts he was neuer seen. He resembles, I say, the Alce, but that he hath neither ioynt in the hough, nor patermes in his hind legs ; and therefore he neuer lieth downe, but sleepeeth leaning to a tree. Wherefore the hunters that lie in wait for these beasts, cut down the trees while they are asleepe, and so take them : otherwise they should neuer be taken, they are so swift of foot, that it is wonderfull. Their vpper lip is exceeding great, and therefore as they graze and feed they go retrograde, lest if they went passant forward, they should fold that lip double vnder their muzzle. There is (they say) a wild beast in Paonia, called Bonafus, with a maine like an horse, otherwise resembling a bull : many his hornes bend so inward with their tips toward his head, that they serue him in no stead at all for fight, either to offend, or defend himself : and therefore all the helpe hee hath is in his good footmanship, and otherwhiles in his flight by dunging, which he will squirt out from behind him three acres in length. This his ordure is so strong and hot, that it burneth them that pursue him, like fire, if haply they touch it. A strange thing it is, and wonderfull, that the Leopards, Panthers, Lions, and such like beasts, as they go, draw in the points of their claws within their body, as it were into sheaths, because they should neither breake nor wax blunt, but be alwaies keene and sharpe : also, that when they runne they should turne the hooked nailes of their pawes back, and neuer stretch them forth at length but when they meane to assaile or strike any thing.

CHAP. XVI.

¶ Of Lions.

THe Lions are then in their kind most strong and courageous, when the haire of their main or collar is so long that it couereth both necke and shoulders. And this comes to them at a certain age, namely to those that are ingendred by Lions : for such as haue Pards to their sires neuer haue this ornament, no more than the Lionesse. These Lionesses are very lecherous, and this is the cause that the Lions are so fell and cruell. This, Africke knowes best, and sees most ; and especially in a great drought, when for want of water a great number of wilde beasts resort by troupes to those few riuers that be there, and meet together : and hereupon it is, that so many strange shaped beasts of a mixt and mungrell kind are there bred, whiles the males either perforce or for pleasure leap and couer the females of all sorts. From hence it is also that the Greeks haue this common prouerbe, *that Africke euermore brings forth some new and strange thing or other*. The Lion knoweth by scent and smell of the Pard, when the Lionesse his mate hath played false, and suffered her selfe to be couered by him ; and presently with all his might and maine runneth vpon her for to chastise and punish her. And therefore when the Lionesse hath done a fault that way, the either goeth to a riuer and washeth away the strong and ranke saour of the Pard, or else keepeth aloofe and followeth the Lion afar off, that he may not catch the said smell. I see it is commonly held, that the Lionesse brings forth yong but once in her life, for that her whelps in her kinning teare her belly with their nailes, and make themselves roome that way. *Aristotle* writeth otherwise, a man whom I cannot name but with great honour and reuerence, and whom in the historie and report of these matters I meane for the most part to follow. And in very truth King *Alexander* the Great, of an ardent desire that he had to know the natures of all liuing creatures, gaue this charge to *Aristotle*, a man singularly accomplished with all kinds of science and learning, to search into this matter, and to set down the same in writing : and to this effect commanded certaine thousands of men, one or other, throughout all the tract as well of Asia as Greece, to giue their attendance and obey him : to wit all Hunters, Falconers, Fowlers, and Fishers that liued by those professions : Item, all Forrefters, Park-keepers, and Vvariners : all such as had the keeping of herds and flocks of cattell : of bee-hiues, fish-pools, stews, and ponds : as also those that kept vp fowle tame or wild,

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A in mew : those that fed poultry in batten or coup : to the end that he should be ignorant of nothing in this behalfe, but be aduertised by them, according to his Commission, of all things in the world. By his conference with them he collected so much, as thereof hee compiled those excellent bookes de *Animalibus*, i. of Liuing creatures, to the number almost of 50. Which being couched by me in a narrow roome and brieue summary, with addition also of some things which he neuer knew, I beseech the Readers to take in good word : and for the discourse and knowledge of all Natures works, which that most noble and famous King that euer was desired so much to know, to make a short start abroad with me, and in a brieue discourse by mine own pains and diligence digested, to see all. To return now vnto our former matter : That great philosopher *Aristotle* therefore reporteth, That the Lionesse at her first litter bringeth forth five whelps, and euery yeare after fewer by one ; and when the cometh to bring but one alone, she giueth ouer and is barren. Her whelps at the first are without shape like small gobbets of flesh no bigger than weecles. When they are six monthes old they can hardly go, and for the two first they stir not at all. Lions there be also in Europe (only between the riuers Achelous and Nestus) and these verily be far stronger than those of Africke or Syria. Moreover, there are two kinds of Lions : the one short, well trusted, and compact, with more crisp and curled mains, but these are timorous and cowards to them that haue long and plain haire ; for those passe not for any wounds whatsoever. The Lions lift vp a leg when they pisse, as dogs do : and moreover, they haue a strong and sinking breath, their very body also smelleth rank. Seldom they drinke, and eat but each other day ; and if at any time they feed til they be full, they will abstain from meat three daies after. In their feeding, whatsoever they can swallow without chewing, downe it goes whole : and if they finde their gorge and stomack too full, and not able indeed to receiue according to their greedy appetite, they thrust their pawes down their throats, and with their crooked clees fetch out some of it again, to the end they should not be heauy and flow vpon their fullnesse, if haply they be put to find their feet and fly. Mine Author *Aristotle* saith moreover, That they liue very long : and hee proueth it by this argument, That many of them are found toothlesse for very age. *Polybius*, who accompanied *Scipio*, *Æmylianus* in his voiage of Africke, reporteth of them, That when they be grown age they will prey vpon a man : the reason is, because their strength will not hold out to pursue in chase any other wild beasts : then they come about the cities and good towns of Africke, lying in wait for their prey, if any folk come abroad : and for that cause, he saith, that while hee was with *Scipio*, hee saw some of them crucified and hanged vp, to the end that vpon the sight of them other Lions should take example, and be skarrd from doing the like mischief. The Lion alone of all wilde beasts, is gentle to those that humble themselves vnto him, and will not touch any such vpon their submission, but spareth what creature soeuer lieth prostrate before him. As fell and furious as he is otherwise, yet he dischargeeth his rage vpon men, before he sets vpon women, and neuer preyeth on babes vnlesse it be for extreme hunger. They are verily perswaded in Lybia, that they haue a certain vnderstanding when any man doth pray or intreat them for any thing. I haue heard it reported for a truth, by a captiue woman of Getulia (which being fled was brought home again to her master) that she had pacified the violent fury of many Lions within the woods and forests, by faire language and gentle speech ; and namely, that for to escape their rage, shee hath been so hardy as to say, she was a silly woman, a banished fugitiue, a sickly, feeble, & weak creature, an humble suiter and lowly suppliant to him the noblest of all other liuing creatures, the Soueraigne and commander of all the rest, and that she was too base and vnworthy for his glorious Maiestic to prey vpon her. Many and diuers opinions are currant, according to the sundry occurrences that haue hapned, or the inuentions that mens wits haue deuised as touching this matter ; namely, that sauage beasts are dulced and appeased by good words and faire speeche as also that fell serpents may be trained and fetched out of their holes by charmes ; yea and by certaine coniuurations and menaces restrained and kept vnder for a punishment : but whether it be true or no, I see it is not yet by any man set downe or determined. To come againe to our Lions, the signe of their intent and disposition is their taile ; like as in horses, their eares : for these two marks and tokens certainly hath Nature giuen to the most courageous beasts of all others, to know their affections by : for when the Lion stirs not his taile, he is in a good mood, gentle, mild, pleasantly disposed, and as if he were willing to be plaied withall : but in that fit he is seldom seen, for lightly he is alwaies angry. At the first when he entrencheth into his choler,

he

he beate the ground with his taile: when he groweth into greater heats, he flappeth and jer-
keth his flanks and sides withall, as it were to quicken himselfe, and stir vp his angry humour.
His maine strength lieth in his brest: hee maketh not a wound (whether it be by laish of taile,
scratch of claw, or print of tooth) but the blood that followeth is black. When his belly is full
all his anger is past, and he doth no more harme. His generositie and magnanimitie he shewes
most in his dangers: which courage of his appeareth not only herein, that he seems to despise
all shot of darts against him, defending himselfe a long time onely with the terrible aspect of
his countenance, proteſſing as it were that he is unwilling to deale, vnlesse he be forced thereto
in his owne defence, *i. defendendo*, and at length maketh head again, not as compelled or dri-
uen thereto for any perill that hee seeth, but angered at their folly that affaile or set vpon him:
but herein also is seen rather his noble heart and courage, That he there neuer so many hounds
and hunters following after him, so long as he is in the open plains where he may be scene, hee
maketh semblance as though he contemned both dog and man, dismarching and retiring with
honour, and otherwhiles seeming in his retreat to turne again and make head: but hauing gain-
ed the thickets and woods, and gotten into the forests out of sight, then he skuds away, then
he runneth amain for life, as knowing full well, that the trees and bushes hide him, that his
shamefull dislodging and flight is not then espied. When hee chafeth and followeth after
other beaſts he goeth alwaies saltant or rampant; which he neuer vseth to do when he is chased
in fight, but is only passant. If he chance to be wounded, he hath a marcellous eye to mark the
party that did it, and be the hunters neuer so many in number, vpon him he runneth only. As
for him that hath let fly a dart at him, and yet missed his marke and done no hurt to him, if
he chance to catch him, he all to touzeth, shaketh, toſſeth, and turneth him lying along at his feet,
but doth him no harme besides. When the Lionesse fighteth for her yong whelps, by report,
she ketteth her eies wistly and entirely vpon the ground, because she would not be affrighted
at the sight of the chafing flauies of the hunters. Lions are nothing at all crafty and fraudulent,
neither be they suspitious: they neuer look askew, but alwaies cast their eye directly forward,
and they loue not that any man should in that sort looke side-long vpon them. It is constantly
belieued, that when they ly a dying they bite the earth, & in their very death shed teares. This
creature, so noble as hee is, and withall so cruell and fell, trembleth and quaketh to heare the
noise of cart-wheeles, or to see them turne about; nay hee cannot abide of all things Chariots
when they be void and empty: frightened hee is with the cockes combe, and his crowing much
more, but most of all with the sight of fire. The Lion is neuer sicke but of the pecuifness of
his stomacke, loathing all meat: and then the way to cure him is to tynto him certaine free
Apes, which with their wanton mocking and making moves at him, may moue his patience,
and drue him for the very indignitie of their malapert fauciness, into a fit of madnesse; and
then so soone as he hath tasted their blood he is perfectly wel again: and this is the only help.
Scævola the son of *Publius* was the first at Rome that in his Curule *Edileſhip* exhibited a
fight and combat of many Lions together, to delight the people: but *L. Sylla*, who was after-
ward Dictator, was the first of all others that in his Pretorship represented a shew of 100 lions
with maines and collars of haire: and after him, *Pompey* the Great shewed 600 of them fighting
in the grand Cirque, whereof 315 were male Lions with mane, And *Cæſar* Dictator brought
400 into the shew-place. The taking of them in old time was a very hard piece of worke,
and that was commonly in pit-falls: but in the Emperor *Claudius* his daies it chanced, that a shep-
heard or heardfin who came out of *Gætulia* taught the manner of catching them: a thing
otherwise that would haue bene thought incredible, and altogether vnbecoming the name
and honour of so goodly a beaſt. This *Getulian*, I say, fortun'd to encounter a Lion, and when
he was violently assailed by him, made no more ado but threw his mandilion or cassocke full
vpon his eyes. This feat or cast of his was soone after practised in the open Shew-place, in
such sort that a man would hardly haue beleued but hee that saw it, that so furious a beaſt
should so easily be quailed, and daunted so soone as euer hee felt his head couered, were the
things neuer so light, making no resistance, but suffering one to do what hee would with him,
even to binde him fast, as if in very truth all his vigour and spirit rested in his eies. Lesse there-
fore is it to be maruelled at, that *Lyſimachus* strangled a Lion, when as by the commandment
of *Alexander* the Great he was shut vp alone together with him. The first man that euer yoked
them a Rome, and made them to draw in a chariot, was *M. Antonius*. And verily it was in
the

- A the time of ciuill warre, after the battell fought in the plaines of *Pharfalia*; a shrewd and vn-
happy preface of the future euent, and namely for men of an high spirit & braue mind in those
daies, to whom this prodigious fight did prognosticate the yoke of subiection: for what should
I say how *Anthony* rode in that wife with the Courtesan *Cytheris* a common Aſſeſſe in Inter-
ludes vpon the stage? To see such a fight was a monstrous spectacle, that passed all the calami-
ties of that time. It is reported that *Hanno* (one of the nobleſt Carthaginians that euer were)
was the first man that durst handle a Lion with his bare hand, and shew him gentle and tame,
to follow him all the city ouer in a flippe like a dog. But this deuice and trickes of his turned
to his great damage and vtter vndoing: for the Carthaginians hereupon laid this ground, that
Hanno, a man of such a gift, so witty and inuentive of all deuises, would be able to persuade the
people to whatſoeuer his minde stood; and that it was a dangerous and ticklish point, to put
the liberty of so great a state as Carthage was, into the hands and managing of him who could
handle and tame the furious violence of so sauage a beaſt, and thereupon condemned and ba-
nished him. Moreover we find in histories many examples also of their clemencie and gen-
tleness, seen vpon diuers casual occasions. *Mentor* the Syracusan fortun'd in Syria to meet
with a Lion, who after an humble manner in token of obedience and submissiue, seemed to treme-
ble and wallow before him: he astonished for feare started backe and began to fly; but the wild
beaſt followed him still, and was ready at euery turne to present himselfe before him, licking
the very tracks of his foot-steps as he went, in flattering manner, as if he would make loue vnto
him. *Mentor* at length was ware that the Lion had a wound in his foot, and that it swelled there-
with: whereupon he gently plucked out the spill of wood that had gotten into it, and so eased
the beaſt of his paine. This accident is for a memoriall represented in a picture at *Syracusa*.
C Semblably, *Elpis* a Samian being arriued and landed in *Africke*, chanced to spy neer the shore
a Lion gaping wide, and seeming afar off to whet his teeth at him in menacing wise: he fled a-
pace to take a tree, calling vpon god *Bacchus* to help him (for then commonly wee fall to our
praiers when we see little or no hope of other help): but the Lion stopt him not in his flight,
albeit he could haue crossed the way well enough, but laying himselfe downe at the tree root;
with that open mouth of his wherewith he had skared the man, made signes to moue pity and
compassion. Now so it was, that the beaſt hauing lately fed greedily, had gotten a sharp bone
within his teeth, that put him to exceeding paine: besides that, hee was almost famished: and
D he looking pittifully vp to the man, shewed how he was punished himselfe among those verie
weapons wherewith he was wont to annoy others, and after a sort with dumb and mute prayers
besought his help. *Elpis* auied him well a pretty while; and besides that hee was not very for-
ward to venture vpon the wilde beaſt, he staid the longer and made the lesse haſt, while he con-
sidered rather this strange and miraculous accident, than otherwise greatly feared. At last he
comes downe from the tree and plucks out the bone, while the Lion held his mouth hand-
somerly to him, and exposed himselfe to his helpfull hand as fitly as he possibly could. In requi-
tall of which good turne, it is said, that so long as this ship of his lay there at anchor, the Lion
furnished him and his company with good store of veniſon ready killed to his hand. And vpon
this occasion *Elpis* after his return dedicated a temple to *Bacchus*: which vpon this reason the
E Greeks called *Καλὴν Βακχίαν*, *i. of gaping Bacchus*; or *Ζωοποιοῦσαν αἰνῶν*, *i. the chappell of Bacchus* the
Saviour. Can we maruell any more from henceforth, that wild beaſts should marke and know
the footing of a man, seeing that in their extremities and necessities they haue recourse to him
alone for hope of succour? Why went not they to other creatures? or who taught them that
the hand of man was able to cure them? vnlesse it be the reason, that griefe, anguish, and ex-
treme perill forceth euen sauage beaſts to seek all means of help and reliefe.

CHAP. XVII.

¶ Of Panthers.

- D *Emetritus* the philosopher, so well seen into the speculation of Natures works, & the cau-
ses thereof, makes mention of as memorable a case as the former, touching a Panther: for
as he saith there was a Panther desirous to meet with a man, & therefore lay in the mids
of an high-way vntill some passenger should come by, and suddenly was espied by the father
of

of *Philinus* the Philosopher, who traualled that way. The man (for feare) began to retire and go backe againe, but the wild beaſt kept a tumbling and vaunting all about him, doubtleſſe and by all appearance after a flattering ſort, as if it would haue had ſomewhat, and ſuch a toſſing and tormenting of it ſelfe ſhe made, ſo piteouſly, that it might ſoone be ſeene in what griefe and pain the Panther was. The poore beaſt had but lately kindled, and her young whelps were ſalne into a ditch, a ſarre off well, the firſt point that the man ſhewed of pittie and commiſeration was, not to be affraid, and the next was, to haue regard and care of her: follow he did the Panther, as ſhe ſeemed to train and draw him by his garment (which with her clawes ſhee tooke hold of dauntily) vntill they were come to the pit or ditch aboue ſaid. So ſoon then as he knew the cauſe of her griefe and ſorrow, and withall what might be the reward of his courteſie, euen as much as his life came to, he drew forth her little ones that were fallen into the ſaid pit: which don, ſhe and her whelps together laſping and ſhewing gambols for ioy, accompanied him, and through the wilde neſſe directed him vntill he was gotten forth. So as it appeared in her, that ſhee was thankfull vnto him, and requited his kinde neſſe, albeit there paſſed no couenant nor promiſe betweene them of any ſuch recompence: a rare example to be ſound euen among men. This ſtory and ſuch like giue great colour of truth to that which *Democritus* reporteth, namely, that *Theas* in Arcadia ſaued his life by means of a dragon. This *Theas* being but a very child, had loued this dragon when he was but young, very well, and nourished him: but at laſt, being ſomewhat fearfull of his nature, and not well knowing his qualities, and fearing withall the bignes that now he was growne vnto, had carried him into the mountains and deſarts: wherein it fortuned that he was afterward ſet vpon and inuironed by thecues: whereupon he cried out, and the dragon knowing his voice, came forth and reſcued him. As for babes and infants caſt forth to perith, and ſuſtained by the milke of wilde beaſts, likeas *Romulus* and *Remus* our firſt founders, who were ſuckled by a ſhe wolfe; ſuch things in mine opinion are in all reaſon to be attributed more to fortune and fatall deſtinies, than to the nature of thoſe beaſts. The Panthers and Tygers are in a manner the only beaſts (for the varietie of ſpotted ſkins and * ſurres which they yeeld) in great requeſt, and commendable: for other beaſts haue each one a proper colour of their owne, according to their kind: Lions there be all blacke, but they are found in Syria only. The ground of the Panthers ſkin is white, beſet all ouer with little black ſpots like eyes. It is ſaid, that all four-footed beaſts are wonderfully delighted and enticed by the ſmell of Panthers; but their hideous looke and crabbed countenance, which they bewray by ſhewing their heads, ſkareth them as much againe: wherefore their maner is to hide their heads, and hauing trained other beaſts within their reach by their ſweet ſauour, they fly vpon them and worrie them. Some report, that they haue one marke on their ſhoulder reſembling the Moone, growing and decreaſing as the doth, ſometime ſhewing a full compaſſe, and otherwhiles hollowed and pointed with tips like hornes. In all this kind and race of wild beaſts now adaies they call the male * *Varix* and *Pardj*, and great abundance there is of them in Atricke and Syria. Some there be againe that make no other difference betweene the Luzernes and Leopards, and theſe Panthers, but only this, that the Panthers are white: and as yet I know no other marks to deſcry them by. There paſſed an old Act and Ordinance of the Senate, forbidding expreſly that any Panthers of Aſricke ſhould be brought into Italy. Agaiſt this edict, *Cn. Anſidius* a Tribune of the commons put vp another bill vnto the people; and granted it was, That for the ſolemnitie of the games *Circenſes* they might be brought ouer. *Scaurus* was the firſt man who in his *Ædiliſhip* exhibited a ſhew vnto the people of 150 Luzernes together. After him *Pompey* the Great brought forth 410. The Emperor *Auguſtus* 420: who alſo in the yere that *Q. Tiberio* and *Fabius Maximus* were Conſuls together (vpon the 4 day before the Nones of May, at the dedication of the Theatre of *Marcellus*) was the firſt of all others that ſhewed a tame Tyger within a cage: but the Emperor *Claudius* ſoure at once.

CHAP. XVIII.

¶ Of the Tyger and his nature: of Camels, *Chamelopardales*, and when they were firſt ſeen at Rome.

TYgers are bred in Hircania and India: this beaſt is moſt dreadfull for incomparable ſwiftheſſe, and moſt of all ſeen it is in the taking of her young: for her litter (whereof there is a great

A great number) by the hunters is ſtolne and caried away at once, vpon a moſt ſwift horſe for the purpoſe; lying in wait to eſpy when the dam is abroad: and ſhifteſh this booty from one freſh horſe to another, riding away vpon the ſpur as hard as they can. But when the Tygreſſe comes and finds her den & neſt empty (for the male Tygre hath no care nor regard at all of the yong) ſhe runs on end after her yong ones, following thoſe that caried them away, by the ſent of their horſe footing. They perceiuing the Tygreſſe to approach, by the noiſe ſhe maketh, let fall or caſt from them one of her whelps: vpon the taketh it in her mouth, and away ſhe runneth toward her den, ſwifter for the burthen than the carrieth. And preſently the ſetteeth out again, following the queſt after her ſawnes, and ouertaketh the Hunter that had them away. Thus runneth ſhe to and fro, vntill ſhe ſee that they be embarqued and gone; and then for very anger that ſhe hath not ſped of her purpoſe, ſhe rageth vpon the ſhore and the ſands for the loſſe of her

B Fawnes.

As for Camels, they are nourished in the Levant or Eaſt parts among other herds of great cattell: two kinds there be of them, the Baſſians and the Arabick: differing herein, that the Baſſians haue two bunches vpon their backs; the other but one peece there, but they haue another in their breſt, whereupon they reſt and ly. Both ſorts want the vpper row of teeth in their mouths, like as bulls and kine. In thoſe parts from whence they come they ſerue all to carry packs like labouring horſes, and are put to ſeruiſe alſo in the wars, and are backed of horſemen: their ſwiftheſſe is comparable to that of horſes; they grow to a juſt meaſure, and exceed not certaine ordinary ſtrength. The Camel in his travelling will not goe a ior farther than his ordinary iourney; nether will hee carry more than his accuſtomed and vſual load. Natural-ly they doe hate horſes. They can abide to be ſoure daies together without drinke: and when they drinke or meet with water, they fill their ſkin full enough to ſerue both for the time paſt and to come: but before they drinke they muſt trample with their feet to raiſe mud and ſand, and ſo trouble the water, otherwiſe they take no pleaſure in drinking. They liue commonly fifty yeares, and ſome of them an hundred. Theſe creatures alſo otherwhile fall to be mad, ſo much as it is. Moreouer, they haue a deuice to ſplay euen the very females, to make them fit for the warres; for if they be not couered they become the ſtronger and more courageous.

D Two other kinds of beaſts there be that reſemble in ſome ſort the Camels: the one is called of the *Æthiopians*, the *Nabis*, necked like an horſe, for leg and hoofe not unlike the beaſt, headed direſtly like a Camell, beſet with white ſpots vpon a red ground, whereupon it taketh the name of *Camelopardalus*: and the firſt time that it was ſeen at Rome, was in the games *Circenſes*, ſet out by *Cæſar* Dictator. Since which time he comes now and then to Rome, to be looked vpon more for ſight, than for any wild nature that hee hath: whereupon ſome call her the ſavage Sheepe.

CHAP. XIX.

¶ Of the *Cham* and *Cephus*.

E The Hinde-wolfe, which ſome call *Chaus*, and the *Gauls* were wont to name *Rhaphius*, reſembling in ſome ſort a Wolfe with Leopards ſpots, were ſhewed firſt in the ſolemnitie of the games and plaies exhibited by *Cn. Pompeius* the Great. He alſo brought out of *Æthiopia* other beaſts named *Cephi*, i. Semivulpes, whoſe forefeet were like to mens hands, and the hinde feet and legs like thoſe of a man. He was neuer ſeen afterward at Rome.

CHAP. XX.

¶ Of the *Rhinoceros*.

F IN the ſame ſolemnities of *Pompey*, as many times elſe was ſhewed a *Rhinoceros*, with one horne and no more, and the ſame in his ſnout or muzzle. This is a ſecond enemy by nature the Elephant: hee ſleth that horne of his againſt hard ſtones, making it ſharpe againſt he ſhould fight; and in his conflict with the Elephant he layes principally at his belly, knowing it to be more tender than the reſt. He is full as long as he, his legs are much ſhorter, and of the box colour.

CHAP. XXI.

¶ *Lynxes or Onces, and Marmozets or Apes, called Sphinges : of Crocutes, Monkeys, English beastes, Leocrocutes, Eale : of Ethiopian bulls, the Mantichore and Lycornes : of the Serpents called Catoblepes, and the Basiliske.*

Onces are common, so are Marmozets, with a browne dusky haire, hauing dugns in their breast. Ethiopia breedeth them, like as many other monstrous beastes, to wit, horses with wings, and armed with hornes, which they cal Pegasi. Also the Crocutes [a kind of mastiue dogs] ingendred betwix a dog and a Wolfe: these are able to craff with their teeth all they can come by: and a thing is no sooner downe their swallow, and got into their stomacke, but presently they digest it. Moreouer, the Cercopithecii, .i. Monkeys with black heads, otherwife haired like Affes, differing from other Apes in their cry. The Indians haue certain beaues with one horne, and others with 3. Also the Leocrocute, a most swift beast, as big almost as an he Affe, legged like an Hart, with a necke, taile, and breast of a Lion, headed like these grayes or Badgers, with a clouen foot in twaine: the slit of his mouth reacheth to his eares, in stead of teeth an entire whole bone. They report that this beast feigneth a mans voice. They haue also among them another beast named Eale, for bignes equal to the riuier-horse, tailed like an Elephant, either black or reddish tawny of colour: his mandibles or chawes resemble those of the Bore, he hath hornes about a cubit long, which he can stir or moue as he list: for being in fight he can let them both or one of them as he will himselfe, altering them euery way, one while straight forward to offend, otherwhiles bending byas, as he hath reason to nort or push toward, or auoid an enemy. But the most fell and cruell of all others of that country be the wild bulls of the Forrest, greater than our common field bulls, most swift, of colour brended, their eyes gray or blewish, their haire growing contrary, their mouth wide and reaching to their eares: their hornes likewise hard by, moueable, their hide as hard as a flint, checking the dent of any weapon whatsoeuer, and cannot be pierced: all other wilde beastes they chase and hunt, themselves cannot be taken but in pit-falls: in this their wildnesse and rage they dy, & neuer become tame. *Ctesias* writeth, that in Ethiopia likewise there is a beast, which he calls Mantichora, hauing three ranks of teeth, which when they meet together, are let in one within another like the teeth of combs, with the face and eares of a man, with red eyes, of colour sanguine, bodied like a Lion, and hauing a taile armed with a sting like a Scorpion: his voice resembles the noise of a flute and trumpet sounded together: very swift he is, and mans flesh of all other he chiefly desireth. In India there be found beaues whole hoofed, with single hornes; also a wilde beast named Axis [as some thinke a muske cat] with a skin like a sawne or hind-calf, howbeit marked with more and whiter spots. This beast is consecrated to *Bacchus*, and vnder his protection. The Orsians of India hunt Apes, and take a number of them while all ouer. But the most fell and furious beast of all other is the Licorne or Monoceros: his body resembles a horse, his head a stag, his feet an Elephant, his taile a bore; he loweth after an hideous manner, one black horne he hath in the mids of his forehead, bearing out two cubits in length: by report, this wilde beast cannot possibly be caught alieue. Among the Hesperian Ethiopians there is a fountain named Nigris, the head (as many haue thought) of the riuier Nilus, and good reason there is for it, alledged by vs before: neere which spring keepeth a wilde beast called Catoblepes, little of body otherwife, heauy also and slow in al his limmes besides, but his head only is so great that his body is hardly able to beare it, he alwaies carrieth it downe to the earth, for if hee did not so, he were able to kill all mankind; for there is not one that looketh vpon his eyes, but he dies presently. The like propertie hath the serpent called a Basiliske: bred it is in the prouince Cyrenaica, and is not aboue twelue fingers bredth long: a white spot like a starre it carrieth on the head, and sets it out like a coronet or diadem: if he be hisse once, no other serpents dare come neere: hee creepeth not winding and crawling byas as other serpents doe, with one part of the body driuing, the other forward, but goeth vpright and aloft from the ground with one halfe part of his body: he killeth all trees and shrubs not onely that he toucheth, but also that hee breatheth vpon: as for grasse and herbes, those he findgeth and burneth vp, yea, and breaketh stones in sunder: so venomous and deadly he is. It is receiued for a truth, that one of them on a time

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A time was killed with a lance by an horsman from his horse-back, but the poison was so strong, that went from his body along the staffe, as it killed both horse and man: and yet a filly weazle hath a deadly power to kill this monstrous serpent, as pernicious as it is [for many kings haue beene desirous to see the experience thereof, and the manner how he is killed.] See how Nature hath delighted to match euery thing in the world with a concurrent. The manner is, to cast these weazles into the hole an deranies where they lye, (and easie they be to know by the stinking sent of the place about them:) they are not so soone within, but they overcome them with their strong smell, but they die themselves withall; and so Nature for her pleasure hath the combat dispatched.

CHAP. XXII.

¶ *of Wolves.*

It is commonly thought likewise in Italy, that the eye sight of wolues is hurtful; in so much, as if they see a man before hee espy him, they cause him to lose his voice for the time. They that be bred in Africk and Egypt, are but little, and withal nothing liuely, but without spirit. In the colder clime, they be more cruell and eger. That men may be transformed into wolues, and restored againe to their former shape, we must confidently beleue to be a lowd lie, or esseigne credit to all those tales which we haue for so many ages found to be meere fables. But how this opinion grew first, & is come to be so firmly settled, that when we would giue men the most opprobrious words of defiance that we can, we terme them * *Veripelles*, I thinke it not much amiss in a word to shew. *Enanthes* (a writer among the Greekes, of good account and authority) reporteth, that he found among the records of the Arcadians, That in Arcadia there was a certaine house and race of the *Amat*, out of which one euermore must needs be transformed into a wolfe: and when they of that family haue cast lots who it shall be, they vse to accompany the party vpon whom the lot is faine, to a certaine meere or poole in that country: when he is thither come, they turne him naked out of all his clothes, which they hang vpon an oke thereby: then he swimmeth ouer the said lake to the other side, and being entered into the wildernesse, is presently transfigured and turned into a wolfe, and so keepeth company with his like of that kind for nine yeeres space: during which time, (if he forebore all the while to eat mans flesh) he returneth againe to the same poole or pond, and being swomme ouer it, receiueth his former shape againe of a man, saue only that he shall look nine yeeres elder than before. *Fabius* addeth one thing more and saith, That he findeth againe the same apparell that was hung vp in the oake aforesaid. A wonder it is to see, to what passe these Greekes are come in their credulity: there is not so shamelesse a lye, but it findeth one or other of them to uphold and maintaine it. And therefore *Agrippas*, who wrote the Olympionica, telleth a tale of one *Damantius Parrhasius*, That he vpon a time at a certain solemne sacrifice (which the Arcadians celebrated in the honour of *Iupiter Lycæus*) tasted of the inwards of a child that was killed for a sacrifice, according to the manner of the Arcadians (which euen was to shed mans blood in their diuine seruice) and so was turned into a wolfe: and the same man ten yeeres after, became a man againe, was present at the exercise of publick games, wrestled, did his deuoir, and went away with victory home againe from Olympia. Ouer and besides, it is commonly thought and verily beleueed, that in the taile of this beast, there is a little string or haire that is effectuell to procure loue, and that when he is taken at any time, he casteth it away from him, for that it is of no force and vertue vnlesse it be taken from him whiles he liues. He goeth to rut in the whole yere not aboue twelue dayes. When he is very hungry and can get no other prey, he feedeth vpon the earth. In the case of presages and fore-tokens of things to come, this is obserued. That if men see a wolfe abroad, cut his way and turne to their right hand, it is good; but if his mouth be full when he doth so, there is not a better signe or more lucky in the world againe. There be of this kind that are called Hart-wolues, such as we said that *Pompey* shewed in the grand Cirque, brought out of Fraunce. This beast (they say) be he neuer so hungry when hee is eating, if he chance to look backe, forgetteth his meat, slinketh away, and seeketh for some other prey.

*Tun: coats:

CHAP. XXIII.

¶ Of Serpents.

AS touching serpents we see it ordinary, that for the most part they are of the colour of the earth, wherein they lie hid: and an infinite number of sorts there be of them. The serpent Ceraſtes hath many times foure small hornes, standing out double; with mouting whereof he amuseth the birds, and traineth them vnto her for to catch them, hiding all the rest of her body.

Amphisbæna hath two heads as it were, namely one at the taile; as if she were not hurtfull enough to cast her poyson at one mouth only. Some are scaled, others spotted and painted, but generally the venom of them all is deadly. There be of them that from the boughes of trees shoo out and launce themselves: in such manner, as that we are not onely to take heed of serpents as they go and glide vpon the ground, but also to looke vnto them that fly as a dart or arrow sent out of an engin. The Aspides swell about the necke when they purpose to sting: and no remedie is there for them that are stung and bitten by them, vntill the wounded parts be cut off presently. This pestilent creature, as venomous as he is, hath one point yet of vnderstanding or affection rather; you shall not see them wandring abroad but two and two together, male and female, as if they were yoked together: and unneeth or not at all can they liue alone without their mate; so that if one of them be killed, it is incredible how the other seeks to be reuenged: it pursueth the murderer, and knoweth him again among a number of people, be they neuer so many: him it courseth, and layeth for his life; notwithstanding what difficulties foueuer, he breaketh through all, be it neuer so far thither, and nothing may impeach this reuenging humor, vntill some riuier be between to keep it backe, or that the party make speed to escape away in great haste. And I assure you, I am not able to say, whether Nature hath bin more free and prodigall in sending among vs such noisome things, or giuing vs remedies againe for them. For to begin withall, she hath afforded to this creature but a darke sight, and dim eyes; and those not placed in the forefront of the head, to see forward and directly, but set in the very temples. And hercof it is, that these serpents are raised oftner by their hearing than sight.

CHAP. XXIV.

¶ Of the Rat of India called Ichneumon.

BESIDES the foresaid infirmities, there is mortall war between them and the Ichneumones or Rats of India. A beast this is well knowne to the Apis, in this regard especially, that it is bred likewise in the same Egypt. The manner of this Ichneumon is, to wallow off times within the mud, and then to dry it selfe against the Sun: and when he hath thus armed himselfe as it were with many coats hardened in this manner, he goeth forth to combat with the Apis. In fight he sets vp his taile, and whips about turning his taile to the enemy, and therein lurcheth and receiveth all the strokes of the Apis, and taketh no harme thereby: and so long he maintaineth a defensive battell, vntill he espy a time, turning his head a side, that he may catch the Apis by the throat, and throttle it. And not content thus to haue vanquished this enemy, he addresseth himselfe to the conflict with another, as hurtfull euery way & dangerous as the former.

CHAP. XXV.

¶ Of the Crocodile, Scinke, and Riuier-Horse.

THE riuier Nilus nourisheth the Crocodile; a venomous creature, foure footed, as dangerous on water as land. This beast alone, of all other that keepe the land, hath no vife or tongue, he onely moueth the vpper jaw or mandible, wherewith he bitheth hard; and otherwise terrible he is, by reason of the course and ranke of his teeth, which close one within another, as if two combs grew together. Ordinarily he is aboute eightene cubits in length. The female layeth eggs as big as geese do, and sitteth euery vpon them out of the water: for a certaine naturall foreknowledge she hath, how far the riuier Nilus will that yeare rise when he is at the highest,

A highest and without it will see be sure to fit. There is not another creature againe in the world, that of a smaller beginning, groweth to a bigger quantity. His feet be armed with claws for offence, and his skin so hard, that it will abide any injury whatsoever, and not be pierced. All the day time the Crocodile keepeth vpon the land, but he passeth the night in the water: and in good regard of the season he doth the one and the other. When he hath filled his belly with fishes, he lieth to sleep vpon the sands in the shore: and for that he is a great and greedie deuourer, somewhat of the meat sticketh euermore between his teeth. In regard whereof cometh the wren a little bird called thus Trochilos, and the king of birds in Italy: and thence for her viduals sake, hoppeth first about his mouth, fallett to pecking or picking it with her little neb or bill, and so forward to the teeth, which he cleareth, and all to make him gap. Then getteth shee within his mouth, which he openeth the wider, by reason that he taketh so great delight in his scraping and scouring of his teeth and claws. Now when he is lulled as it were fast asleep with this pleasure and contentment of his: the rat of India, or Ichneumon aboute said spieth his vantage, and seeing him lye thus broad gaping, whippeth into his mouth, and shooteth himselfe downe his throat as quicke as an arrow, and then gnaweth his bowels, eateth an hole through his belly, and so killeth him.

Within the riuier Nilus there breeds another Serpent called Scincos, like in forme and proportion somewhat to the Crocodile, but not all so big as the Ichneumon: the flesh whereof seruethe for a singular Antidote or countre-poyson; as also for to prouoke the hear of lust in men.

C But to returne againe to the Crocodile: the mischief that he doth is so great, that Nature is not content to haue giuen him one mortal enemy & no more; & therefore the dolphins also enter the riuier Nilus in despite of the Crocodiles, that take themselves for kings there, as if this riuier were their peculiar kingdome: but seeing they be otherwise inferior to the Crocodiles in strength, who alwaies driue them away from preiding or feeding there, they desire to ouermatch him in sleight and subtilty, and so kill him. And in truth they haue certain fins or wings as it were vpon their backe, as trenchant & keene as knives, properly made as it were, for this purpose. For surely all creatures are herein naturally very skilfull and cunning, to know not only their owne good, and what is for them, but also what may hurt and annoy their enemies. Ware they be what offensive weapons they haue, and of what force they are: they are not ignorant of fit occasions and opportunities to take their vantage, ne yet of the weak parts of their occurrents, by which they may assaile and conquer them the sooner. Thus the Dolphins knowing full well, that the skin of the Crocodiles belly is thin and soft, make as though they were afraid of them: as he comes, and so diue vnder the water, vntill he be gotten vnder his belly, & then punch and cut it with the forehead sharp-pointed finnes. Moreover, there is a kind of people that carry a deadly hatred to the Crocodile, and they be called Tentyrites, of a certaine Isle euen within Nilus, which they inhabite. The men are but small of stature, but in this quarrell against the Crocodiles, they haue hearts of Lions, and it is wondrous to see how resolute and courageous they are in this behalfe. Indeed, this Crocodile is a terrible beast to them that flee from him: but contrary, let men pursue him or make head againe, he runnes away most cowardly. Now, these Islanders be the only men that dare encounter him affront.ouer and besides,

E they will take the riuier, and swim after them, nay they will mount vpon their backs, and fer them like horsemen: and as they turne their heads, with their mouth wide open to bite or deuour them they will thrust a club or great cudgell into it crosse ouerthwart, & so holding hard with both hands each end thereof, the one with the right, and the other with the left, and ruling them therefore, (as it were) with a bit and bridle, bring them to land like prisoners: when they haue them there, they will so fight them only with their words and speech, that they compel them to cast vp and vomit those bodies againe to be entered, which they had swallowed but newly before. And therefore it is, that this is the only Isle which the Crocodiles wil not swim to: for the very smell and sent of these Tentyrites is able to driue them away, like as the Pestil with their fauour put Serpents to flight. By report, this beast feedeth but badly in the water: but be they once without, they are most quick sighted. All the 4 winter months they liue in a cage, and eat nothing at all. Some are of opinion, that this creature alone groweth all his life: and surely a great time he liueth.

The fame riuier Nilus bringeth forth another beast called Hippopotamus, a Riuier-horse. Taller he is from the ground than the Crocodile: he hath a clouen foot like a bœufe: the back,

maine and haire of an horse, and he hath his neyng also. His muzzle or snout turneth vp: his taile twineeth like the Bores, and his teeth likewise are crooked and bending downward as the Bores tusks, but not so hurtfull: the skin or hide of his backe vnpenetrable [whereof are made targuets and head-pieces of doubtie proof that no weapon wil pierce] vntill he is foked in water or some liquor. He eateth downe the standing corne in the field: and folke say that he setteth downe beforehand where he will pasture and feed day by day: and when hee fets forward to any field for his reliefe hee goeth alwaies backward, and his traicts are fenee leading from thence, to the end that against his return he should not be forelaid nor followed by his footing

CHAP. XXVI.

¶ Who first shewed the riuer-Horse and Crocodiles at Rome. Also the medicinable means found out by the said dumbe creatures.

Marcus Scaurus was the first man, who in his plaies and games that he set out in his Ædileship, made a shew of one water-Horse and foure Crocodiles, swimming in a poole or more made for the time during those solemnities.

The riuer-Horse hath taught physicians one deuice in that part of their profession called Surgerie: for hee finding himself ouer-groffe & fat by reason of his high feeding so continually, gets forth of the water to the shore, hauing spied afore where the reeds and rushes haue bin newly cut: and where hee seeth the sharpest cane and best pointed, hee fets his body hard vnto it, to prick a certaine veine in one of his legs, and thus by letting himselfe blood maketh euacuation: whereby his body, otherwise inclining to diseases and maladies, is well eased of the superfluous humor: and hauing thus done, hee stoppeth the orifice againe with mud, and so stauncheth the blood, and healeth the wound.

CHAP. XXVII.

¶ What physcall Herbes certaine creatures haue shewed vs to wit, the harts and stags, the Lizards, Swallows, Tortois, the Weasell, the Storke, the Bore, the Snake, Dragon, Panther, Elephant, Beares, flocks-Doues, house-Doues, Cranes, and Ravens.

The like deuice to this, namely of clifters, we learned first of a Fowle in the same Egypt, called Ibis [or the blacke Storke.] This bird hauing a crooked and hooked bill, vieth it in stead of a syringe or pipe to squirt water into that part, whereby it is most kinde and wholsome to auoid the doung and excrements of meat, and so purgeth and clenseth her body. Neither hath dumbe creatures directed vs to these feats onely practised by the hand, which might serue for our vse, to the preservation of our health, and cure of diseases: for the hart first shewed vs the vertue of the herbe Distamnus or Dittanie, to draw arrowes forth of the bodie. Perceiuing themselves shot with a shaft, they haue recourse presently to that herbe, and with eating thereof it is driuen out againe. Moreouer, being stung with the Phalangium, a kinde of spider, or some such venomous vermin, they cure themselves with eating Crai-fishes, or fresh water crabs.

There is a certain herbe called Calaminth, most foueraine and singular against the biting of serpents: wherewith the Lizards, whensoever they haue fought with them, cure their wounds by applying it thereto.

Celandine [the greater] a most wholsome herbe for the eie sight, Swallows taught vs how to vse: for with it they helpe their yong ones when they eeries be fore and put them to grieue.

The land Tortoise by eating of a kinde of Saurie or Marjerome, called *Cunila bubula*, armes himselfe against poyson when he should fight with serpents.

The Weasell vieth Rue as a preseruatue when hee purposeth to hunt for Rats, in case hee should fight with any of them.

The Storke feeling himselfe amiss, goeth to the herbe Organ for remedy. And the Bore when he is sicke is his owne physician, by eating iuy and crab fishes, such especially as the sea casteth vp to shore.

The Snake by restinesse and lying still all Winter, hath a certain membrane or filme growing

A ing ouer her whole body, but hauing recourse to Fennel, with the iuice thereof she casteth that old coat that cloggeth her, and appeareth fresh, slick, and yong againe. Now the manner of this her vncasing, is this; she beginneth first at the head, and turneth the skin ouer it, and thus she is a whole day and a night a folding it backward, before the inside of that membrane can be turned outward, and so she is clean rid of it. Moreouer, when by lying still & keeping close all the Winter time, her sight is become dim and dark, she rubbeth and scoureth her self with the said herbe Fennell, and therewith annoineth and comforteth her eies. But if the scales that are ouergrowne her skin be hard and stiffe, nor willing to part and be removed, she maketh no more adoe, but scratcheth them with sharp juniper pricks.

The Dragon finding a certain lothing of meat, and ouerturning of her stomack in the spring time, cureth and helps the same with the iuice of the wild Lesciue.

B The barbarous people when they hunt the Panthers, rub the goblets of flesh, which they lay as a bait for them, with Aconitum (a kind of poison-ful herbe.) The beafts haue no sooner touched the flesh, but presently their throat swelleth, and they are ready to be stifled and choked: whereupon some haue called this venomous herbe Pardalianches. Libard baine, or choke Libard. But the wilde beast hath a remedy against this, namely, the ordure and excrements of a man; yea, and at other times also, when he is not thus poisoned, so eager he is thereof, that when the shepheards for the nonce haue hanged them vp aloft in some vessell about their reach, although they leap vp at them, he is ready to faint with mounting on high, & straining to get the same, and in the end killeth himselfe therewith, & lieth dead on the ground. And yet otherwife he is too vntoward to be killed, and so long it is ere he will die, that when he is panned, and his very guts come forth of his belly, he will liue still, and fight.

The Elephant if he chance to let the [Lizard] Chameleon go downe his throat amongst other herbes or leaues (which this Lizard alwaies is like vnto in colour) he goeth straightwaies to the wild Oliue, the only remedy he hath of this poison.

Beares, when they haue eaten Mandrage apples, lick vp pissmires to cure themselves withall. The Stag and Hind feeling themselves poisoned with some venomous weed among grasse where they pasture, go by and by to the Artichoke, and therewith cure themselves.

The Stock-doues, the Iais, Merles, Blackbirds, Oufels, recouer their appetite to meat, which once in a yeare they lose, with eating Bay-leaues that purge their stomack. Partridges, House-doues, Turtledoues, and all Pulletin, as Hens, Cocks, and Capons, do the like with Parietarie of the wall, Ducks, Geese, and other water fowls purge with the herb Endiue or Cichory. Cranes and such like helpe themselves that way with the Marsh reed.

The Raven when he hath killed the Chameleon, and yet perceiuing that he is hurt and poisoned by him, flieth for remedy to the Laurell, and with it represseth and extinguisheth the venom that he is infected withall.

CHAP. XXVIII.

¶ The Prognostication of weather, taken by the obseruation of dumbe creatures.

Moreouer, the same vniuersall Nature hath giuen a thousand properties besides vnto beafts: and namely, hath endued very many of them with the knowledge and obseruation of the aire about giuing vs good means by them diuers waies, to fore-see what weather we shall haue, what winds, what raine, what tempest will follow: which to decipher in particular, it is not possible, no more than to discourse thoroughly of their other qualities they haue respectiue to the society with every man. For their aduertise & warn vs before-hand of dangers to come, not only by their fibres and bowels (about the skill and presage wherof, the most part of the world is amazed) but also by other manner of tokens and significations. When an house is readie to tumble downe, the mice goe out of it before: and first of all, the spiders with their webs fall down. As for the flight of birds & their fore-tokening, called Augurie, there is an Art of it, and the knowledge thereof is reduced into a method, in so much as at Rome there was a college of Augurus instituted: by which it may appeare in what account & regard that sacerdotal dignitie and profession was. In Thracia, which is a cold and frozen countrie, the Fox alfo will not passe ouer any riuer or poole that is frozen, before he trie the thickenesse of the yce by

by his eare, and otherwise it is a beast most quicke of hearing. And obserued it is, that men neuer venture thereupon, but when he goes to reliefe, or returneth from thence, and then he layes his eare close to the yce, and guessteth thereby how thicke the water is frozen.

CHAP. XXIX.

¶ *What cities and nations have been utterly destroyed by little beasts.*

Nothing is more certain and notorious than this, that much hurt and dammage hath been known to come from small contemptible creatures, which otherwise are of no reckoning and account. *M. Parro* writes, that there was a towne in Spaine vndermined by Conies: and another likewise in the Thessalie, by the Moldwarpes. In France the inhabitants of one cite were driuen out and forced to leaue it, by Frogs. Also in Affricke the people were compelled by Locusts to void their habitations: and out of Gyarus an Island, one of the Cyclades, the Islanders were forced by Rats and Mice to flee away. Moreover, in Italie the cite Amycle was destroyed by serpents. In Æthiopia, on this side the Cynamolgi, there is a great country lieth wast and desart, by reason that it was dispeopled sometime by Scorpions, and a kinde of Pismires called Solpuger. And if it be true that *Theophrastus* reporteth, the Trieriens were chased by certaine wormes called Scolopendres. But now let vs returne to other kinds of wild beasts.

CHAP. XXX.

¶ *Of the Hyana, Crocuta, Mantichora, Bieucers, and Otters.*

As touching Hyanes, it is commonly beleued, that they haue two natures, and that euery second yeere they change their sexe, being this yeere males, and the next yeere females. Howbeit, *Aristotle* denieth it. Their necke and the mane therewith, together with the backe, are one entire bone without any ioint at all, so as they cannot bend their necke without turning the whole body about. Many strange mattes are reported of this beast, and about all other, that he will counterfeite mans speech, and coming to the shepheards cottages, will call one of them forth, whose name he hath learned, and when he hath him without all to worrie and teare him in peeces. Also it is said that he will vomit like a man, thereby to train dogs to come vnto him, and then will deuoure them. Also, this beast alone of all others, will search for mens bodies within their graues and sepulchres, and rake them forth. The female is seldome taken. He changeth his eies into 1000 diuers colours. Moreover, if a dog come within his shadow, he presently loseth his barking and is quite dumbe. Again he is a kinde of magicall charme or enchantment, if he goe round about any other liuing creature but three times, it shall not haue the power to stir a foot and remooue out of the place. The Lionesses of Æthiopia, if they be couered with any of this kinde, bring forth another beast called Leocrocuta, which likewise knows how to counterfeite the voice both of man, and of other beasts. He fees continually with both eies: he hath one entire bone in stead of teeth in either iaw (and no gombs at all) wherewith he cuts as with a knife. Now these bones, because they should not wax dul and blunt with continuall grating one against the other, they are enclosed each of them with a case or sheath.

Iuba reports that the Mantichora also in Æthiopia resembles mens language. Great store of Hyenes be found in Affricke: which also yelds a multitude of wild Asses. And one of the males is able to rule and leade a whole flocke of the female asses. This beast is so ialous, that they looke narrowly to the females great with young: for so soone as they haue foled, they bite off the cods of the little ones that be males, and so gueld them. But contrariwise, the shee asses when they be big, seeke corners, and keepe out of their way, that they might bring forth their young secretly without the knowledge of the Stallions: for desirous they are to haue many males: so lecherous they be, and glad euermore to be couered.

The Bieucers in Pontus gueld themselves, when they see how neer they are driuen, and be in danger of the hunters: as knowing full well, that chased they be for their genetoires: and these their stones, Physicians call Castoreum. And otherwise, this is a dangerous and terrible beast with his teeth. For verily, he will bite down the trees growing by thieruires sides, as if they were cut with an axe. Looke where he catcheth hold of a man once, he neuer leaues nor lets loose vntill he haue knapped the bone in sunder, and heard it cracke againe. Tailed hee is like a fish, otherwise

A otherwise he resembleth the Otter. Both these beasts liue in the water altogether, and cary an haire softer than any plume or downe of feathers.

CHAP. XXXI.

¶ *Of Frogs, Sea-calues, and star-Lizards called Stelliones.*

The venomous frogs and todes called Rubetæ, which liue both on land, and also in the water, yeld many good things medicinable. It is said, that their manner is to let goe & cast from them all that is good within them, reseruing only to themselves all the poison: and when they haue bin at their food, take the same vp againe. The sea calfe likewise liueth both in the sea, and vpon the land: and hath the same nature and qualitie that the beuer is, for hee casteth vp his gally, which is good for many medicines: & so he doth the runnet in his maw, which is a singular remedy for the falling sicknes: for wel he is ware, that men seek after him for these two things. *Theophrastus* writeth, that the Lizards called Stelliones, cast their old coar, like as Snakes do; but when they haue so done, they eat it vp againe, and so preuent men of the helpe thereby for the said falling euill. He reporteth besides, that their stings and bitings in Greece be venomous and deadly: but in Sicily harmlesse.

CHAP. XXXII.

¶ *Of red and fallow Deere.*

The Bucke or Stag, albeit that he be the most gentle and mild beast in the world, yet is he as enuious as the rest, & loth to part with that which is good for others. Howbeit, if he chance to be ouerlaied with hounds, then gently of himselfe hee hath recourse to a man. Likewise, the Hinds when they are to calue, chuse rather some place neere to the pathes and waies that are beaten with many steps, than secret corners, for feare of other wilde beasts. They begin to goe to rut after the rising of the star Arcturus, which is much about the 5 of September: they goe 8 months: and otherwhiles bring 2 calues at once. Finding themselves that they are sped, they part companie with the Stags. But they againe seeing themselves forsaken, fall into a kinde of rage for heate of lust, and dig pits in the ground where they lie hidden. Then begin their muzzles to looke blacke, and so continue, vntill such time as some raine wash away that colour. The Hinds before they calue, purge themselves with the herbe Scelis or Silermontaine, whereby they haue lesse paine in their bearing, and more speedy and easie deliuerance. After they are lightened of their burden, they know where two herbes be, which they haue presently recourse vnto, Wake-Robin, and the foresaid Silermountain. When they haue eaten well thereof, they return presently to their yong. And (for what secret reason in Nature, God knowes) their first milke must haue a taste & talang of those two herbes. Their little ones they practise and exercise to vie their legs from the very beginning so soon as they be come into the world: teaching them euen then how they should run away and flee. To high and steepe cragged rocks they bring them and there shew them how to leape, and withall acquaint them with their dens and places of harborough. And now by this time, the stags being past the heat of the rut, feed apace. But so soone as they be growne very fat, they seeke lurking places, and there abide, confessing as it were how heauie and vnweldie they be for fatnesse, and how vncommodious it is vnto them. At other times they vie in their flight to make staies, and take their breath, and as they stand still, to looke behinde them. But when they espie once the hounds and hunters to be neer vnto them then they fall to running afield. And this they doe for a pain that they haue in their guts, which are so weak & tender, that with a small blow or stripe giuen vnto them they will burst within their bellies. When they perceiue the hunt is vp, & heare the hounds cry, they presently run but euer downe the winde, to the end that the sent of their feet should passe away with them. They take much pleasure & delight in the sound of shepheards pipes, and their song withall. When they set vp their eares, they are most quicke of hearing: when they let them hang downe, they be as deaf. Moreover, they are very simple and foolish creatures: amased, yea, and amased they will be at euery thing, and keepe a wondering at it, inso-much, as if an horse, a cow, or an haifer approach neere vnto them, they will stand gazing at it, and neuer regard the hunters neere by: or if they happen to spie him, they will looke at his

his very bow, and the end of arrows, as at strange and wondrous things. They passe the seas, swimming by flocks and whole herds in a long row, each one resting his head vpon the buttocks of his fellow next before him: and this they do in course, so as the foremost retireth behinde to the hindmost, by turnes one after another: and this is ordinarily obserued by those saylers that passe from Cilicia to Cypres. And yet in their swimming they desery no laud by the eye, but only by their smelling haue an aime thereat. The males of this kind are horned, and they (about all other liuing creatures) cast them euerye year once, at a certaine time of the Spring: and to that purpose a little before the very day of their mewing, they seek the most secret corners and most out of the way, in the whole forest. When they are pollards, they keep close hidden, as if they were disarmed: and all this they do as if they enuied that men should haue good of any thing that they had. And in very truth, the right horn (they say) can neuer be found, as if it had some rare and singular vertue in Physicke. A strange and marvellous thing, considering that in the parks they change them euery yere, in so much as it is thought verily, that they hide them within the earth. But burne whether of them ye will, the left as well as the right, this is certain. That the smell and perfume thereof driueth serpents away, and discouereth them that are subiect to the fits of the falling disease. A man may also know their age by their heads, for euery year they haue one knag or branch more in their horns than before, vntill they come to fix: after which time, they come new euer alike, so as their age cannot be discerned any more by the head, but the marke is taken by their mouth and teeth: for as they grow in age, they haue few or no teeth at all, ne yet grow the branches out at the root, whereas all the while they were younger, they vsed to haue them breake forth and standing out at the very forehead. After they be guelced once, neither cast they their horns which they had before, neither grow there any if they had none when they were libbed. At the first when they breake out againe, like they be to the glandules or kernels of dry skin, that new put forth: then grow they with tender stalks, in to certain round and long knobs of the reed mace, covered all ouer with a certaine soft plume downe like veluet. So long as they be destitute of their horns, and perceiue their heads naked, they go forth to reliefe by night; and as they grow bigger and bigger, they harden them in the hot sun, & soons making prooue of them against trees; and when they perceiue once that they be rough and strong enough, then they go abroad boldly. And certainly some of them haue been taken with green Iuie sticking fast and growing in their horns, remaining there since the time that they ran them (when they were but tender) against some trees, for trial whether they were good or no, and so chanced to race the Iuie from the wood of the tree. You shall haue them sometime white of colour, and such an one was the hind that *Q. Sertorius* had about, which he perswaded the people of Spaine to be his Sooth-sayer, & to tel him of things to come. This kind of Deere maintaine fight with serpents, and are their mortall enemies: they will follow them to their very holes, and there (by the strength of drawing and snuffing vp their wind at the nostrils) force them out whether they wil or no: and therefore there is not so good a thing again to chase away serpents, as is the smoke and smell of an Harts horn burnt. But against their sting or biting, there is a singular remedy, with the runner in the maw of a fawne or Hind-casse killed in the dams belly. It is generally held and confessed, that the Stag or hind liues long-for: an hundred yeres after *Alexander* the great, some were taken with golden collars about their necks, ouergrowne now with haire and growne within the skin: which collars, the said king had done vpon them. This creature of all diseases is not subiect to the feuer, but he is good to cure it. I haue known great ladies and dames of state, vse euery morning to eat the venison of red Deere, and thereby to haue liued a great age and neuer had the ague: but it is thought this is a certain remedy and neuer faileth, in case the stag be stricken starke dead at once with one wound and no more.

CHAP. XXXIII.

¶ Of the shag-haired and bearded Stagge like to a Goat:
as also of the Chamaeleon.

OF the same kind is the Goat hart, and differing only in the beard and long shag about the shoulders, which they call Trachelaphis: and this breedeth no where but about the riuer Phasis. Africke in a manner is the onely country that breedeth no stags and hinds: but contrari-

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A contrariwise, it bringeth Chamaeleons; although India hath them ordinarily in greater number. In shape and quantitie it is made like a Lizard, but that it standeth higher and streighter than the Lizards do, vpon his legs. The sides, flank, and belly, meet together, as in fishes: it hath likewise sharp prickles, bearing out vpon the back as they haue: snouted it is, for the biggesse not vnlike to a swine, with a very long taile thin and pointed at the end, winding round and entangled like to vipers: hooked clawes it hath, and goeth slow, as doth the Tortoise: his body and skin is rough and scaly, as the crocodiles: his eyes standing hollow within his head, & those be exceeding great, one neere vnto the other, with a very small portion betweene, of the same colour that the rest of the body is: he is alwaies open eied, and neuer closeth them: he looketh about him not by mouing the ball of his eye, but by turning the whole body thereof: he gapeth euermore aloft into the aire, and is the onely creature aliuie that feedeth neither of meat nor drinke, but hath his nourishment of aire only: about wilde fig-trees he is fell and dangerous, otherwise harmlesse. But his colour naturally is very strange and wonderful, for euer and anon he changeth it, as well in his eyes, as taile and whole body besides: and looke what colour he toucheth next, the same alwaies he resembleth, vnlesse it be red and white. When he is dead, hee looketh pale and wan: very little flesh he hath in head and chawes, and about the joint where his taile is grafted to his rump, but in all the body besides, none at all. All his bloud is in his heart, and about his eyes: among other his bowels, he is without a spleen. Hidden hee lieth all winter long as Lizards do.

CHAP. XXXIII.

¶ Of the Buffe, or Tarandus: the Lycan, and the Thos.

C IN Scythia there is a beast called Tarandus, which changeth likewise colour as the Chamaeleon: and no other creature bearing haire doth the same, vnlesse it be the Lycan of India: which (by report) hath a maned necke. As for the Thoes (which are a kinde of wolues somewhat longer than the other common wolues, and shorter legged, quicke and swift in leaping, liuing altogether of the venison that they hunt & take, without doing any harme at all to men) they may be said not so much to change their hew, as their habit and apparell: for all winter time they be shag-haired, but in summer bare and naked. The Tarandus is as big as an ox, with an head not vnlike to a stag, but that it is greater, namely carrying branched hornes: cloven hoofed, and his haire as deep as is the Beares. The hide of his backe is so rough and hard, that thereof they make breast-plates. He taketh the colour of all trees, shrubs, plants, floures, and places wherein he lieth when he retireth for feare; and therefore seldom he is caught. But when he list to looke like himselfe and be in his owne colour, he resembleth an Asse. To conclude, strange it is that the bare body of a beast should alter into so many colours: but much more strange it is and wonderfull, that the haire also should so change.

CHAP. XXXV.

¶ Of the Pork-pen.

E THE Porkpens come out of India and Africke: a kinde of Vrchin or hedge-hog they be: armed with prickles they be both; but the Porkpen hath the longer sharp pointed quilles, and those, when he stretcheth his skin, he sendeth and shooteth from him: when the hounds presseth hard vpon him, he flieth from their mouthes, and then takes vantage to lounce at them somewhat farther off. In the Winter he lieth hidden, as the nature is of many beasts to doe, and the Beares about the rest.

CHAP. XXXVI.

¶ Of the Beares, and how they breed and bring forth their young.

F THEY ingender in the beginning of winter, nor after the common manner of other four-footed beasts, but lying both along, clasping and embracing one another: then they goe apart into their dennes and caues, where the she beare thirtie daies after is discharged of her burden, and bringeth forth commonly sixe whelps at a time. At the first, they seem to be a lump

lump of white flesh without all form, little bigger than rattons, without eies, & wanting haire: only there is some shew and apparance of claws that put forth. This rude lumpe, with licking they fashion by little & little into some shape; & nothing is more rare to be seen in the world, than a beare bringing forth her yong; and this is one cause that the male beares are not to be seen in 40 daies, nor the femall for 4 moneths. If they haue no holes and dens for the purpose, they build themselves cabbins of wood, gathering together a deale of boughes & bushes, which they couch and lay artificially together, to beare off any shower, so as no raie is able to enter; and those they strew vpon the floore with as soft leaues as they can meet withall. For the first 14 daies (after they haue taken vp their lodging in this manner) they sleep so foundly, that they cannot possibly be wakened, if a man should lay on and wound them. In this drowfie of theirs, they grow wondrous fat. This their greafe and fat thus gotten, is it that is for medicine, and good for those that shed their haire. These 14 daies once past, they sit vpon their rump or buttocks, and fall to sucking of their fore-feet, and this is all their food wherof they liue for the time. Their yong whelpes, when they are starke and stiff for cold, they huggle in their bosom and keep close to their warm breast, much like to birds that sit vpon their eegs. A strange and wonderful thing it is to be told, and yet *Theophrastus* beleueth it, That if a man take beares flesh during those daies, and seeth or bake the same, if it be set vp and kept safe it will grow neuertheless. All this time they dung not, neither doth there appeare any token or excrement of meat that they haue eaten; and very little water or aquositie it found within their belly. As for blood, some few small drops lie about the heart only, and none at all in the whole body besides. Now when spring is come, forth they go out of their den, but by that time the males are exceeding ouergrown with fat; and the reason thereof cannot be readily rendered: for as we said before, they had no more but that fortnights sleep to fat them withall. Being now gotten abroad, the first thing that they do, is to deuoure a certain herbe named *Aron*, & *Vvake-robin*, and that they do to open their guts, which otherwise were clunged and grown together: and for to prepare their mouths and teeth again to eat, they whet and set the edge of them with the yong shoots and tendrons of the briars and brambles. Subiect they are many times to dinnesse of fight; for which cause especially they seek after honny combs, that the bees might settle vpon them; and with their stings make them bleed about the head, and by that means discharge them of that heauinesse which troubleth their eies. The Lions are not so strong in the head, but beares bee as weak and tender there: and therefore when they be chased hard by hunters, & put to a plunge, ready to cast themselves headlong from a rocke, they couer and arme their heads with their fore-feet and pawes, as it were with hands, and so jump downe: yea and many times, when they are baited in the open shew-place, we haue known them laid streaking for dead with one cuffe or box of the eare given them with a mans fist. In Spain it is held for certain, that in their brain there is a venomous qualitie; and if it be taken in drinke, driueth men into a kind of madness, so as they will rage as if they were beards: in token whereof, when foucer any of them be killed with baiting, they make firework and burn their heads all whole. When they list, they will go on their two hinder feet vpright; they creep down from trees backward: when they fight with bulls, their manner is to hang with all their foure feet, about their head and hornes, and so with the very weight of their bodies wearie them. There is not a liuing creature more craftie and foolish withall, when it doth a shrewd turne. We finde it recorded in the *Annales of the Romans*, that when *M. Pison* and *M. Messala* were Consuls, *Domitius Sinobarbus* an *Edile Curule*, vpon the 14 day before the Calends of *Orober*, exhibited 100 Numidian beares to be baited & chased in the great Cirque, and as many *Ethiopian* hunters. And *Marcellus* much, that the *Chronicle* nameth Numidian, since it is certain, that no beares come out of *Africke*.

CHAP. XXXVII.

¶ Of the Rats of Pontus, and the Alps: also of Vrchins and Hedge-hogs.

THE Rats of Pontus, which be onely white, come not abroad all winter: they haue a most fine and exquisite taste in their feeding; but I wonder how the authours that haue written this, should come to the knowledge of so much. Those of the Alps likewise, *i. e.* *Marmotanes*, which are as bigge as Brocks or Badgers, keepe in, during winter: but they are provided of

A of victuals before hand which they gather together and carry into their holes. And some say, when the male or female is laden with grasse and herbs, as much as it can comprehend within all the foure legges, it lieth vpon the backe with the said prouision vpon their bellies, and then cometh the other, and taketh hold by the taile with the mouth, and draweth the fellow into the earth: thus doe they one by the other in turnes: and herupon it is, that all that time their backs are bare and the haire worne off. Such like *Marmotanes* there be in *Aegypt*; and in the same manner they sit ordinarily vpon their buttocks, and vpon their two hinder feet they goe, vntil their fore-feet in stead of hands.

Hedgehogs also make their prouision before-hand of meat for winter, in this wise. They wal- low and roll themselves vpon apples and such fruit lying vnder foot, and so catch them vp with their prickles, & one more besides they take in their mouth, & so carry them into hollow trees. By stopping one or other of their holes, men know when the wind turneth, and is changed from North to South. When they perceiue one hunting of them, they draw their mouth and feet close together with all their belly part, where the skin hath a thin downe and no prickles at all to do harme, and so roll themselves as round as a foot-ball, that neither dog nor man can come by any thing but their sharpe-pointed prickles. So soon as they see themselves past all hope to escape, they let their water go & pisse vpon themselves. Now this vrine of theirs hath a poisonous qualitie to rot their skin and prickles, for which they know well enough that they be chased and taken. And therefore it is a secret and speciall policie, not to hunt them before they haue let their vrine go; and then their skin is very good, for which chiefly they are hunted: otherwise it is nought euer after, and so rotten, that it will not hang together, but fall in peeces: all the prickles shed off, as being putrified, yea although they should escape away from the dogs and liue still, and this is the cause that they neuer bespille and drench themselves with this pestilent excrement, but in extremity & vtter despair: for they cannot abide themselves their owne vrine, of so venomous a qualitie it is, & so hurtfull to their own body; and do what they can to spare themselves, attending the utmost time of extremity, inasmuch as they are ready to be taken before they do it. When the *Vrchin* is caught alive, the deuise to make him open again in length, is to besprinkle him with hot water; and then by hanging at one of their hinder feet without meat they die with famine: otherwise it is not possible to kill them and saue their case or skin. There be writers who bask not to say, That this kinde of beast (where not those prickles) is good for nothing, and may well be missed of men: and that the soft fleece of wooll that sheepe bear, but for these prickles were superfluous & to no purpose bestowed vpon mankind: for which the rough skin of these *Vrchins*, are brushes & rubbers made to brush & make cleane our garments. And in very truth, many haue gotten great gain & profit by this commodity & merchandise, and namely, with their crafty deuise of monopolies, that all might passe through their hands only: notwithstanding there hath not bin any one disorder more repressed and reformation fought by sundry edicts and acts of the Senate in that behalfe: every prince hath been continually troubled hereabout with grievous complaints out of all prouinces.

CHAP. XXXVIII.

¶ Of the Leontophones, the Onces, Badgers, and Squirrels.

TWO other kinds there be of beasts, whose vrine worketh strange and wonderfull effects. The one is called *Leontophones*, and he breeds in no country but where there be lions: a little creature it is, but so venomous, that the lion (king of beasts, before whom all others tremble) for all his might and puissance, dieth presently if he taste neuer so little thereof. And therefore they that chase the lion, get all the *Leontophones* that they can come by, burne their bodies, and with the powder of them bestrew & season as it were the pieces of other flesh that they lay for a bait in the forest, and thus with the very ashes (I say) of his enemy, kill him and deadly and pernicious is it to the lion. No maruile therefore if the lion abhor & hate him, for so soon as he espieth him, he crushes him with his pawes, & so killeth him without setting tooth to his body. The *Leontophone* for his part againe, is as ready to bedrench him with his vrine, knowing right well that his pisse is a very poison to the lion.

In those countries where the *Onces* breed, their vrine (after it is made) congealeth into a certain ycie substance, & waxes drie, & so it comes to be a certain precious stone like a carbuncle, glit-

Or rather in-
stead of prickles
that these
men vie.

glittering and shining as red as fire, and called it is *Lyncurium*. And vpon this occasion many haue written, that Amber is ingendred after the same manner. The Onces knowing thus much, for very spight and enuie, couer their vine with mold or earth, and this maketh it so much the sooner to harden and congeale.

The Grayes, Polcats, or Brocks, haue a cast by themselves, when they be affraid of hunters: for they will draw in their breath so hard, that their skin being stretched and puffed vp withall, they will auoid the biting of the hounds tooth, and checke the wounding of the hunter; so as neither the one nor the other can take hold of them.

The Squirrels also foresee a tempest coming, and where the wind will blow: for looke in what corner the wind is like to stand, on that side they stop vp the mouth of their holes, and make an ouerture on the other side against it. Moreover, a goodly broad bush taile they haue, wherewith they couer their whole body. Thus you see how some creatures prouide victuals against winter, others battle and feed with sleepe onely.

CHAP. XXXIX.

¶ Of the Viper, Land-winkles or Snails, and Lizards.

Of all other serpents, it is said, that the Viper alone lies hidden in the ground during winter, whereas the rest keepe within cranies and cists of trees, or else in the hollow chinkes of stones: and otherwise they are able to endure hunger a whole yeere, so they be kept from extreme cold: All the while during their retreat and lying close within, they sleepe as if they were dead and deprived of their power to poyson.

In like manner do Perwinkles and Snails, but not on'y in the winter season, but in Summer againe they lie still, cleauing so hard to rocks & stones, that although by force they be plucked off and turned with their bellies vpward, yet they will not out of their shell. In the Balcare Islands there be a kinde of them called *Cautacia*, which neuer creepe out of their holes within the ground, neither liue they of any grasse or Greene herbe, but hang together like clusters of grapes. Another sort there is of them, but not so common, hiding themselves within the couer of their shell, sticking euer fast vnto them: these lie alwaies vnder the ground, and were in times past digged vp onely about the Alpes, along the maritime coasts: but now of late they be discovered in Vcliternum also, where men begin to get them out of the earth. But the best of them all and most commendable, are those in the Island *Astypelaea*.

As touching Lizards (deadly enemies to the Snails or Winkles aboue-named) men say they liue not aboue six moneths. In Arabia, the Lizards be a cubit in length: and in the mountain Nisa of India, they be foure and twenty foot long; some tawnie, some light red, and others blew of colour.

CHAP. XL.

¶ Of Dogges.

Among those domestick creatures that conuerse with vs, there be many things worth the knowledge: and namely, as touching dogges (the most faithfull and trustie companions of all others to a man) and also horses. And in very truth, I haue heard it credibly reported, of a dogge, that in defence of his master, fought hard against theues robbing by the high way side: & albeit he were forewounded euen to death, yet would he not abandon the dead body of his master, but draue away both wild foule and sauage beast, from seizing of his carcase. Also of another in Epirus, who in a great assembly of people knowing the man that had murdered his M^r. slew vpon him with open mouth, barking and snapping at him so furiously, that he was ready to take him by the throat, vntill he at length confessed the fact that should cause the dog thus to rage and some against him. There was a king of the Garamants exiled, and recovered his royall state againe by the meanes of 200 dogges that fought for him against all those that made resistance, and brought him home maugre his enemies. The Colophonians and Castabalcans, maintained certain squadrons of mastiue dogs, for their war seruice: and those were put in the vaward to make the head and front of the battell, and were neuer knowne to draw back and refuse fight. These were their trustiest auxiliaries and aid-foldiers, and neuer so needly

A as to call for pay. In a battell when the Cimbrians were defeated and put all to the sword, their dogges defended the baggage, yea, and their houses (such as they were) carried ordinarily vpon chariots. *Iason* the Lycian had a dogge, who after his master was slaine, would neuer eat meat, but pined himselfe to death. *Darius* maketh mention of another dogge, which he named *Hircanus*, that so soone as the funeral fire of king *Lysimachus* his master was set a burning, leapt into the flame. And so did another at the funerals of king *Hiere*. Moreover, *Phyllistum* reporteth as strange a story of king *Pyrrhus* his dogges: also of another belonging to the tyrant *Gelo*. The Chronicles report of a dog that *Nicomides* king of Numidia kept, which flew vpon the queene *Confingis* his wife, & al to mangled and worried her, for toying and dallying ouerwantonly with the king her husband. And to goe no farther for examples, euen with vs here at Rome, *Volatius* a noble gentleman (who taught *Cecilius* the ciuile law) as he returned home one euening late, riding vpon an hackney from a village nere the citie, was assailed by a theefe on the high way, but he had a dog with him that saued him out of his hands, *Celius* likewise, a Senator of Rome, lying sicke at Plaisance, chanced to be assailed by his enemies, well appointed and armed; but they were not able to hurt and wound him, by reason of a dog that he had about him, vntill such time as they had killed the said dog. But this passeth al, which happened in our time, and standeth vpon record in the publicke registers, namely, in the yeere that *Appius Tullius* and *P. Silus* were Consuls, at what time as *T. Sabinus* and his seruants were executed for an outrage committed vpon the person of *Nero*, sonne of *Germanicus*: one of them that died had a dog which could not be kept from the prison dore, and when his master was throwne down the staires (called *Scala Gemoniæ*) would not depart from his dead corps, but kept a most pittious howling and lamentation about it, in the sight of a great multitude of Romanes that stood round about to see the execution and the manner of it: and when one of the companie threw the dogge a peece of meat, he straightwaies carried to the mouth of his master lying dead. Moreover, when the carcase was thrown into the riuer *Tiberis*, the same dog swam after, & made all the means he could to beare it vp afote that it should not sink: and to the sight of this spectacle and fidelitie of the poore dogge to his master, a number of people ran forth by heapes out of the citie to the water side. They be the onely beasts of all others that know their masters, & let a stranger vnknown be come neuer so suddenly, they are aware of his coming, and will giue warning. They alone know their owne names, and all those of the house by their speech. Be the way neuer so long, and the place from whence they came neuer so farre, they remember it, and can go thither againe. And surely, setting man aside, I know not what creature hath a better memorie. As furious and raging as they be otherwhiles, yet appeased they will be and quieted, by a man sitting down vpon the ground. Certes, the longer we liue, the more things we obserue & marke still in these dogges. As for hunting there is not a beast so subtle, so quick, & so fine of sent, as is the hound: he hunteth and followeth the best by the foot, training the hunter that leads him by the collar and leath, to the very place where the beast lieth. Having once gotten an eie of his game, how silent & secret are they notwithstanding? and yet how significant is their discouerie of the beast vnto the hunter? first with wagging their taile, and afterwards with their nose and snout, sniffing as they doe. And therefore it is no maruell, if when hounds or beagles be ouer old, wearie, and blind, men carry them in their armes to hunt, for to wind the beast, and by the verie sent of the nose to shew and declare where the beast is at harbour. The Indians take great pleasure to haue their salt bitches to be lined with tygres: and for this purpose, when they goe proud, they couple and tie them together, and to leaue them in the woods for the male tygres: howbeit they were neither the first nor second litter of them, supposing that the dogs thus bred, will be too fierce and eger, but the third they nourish and bring vp. Semblably, thus doe the Gauls by their dogges that are ingendred of wolues: and in cuerie chace and forest there be whole flockes of them thus ingendred, that haue for their guide, leader, and captain, one dogge or other: him they accompanie when they hunt; him they obey and are directed by: for surely, they keepe an order among themselves, of government and mastership. This is knowne for certain, that the dogges which be nere vnto Nilus, lap of the riuer, running still and neuer stay while they are drinking, because they will giue no vantage at all to be a prey vnto the greedie Crocodiles. In the voyage that *Alexander* the Great made into India, the king of Albania gaue him a dogge of an huge and extraordinarie bignesse. And *Alexander* taking great delight and contentment to see so goodly and so faire a dogge, let loose vnto him first *Bears*, afterwards

wild Bores; and last of all, fallow Deere. But this dog making no reckoning of all this game, lay still couchant, and neuer stirred nor made at them. This great Commander *Alexander*, a man of mighty spirit and high mind, offended at the lazinesse and cowardise of foegreat a bodie, commanded that he should be killed, and so he was. Newes hereof went presently to the king of Albanie. Whereupon he sent vnto him a second dog, with this message, That he should not make triall of this too against such little beasts, but either set a Lion or an Elephant at him: saying moreover, that hee had in all but those two of his kinde: and if hee were killed likewise, hee were like to haue no more of that race and breed. *Alexander* made no stay, but presently put out a Lion, and immediately he saw his backe broken and all to rent and torne by the dog. Afterwards he commanded to bring forth an Elephant, and in no light tooke he greater pleasure, than in this. For the dog at the first with his long rough shagged haire, that ouerspread his whole bodie, came with full mouth thundering (as it were) and barking terribly against the Elephant. Soon after he leapech and flieth vpon him, rising and mounting against the great beast, now of one side, then of another: maintaining combate right artificially, one while assailing, another while auoiding his enemies; and so nimble he bestirreth him from side to side, that with continuall turning about to and fro, the Elephant grew giddie in the head, inso much as he came tumbling downe, and made the ground to shake vnder him with his fall. Bitches breed and beare young euery yeere lightly once; and the due time for them to be with whelpes is when they are full a yeere old. They goe with young three score daies. Their puppies come blinde into the world; and the more milke they sucke, the later it is ere they receive their sight: but as it is neuer above twenty daies ere they see, so they open not their eyes vnder seuen daies old. Some say, that if a bitch bring but one at a litter, it will see by nine daies: if twaine, it will be ten daies first; and the more puppies she hath, the more daies it will be in that proportion ere they see. Moreover, that the bitch whelpes that cometh of the first litter, see strange bugs and goblins. The best of the whole litter is that whelpes that is last ere it begin to see: or else that which the bitch carries first into her kennell. The biting of mad dogs are most dangerous to a man, as we haue said before, especially during the dog-daies, while the dog star Syrius is so hot: for they that are so bitten, lightly are afraid of water, which is a deadly plague. To preuent therefore that dogs fall not mad, it is good for thirtie or fortie daies space, to mingle hens or pullins dung especially with their meat againe, if they be growing into that rage, or tainted already, to giue them Ellebor with their meat.

CHAP. XLII.

¶ Against the biting of a mad Dog.

The sure and soueraigne remedy for them that are bitten with a mad dog, was reuealed lately by way of Oracle: to wit, the root of a wild rose, called the sweet brier or Eglantine. *Columella* writeth, That when a whelpes is iust fortie daies old, if his taile be bitten off at the nethermost joint, and the sinew or string that cometh after, be likewise taken away, neither the taile will grow any more, nor the dog fall euer to be mad. I haue my selfe obserued, that among the prodigies it is reported, how a dog sometime spake, as also that a serpent barked, that yeere when *Tarquinius* the proud was deposed and driuen out of Rome.

CHAP. XLIII.

¶ Of Horses, and their nature.

The same *Alexander* the Great, of whom ere while we spake, had a very strange and rare horse, whom men called Bucephalus, either for his crabbed and grim looke, or else of the make or brand of a bulls head, which was imprinted vpon his shoulder. It is reported, that *Alexander* being but a child, seeing this faire horse, was in loue with him, and bought out of the breed and race of *Philonicus* the Pharfalian, and for him paid fixteene talents. He would suffer no man to sit him, nor come vpon his backe, but *Alexander*; and namely, when he had the kings faddell on, and was also trapped with roiall furniture: for otherwise he would admit any whom he would. The same horse was of a passing good and memorable seruice in the warres: and namely, being wounded vpon a time at the assault of Thebes, he would not suffer *Alexander* to alight

A alight from his back, and mount vpon another. Many other strange and wonderfull things be did in regard whereof, when he was dead, the king solemnized his funerals most sumptuously, erected a tombe for him, and about it built a city that bare his name, Bucephalia. *Cesar* Dictator likewise had another horse that would suffer no man to ride him but his maister: and the same horse had his forefeet resembling those of a man: and in that manner he stands portraited before the temple of *Venus*, Mother. Moreover, *Augustus Cesar*, late Emperour of famous memory, made a sumptuous tombe for an horse that he had, whereof *Germanicus Cesar* compiled a poeme. At Agrigentum there be seen Pyramides ouer many places where horses were entombed. *Iuba* reporteth, That queene *Semiramis* loued a great horse that shee had, so far forth, that she was content he should doe his kind with her. The Scythians verily take a great pride and glorie much in the goodnes of their horses and Caualerie. A king of theirs happened in combat and single fight vpon a challenge to be slain by his enemy, and when he came to despoile him of his armes and roiall habit, the kings horse came vpon him with such furie, ringing and laying about him with his heeles, and biting withall, that he made an end of the conquerour champion. There was another great horse hoodwinked because he should couer a mare: but perceiving after that he was vnhooded that he serued as a stallion to his own dam that foled him, ran vp to a steep rock with a downfall, and there for griefe cast himselfe down and died. We find also in record, That in the territorie of Reate there was a mare killed & all to rent an horsekeeper vpon the same occasion. For surely these beasts know their parentage, & those that are next to them in blood. And therefore we see that the colts will in the flocke more willingly keep company and fort with their sisters of the former yeere, than with the mare their mother. Horses are so docile, and apt to learne, what we find in histories, how in the army of *Sibaritanes*, the whole troupe of horsemen had their horses vnder them, and vfed to leap and daunce to certaine musicks that they were wonted and accustomed vnto. They haue a fore-knowledge when battell is toward, they will mourne for the losse of their maisters: yea, and other whiles shed teares and weep pitifully for loue of them. When king *Nicomedes* was slaine, the horse for his owne faddell, would neuer eat meat after, but for very anguih died with famine. *Philarchus* reporteth, That king *Antiochus* hauing in battaille slaine one *Centareus*, a brave horseman of the Gallogreks or Galatians, became maister of his horse, and mounted vpon him in triumphant wise: But the horse of him that lay dead in the place, and vpon whom *Antiochus* was mounted, for very anger and indignation at this indignitie, passed neither for bit nor bridle, so as he could not be ruled; and so ran furiously among the craggies and rocks, where both horse and man came downe headlong, and perished both together. *Philistus* writeth, That *Dymisius* was forced to leaue his horse sticking fast in a quae-mire, and got away; but the horse after he had recovered himselfe, and was gotten forth, followed the tracks of his master, with a swarm or cast of bees setting in his mane: and this was the first preface of good fortune that induced *Demis* to vsturp the kingdome of Sicilie. Of what perceiuaunce and vnderstanding they be, it cannot be exprest: & that know those light horsemen full well that vse to launce darts and iauelins from horseback, by the hard seruice that they put their horses to; which they doe with great dexteritie & resolution in straining, winding, and turning their bodies nimble euery way. Nay, ye shall haue of them to gather vp darts and iauelins from the ground, and reach them againe to the horseman. And commonly we see it to be an ordinary matter with them in the great race or shew place, when they are set in their geirs to draw the chariots, how they ioy when they are encouraged and praised; giuing no doubt a great proofe, and confessing that they are desirous of glorie. At the secular solemnities, exhibited by *Claudius Cesar*, in the Circenian games, the horses with the white liuery (notwithstanding their driuer and gouernour, the charioteer, was cast and flung to the ground euery within the bars) wan the best prize & went away with the honour of that day. For of themselves they brake and bare down whatsoeuer might impeach them of running the race thoroughout: they did all that euery was to be done against their concurrents and aduersaries of the contrarie side, as well as if a most expert chariot-man had been ouer their backs to direct and instruct them. At the sight whereof, men were ashamed to see their skill & art to be ouermatched & surmounted by horses. And to conclude, when they had performed their race, as much as by law of the game was required, they stood still at the very goale, and would no farther. A greater wonder and preface was this in old time, that in the Circenian games exhibited by the people, the horses after they had flung and cast their gouernour, ran directly vp to the Capitol, as well as if he

had stood still in his place, and conducted them; and there fetcht three turnes round about the temple of *Iupiter*. But the greatest of all was this which I shall now tell, That the horses of *Ratumenus*, who had won the price in the horse-running at *Vei*, throw their *M'* down, and came from thence, euen out of *Tulcane*, as far as to the forelaid Capitoll, carrying thither the *Palme* branch and chapter of *Victory* won by *Ratumenus* their *M'* of whom the gate *Ratumena* took afterwards the name at *Rome*. The *Sarmatians* minding to take a great iourne, prepare their horses two daies before, and giue them no meat at all, only a little drinke they allow them, and thus they will ride them gallop 150 miles an end, and neuer draw bridle. Horses liue many of them 50 yeres, but the mares not so long. In five yeres they come to their full growth, whereas stone horses grow one yere longer. The making of good horses indeed, and their beautie, such as a man will chuse for the best, hath bin most elegantly and absolutely described by the Poet *Virgil*. And somewhat also haue I written of that argument, in my booke which I lately put forth, as touching *Tournois* and shooting from horsebacke: and in those points required, and there set downe, I see all writers in manner to agree. But for horses that must be trained to run the race, some considerations are to be had and obserued, different from horses of other vse and seruice. For whereas to other affaires and imploiments they may be brought when they are two yeres old colts, and not vvard; to the *Lits* they must not be brought to enter into any mairies there, before they be full five yeres of age. The female in this kind go cleuen months compleat with young, and in the twelfth they foale: commonly the stallion and the mare are put together, when both of them are full two yeres old: and that about the Spring *Equinoctiall*, that is, to say, in mid-March: but if they be kept asunder vntill they are full 3 yeres of age, they breed stronger colts. The stallion is able to get colts vntill he be three and thirtie yers old, for commonly when they haue serued in the race, and run full twenty yeres, they are discharged from thence, & let go abroad for to serue mares. And men say that they will hold to 40 yeres with a little helpe put to the forepart of his body, that he may be lifted vp handfomly to couer the mare. Few beasts besides are lesse able to ingender and leape the female often, nor sooner haue enough of them. For which cause they be allowed some space betweene every time that they do their kind. And in one yere the most that the Stallion is able to do that way, is to couer 15 mares, and that is somewhat with the ofteneft. If ye would coole the courage, & quench the lust of a mare, share and clipper mane. And yet are mares sufficient to beare euery yeere, vntill they came to fortie. It is reported that an horse hath liued 75 yeres. Mares only of all other females, are deliuered of their foales, standing on their feet: but loue them more than any other doe their young. These foales verily, by report, haue growing on their forehead, when they be newly come into the world, a little blacke thing of the bignesse of a fig, called *Hippomanes*, & it is thought to haue an effectfull vertue to procure and win loue. The dam hath not so soon foled, but she bites it off, and eats it her selfe: and if it chance that any bodie preuent her of it, and catcheth it from her, the will neuer let the foale sucke her. The verie smell and sent thereof, if it be stollen away, will driue them into a fit of rage and madnesse. If peraduenture a young foale lose the damme, the other mares of the common heard that are milch nurses, giue their teates to this poore orphan, and reare it vp in common. They say that for 3 daies after they be newly foled, the young colts cannot lay their mouth to the ground, and touch it. Moreover, the hotter fomaeked that a horse is, the deeper he thrusteth his nose into the water as he drinks. The *Seythians* chuse rather to vse their mares in war-seruice than their stone-horses: the reason is this, that their staling is no hindrance to their pace in running their carriere, as it doth the horse, who must needs then stand still. In *Portugall*, along the riuer *Tagus*, & about *Lisbon*, certaine it is, that when the west-wind blowes, the mares set vp their tails, and turne them full against it, and so conceiue that genitall aire in steed of naturall seed: in such sort, as they become great withall, and quicken in their time, & bring forth foales as swift as the wind, but they liue not above three yeres. Out of the same *Spain*, from the parts called *Gallicia* and *Asturia*, certaine ambeling iennets or nags are bred, which wee call *Thieldones*: and others of lesse stature & proportion euery way, named *Aducones*. These horses haue a pleasant pace by themselves differing from others. For albeit they be put to their full pace, a man shall see them set one foot before another so deftly and roundly in order by turnes, that it would do one good to see it: and hereupon horse-breakers (masters) haue an art by cords to bring a horse to the like amble. A horse is subiect to the same diseases in maner that a man is: & besides, to the running of

A of the bladder: like as all other beasts that labour either in draught or carriage?

CHAP. XLIII.

¶ Of Asse.

Varro writes, That *Q. Axius* a Roman Senator bought an Asse which bought him 400000 Sesterces, a price in my conceit above the worth of any beast whatsoeuer: & yet (doubtlesse) he was able to do wondrous good seruice in carrying burdens, plowing of ground, and principally in getting of mules. The chapmen that vse to buy these Asse haue a speciall regard to the place from whence they come, and where they be bred: for in *Achaia* or *Greece* those of *Arcadia* be in greatest request: and in *Italy* those of *Reate*. This creature of all things can worst away with cold; which is the cause that none of them are bred in *Pontus*. Neither do they ingender as other such like beasts, in the Spring *Equinoctiall*, about mid-March, but in mid-Iune, about the time of the Sun-stead, when daies be at the longest. He Asse, the more you spare them in their worke, the worse they are for it. The females are at the least 30 months or two yeres and halfe old before they bring any young; but 3 yeres is the ordinarie and due time indeed. They go as long as mares, and iust so many moneths, and after the same maner do they foale. But after they be couered, they must be forced to run presently, with beating & laying on them, or else they will let go their seed again, so slippery is their wombe, and so vnapt to keep that which once it hath conceiued. They are seldom seene to bring forth two at once. The she Asse when she is about to foale seeketh some secret blinde corner to hide her selfe, that she might not be seen of any man. She breeds all her life time, which commonly is vntill shee be 30 yeres old. They loue their young foales exceeding well, but as ill or rather worse can they abide any water. To their little ones they will go through fire, but if there be the least brooke or rill between, they are so afraid of it, that they dare not once dip their feet therein. And verily drinke they will not, but of their accustomed fountains within the pastures where they vse to go: but they will be sure to chafe their way, and go dry-foot to their drinke, and not wet their hoofs: neither will they go ouer any bridges, where the planks are not so close drawn together and ioyned, but that they may see the water through vnder their feet; or the rails of each side soopen that the riuer is seen. A strange nature they haue by themselves. Thirsty they are: but be they neuer so dry, if you change their watering place (as in travelling vpon the way) they must be forced to drinke with cudgels, or else vnload of their burdens. Wherefoeuer they be stabled, they loue to lie at large and haue room enough. For in their sleep they dream, & haue a thousand phantasies appearing to them; in so much as they fling about them with their heels euery way: now if they were not at libertie, and had not void space enough, but should beat against some hard thing in their way, they would soone be lame and halt withall. They be very gainfull and profitable to their masters, yielding more commoditie than the reuenues of good farme. It is well knowne, that in *Celtiberia* a the Asse ordinarily with very breeding may be worth vnto them 400000 Sesterces. For the suling and bringing forth of the mules, the chief thing to be regarded in the she Asse, is the haire about the eares and eie lids. For howsoeuer the whole body besides be of one and the same colour, yet shall the mules foled haue as many colours as were there, all ouer the skin. *Metanus* was the first, that at feasts made a daintie dish of young Asse foales, and preferred their flesh in his time before the venison of wild Asse. But hebing dead, they were not thought for good meat, nor accepted at all. If an Asse be seene to die, looke soon after that the whole race and kind of them will follow to the very last.

CHAP. XLIV.

¶ Of Mules.

Betweene the he Asse and a Mare is a Mule ingendred, and foled in the 12 moneth: a beast of exceeding strength to beare out all labor and trauell. For breeding of such Mules, Mares are chosen that are not vnder foure yeres old, nor above ten. Men say, that they will driue away one another in both kinds, and not accompany together, vnlesse they tasted the milk and sucked the damme when they were young, of that kinde which they would court. And for this purpose

purpose they vse to steale away either the yong Asse foles, and fet them in the dark to the teats of the Mare, or els the yong colts to suck of the she Asse. For there is a kind of Mule also that comes of a stone horse and a female Asse: but of all others they be vntoward and vnruely, and so slow withall, that it is vnpossible to bring them to any good seruice: and much more (as all things else) if they be far in age when they ingender. If when a she Asse hath taken the horse and be sped, there come an Asse and couer her againe, he will cast her fruit vntimely, and lose all: but it is not so if an horse couer her after an Asse. It is noted & found by experience, that seuen daies after an Asse hath foled, is the best time to put the male vnto her, and then soonest will she be sped: as also, that the he Asse being wearie with trauel, will better couer the female than otherwise being resty. That Asse is held for barren, which is not couered, nor conceiueeth, before she haue cast her sucking or foles teeth, whereby the age is known: as also the that standeth not to the first couering, but loseth it. In old time they vsed to call those Hinuli which were begotten betwene a horse and an Asse: and contrariwise Mules, such as were ingendered of an Asse and a Mare. Moreouer this is obserued, that if two beafts of diuers kindes ingender, they bring forth one of a third sort, and resembling none of the parents: also, that such begotten in this manner, what kind of creatures fouer they be, are themselves barren and fruitles, vnable either to beare or beget yong. And this is the cause that the mules neuer breed. We finde verily in our Chronicles, that oft times Mules brought forth yong foles, but it was alwaies taken for a monstrous and prodigious signe. And yet *Theophrastus* saith, that in Cappadocia ordinarily they do beare and bring forth foles: but they are a kind by themselves. Mules are broken of their flinging and winning, if they vse often to drinke wine. It is found written in many Greeke authors, that if an he Mule couer a Mare, there is ingendered that which the Latins call Hinuus, that is to say, a little Mule. Between Mares and wild Assees made tame, there is ingendered a kind of Mules very swift in running, and exceeding hard hoofed, Ianke and slender of bodie, but fierce and couragious, and vnneeth or hardly to be broken. But the Mule that comes of a wild Asse and a female tame Asse, passeth all the rest. As for wild asses, the very best & floure of them be in Phrygia and Lycania. In Asricke the flesh of their foles is held for excellent good meat, and such they call Lalifiones. It appeares in the Chronicles of Athens, That a mule liued 80 yeares. And reported thus much there is of it, That when they build the temple within the citadell thereof, this old Mule being for age able to do nothing els, would yet accompanie other Mules that laboured and caried stones thither, and if any were ready to fall vnder their lode, would seeme to relieue and hold them vp, and as it were incourage them to his power: in so much as the people tooke so great delight and pleasure therein, that they made a decree and took order, that no corn-masters that bought and sold graine should beat this mule from their ranging futes, when they clenfed or winnowed their come, but that he might eat vnder them.

CHAP. XLV.

Of Bulls, Kine, and Oxen.

The Beoues of India are as high by report as Camels, and foure foot broad they are betwixt the horns. In our part of the world those that come out of Epirus are most commended, and beare the greatest price aboue all others, and namely those which they say are of the race & breed of king *Pyrhus*, who that way was very curious. For this prince because he would haue a principall good breed, would not suffer the Bulls to come vnto the kine and season them before they were both foure yeares old. Mighty big they were therefore, and so they continue of that kind vnto this day. Howbeit, now when they be but heifers of one yeare, or two yeares at the most (which is more tolerable) they are let go to the fellow and breed. Bulls may wel ingender and serue kine when they be 4 yeares old; and one of them is able all the yeare long to goe with ten kine and serue their turne. They say moreouer, that a Bull after he hath leapt a Cow, and done his kind, if he go his way toward the right hand, he hath gotten an ox calfe; but contrariwise a cow calfe if he take the left hand. Kine commonly take at their first seasoning, but if it chance that they misse and stand not to it, the 20 day after they seeke the fellow, and goe a bulling againe. In the tenth moneth they calue, and whatsoeuer falleth before that terme, neuer proueth nor commeth to good. Some write, That they calue iust vpon the last day of the tenth moneth complete. Seldome bring they forth two calves at a time. Their seasoning time commonly

A commonly continueth 30 daies, namely from the rising of the Dolphin starre, vnto the day before the Nones of Ianuarie: howbeit some there be that go to fellow in Autumne. Certes in those countries where the people liue altogether of milke, they order the matter so, that their kine calue at all times, so as they are not without their food of fresh milke all the yeare long. Bulls willingly leape not aboue two kine at most in one day. Beoues alone of all liuing Creatures can grate going backward, and verily among the Gamarants they neuer feed otherwise. Kine liue not aboue 15 yeares at the vtmost: bulls and oxen come to 20: they be at their full strength when they are 5 yeares old. It is said that they will grow fat if they be bathed with water, or if a man slit their hide, and with a reed or pipe blow wind betwene the flesh and the skin, euen into their intrals. Kine, Bulls, and Oxen are not to be despised as vnkindly, although they look but illfauredly, and be not so faire to the eie; for in the Alpes the least of bodie are the best milch kine: and the best laboring oxen are they which are yoked by the head, and not the neck. In Syria they haue no deuplats at all hanging vnder the necke, but bunches standing vp on their backs in stead thereof. They of Caria also, a country of Asia, are illfaured to fight, hauing betwene their neckes and shoulders a tumor or swelling hanging ouer; besides, their horns are loose, and as it were out of joint; and yet by report they are passing good of deed, and labor most stoutly. Furthermore, it is generally held for certain, that the black or white in this kind are simply the worst for work, and condemned. Bulls haue lesser and thinner horns than either Kine or Oxen. The best time to bring the Ox or Bull to the yoke, and make him draw, is at 3 yeares of age; after, it is too late; and before, with the soonest. A yong Stere is soonest trained and taught to draw, if he be coupled in one yoke with another that hath bin wrought all ready, and beaten to his work: for this beaist is our companion, and labors together with vs, in caring and plowing the ground: and so highly regarded was the Ox in old time of our forefathers, that we find it registred vpon record, That a certain Roman was iudicially ended, accused, and condemned by the people of Rome, for that (to satisfie the minde of a wanton minion and catamite of his, who said he had not eaten any tripes all the while he was in the Countie) he had killed an Ox, yea although he was his one; and for this fact was banished, as if he had slain his Grangier, or Bailif of his husbandry. Bulls are known to be of a good kind & couragious, by their fierce and grim countenance, for they alwaies looke crabbed and frowning; their eares are ouergrown with stiff haire, and their hornes so standing, as if they were euer disposed and ready to fight: but all his threatening and menaces appeare in his fore-feet; with them he giues warning, and as he is more and more angry, he bestirs himselfe now with the one foot, then with another, in course and by turnes, stamping and pawing with them against the ground, railing and flinging the dust about him aloft into the aire: and of all other beaists, he alone after this manner in chafeth himselfe, and giues an edge vnto his anger. I my self haue seen them fight one with another for the mastrix: I haue seen them, being turned and strong round about in their fall, caught vp with the hornes of others, and yet rise againe & recouer themselves: I haue seene them lying along to be raised aloft from the ground; and when they haue run all amain with full pace, galloping in their chariots, yet staid and stood still when they should, as if the chariots had caused them to rest. The Thessalians were they who deuised with prauncing horse to ride gallop close to the Bulls head to take them by the horn, wryth their neckes down, and so kill them. The first that exhibited this pleasant shew to the people at Rome was *Cassius* Dictator. The Bull yeeldeth the principal and most sumptuous sacrifice of all other vnto the gods, and therewith are they best pleased. This beaist alone, of all that are long tailed, when it first comes into the world, hath not the taile of the full measure and perfect length as others, but it grows fill, till it reach down to the very heels, and touch the ground. And hereupon it is, that in chusing calves for sacrifice, those are allowed for good and sufficient, whose taile reacheth to the joint of the haugh or gambrell: for if it be shorter, they will not be receiued & accepted of the gods. This also is noted by experience, that calves so little, that they be brought on mens shoulders to the altars to be killed, lightly are not sufficient to appease the gods. Neither are they pacified & well pleased with a beaist that is lame or maimed; nor with that which is not appropriat vnto them, but to some other gods; ne yet with it that comes from the altar, and is loth to come to it. In the prodigies that we reade of antient times, we find very oft, that Kine and Oxen haue spoken: vpon report of which strange token, the Senat was euer wont to assemble in some open place abroad, and not to sit either in hall or chamber.

CHAP. XLVI.

¶ Of the *Bawfe* or *Oxe* named *Apis*.

IN Egypt also they had an Oxe which the people of that country adored and worshipped as a god, vnder the name of *Apis*. This beast was marked in this manner; with a white spot on his right side, like to the horns or tips of the new moon croissant; a knot or bunch vnder the tongue, which they called *Cantharus*: by their religion it was not lawfull to suffer him to liue aboue a certain number of yeres, at the end of which term they drown him in a certain Well or fountain of their priests, and so shorten his life: and then with great sorrow fall to seek another to substitute in his place; vntill they find him they mourne and waile, and in token of grief and sorrow, they shaueth their heads. But long they neuer are before they meet with another, & when they haue him, he is by the priests brought to Memphis, where he hath a Temple, which they call *Thalami*, bed-chambers; out of which all the people of Egypt, as from an Oracle, are informed truly of things to come. For if this Oxe enter into the one of them it is a good luckie signe; but if he go into the other, then it portendeth great mishap and infortunite. And these be generall prefaces to the whole nation. As for priuat persons, he foretellet them of things to come by the maner of taking meat at their hands, who come to know what fortune they shal haue. He turned away his head from the hand of *Germanicus Caesar*, and would eat no meat when he offered it him; but he died for it, and that not long after. He is kept secrete and clofe for the most part: but if at any time he get forth and come abroad to be seen of the multitude of people, he goeth with a guard of tip stauers to make way for him, and then a company of prety boys go chanting before him canticles and songs in his honour and praise: for it seemeth that he taketh heed to what they sing, and is well pleased and contented thus to be worshipped. Now these Ch. orifiers before said presently fall into a kinde of furious rage, and withall are inspired with the gift of prophesie, and so foretell what will ensue. Once a yere there is presented vnto him a Cow, which hath marks likewise as he hath, but differing from his: and alwaies on what day this cow is found, the same day, by report, it dies. At Memphis there is a place within Nilus, which the inhabitants name *Phiola*, because it is made in fashion of a pot or boll; & therein duly euery yere the Egyptians drowne two cups, one of siluer, another of gold, during seven daies, dedicated to solemnise the natiuitie of their god *Apis*. And this is one thing to be wondered at, that in that seven-night space there is not one that taketh hurt by Crocodiles: but let the eighth day come once, within six houres they returne to their former mischievous cruelty

CHAP. XLVII.

¶ The nature of *Sheepe*, and their breeding.

SHeepe likewise are in great request, both in regard they serue as sacrifices to pacifie the gods; and also by reason their fleece yeelds so profitable an vse: for euens as men are beholden to the beuise for their principall food and nourishment which they labour for, so they must acknowledge, that they haue their cloathing and couerture for their bodies from the poore sheep. The ram and ewe both are fit for generation from two yeres of age yeward, vntill they come to nine, and some also vntill they be ten yeres old. The lambes they yeare first are but little ones. They go all generally to rut about the setting of *Arcturus*, $\alpha\zeta$, vpon the third day before the Ides of May; and their heat lasteth vnto the full of the *Ægle* starre, namely the tenth day before the Calends of August. They be with yong 150 daies: if any take the Ram after that time, the fruit they beare comes to no good, but proues weakie. And such lambes as fall after that season they called in old time *Cordos*, i. later lambes. Many men do preferre these winter lambes before those that come in spring: the reason is, because it is much better they should be strong before the heat of summer and the long daies, than against the cold of winter and the shortest daies: and they think that this creature only taketh good by being yeaned in the midst of winter. It is kinde and naturall for Rams to make no account of young Hoggrels, but to loath them: for they had rather follow after old ewes. Himselfe also is better when he is old, and more lusty to leape the Ewes. To make him more milde and gentle they vse to bore

A bore his horn about the root neere vnto his eares. If his right cullion or stone betted vp, hee getteth ewe lambes; but if the left be taken vp, he getteth ramme lambes. If ewes be alone by themselves without the flocke when it thundreth, they cast their lambes. The only remedie is to gather them together, that by company and fellowship they may haue help. They say, that if the North winds blow when they take the ram, they will bring forth males; but if the South winds be vp, females. Moreover, great regard there is had in this kind, to the mouthes of the rams: for look what colour the veines be vnder their tongue, of the same will the fleece be of the lambes, that is to say, of sundrie colours, in case the veines were diuers coloured. Also the change of water and drinke maketh them to alter their hew. In summe, two principall kinds there be of sheep, that is to say, the one reared within house, and the other abroad in the field: the first is the tenderer, but the other more pleasant meat and delicate in tast; for those within-house feed vpon briars and brambles. The clothes and coverings made of the Arabick wooll, are chiefe of all.

CHAP. XLVIII.

¶ Diuers kinds of wooll and clothes.

THe best wooll of all other, is that of *Apulia*; then, that which in Italy is named the Greek sheeps wooll, but in other countries is named Italian. In the third ranke, the Milesian sheepe and their wooll, carrie the prize. The wooll of *Apulia* is of a short staple, and specially in request for cloaks and mantles, and nothing else. About *Tarentum* and *Canusium*, the richest of this kind are found: also at *Laodicea* in Asia. As for whitenesse, there is none better than that which groweth along the *Po*, namely, about *Piemont* and *Lombardie*: and yet neuer to this day, a pound of it hath exceeded the price of an hundred sesterces. In all places they vse not to sheare sheepe: for the manner of plucking their fells continueth still in some countries. Sundry sorts of colours there be in wooll, and so many, that we are not able to giue severall names so much as to those that we call *Nature*, i. growing vpon the sheeps backe. For black fleeces, *Spaine* is chiefe, *Pollentia* for white; and *g. ey*, the tract of *Piemont* neere to the *Alpes*: Asia for red hath no fellow, and such kind of wools are called *Erythrææ*. In *Bœtia* likewise, that is to say, in the kingdome of *Granade* and *Andalusia*, the same colour is to be found. Neere to *Canusia*, the sheepe be deepe yellow or tawnie: and about *Tarentum*, they are of a browne and dusky colour. Generally, all kind of wools newly thorne or plucked, ynwash and greasy still, be good and medicinable. About *Istria* and *Liburnia*, the sheeps fleece resembleth haire rather than wooll, nothing at all good for to make frized clothes with a high nap: but serueth only for the Artizan or workman in *Portugall*, whose artificiall weauing in net or scutchen-work with squares, commends this wooll. The like wooll is common about *Pissenæ* in the prouince *Narbonensis*, i. *Languedoc* in France: and such is found in Egypt: the cloth made thereof, after it is worne bare, is then died and serueth new againe, and will weare still and last a mans life. The course rough wooll with the round great haire, hath been of ancient time highly commended and accounted of in tapestry worke: for euen *Homer* himselfe witnesseth, that they of the old world vsed the same much, andooke great delight therein. But this tapestry is set out with colours in France, after one sort, and among the *Parthians* after another. Moreover, wooll of it selfe driuen together into a felt without spinning or weauing, serueth to make garments with: and if vinegre be vsed in the working of it, such felts are of good proof to bear off the edge and point of the sword, yea and more than that, they will check the force of the fire. And the last cleansing and refuse thereof (when it is taken out of the coppers and leads of those that haue the fulling and dressing thereof) serues for flock-worke and to stuffe mattresses: an inuention (as I suppose) which came first out of France: for surely these flocks and quilted mattresses are at this day distinguished and knowne one from another by French names. But I am not able easily to set downe at what time first this workmanship began: for certain it is that in old time men made them pallets and beds of straw, or else lay vpon bare mats, like as now adayes soldiers in the camp make shift with hairy rugges. As for our mantles, frized deep both without and within, they were inuented & came to vse first, no longer since than in my fathers daies: as also these hairy counterpoints and carpets. For the studded cassocks that Senators and noble men of Rome do weare, begin but now for to be worn after the manner of deep frize rugges: Wooll that is blacke, will take no other hew, nor be dyed into any colour.

As

As touching the manner how to die other woolls, we will speake in conuenient place, namely, when we shall treat of the purples and sea shell fishes, and of certain hearbs good for that purpose. *M. Varro* writeth, That within the temple of *Sanguis*, there continued vnto the time that he wrote his booke, the wooll that ladie *Tanaquil*, otherwise named *Cata Caelia*, (pun: together with her distaffe and spindle: as also, within the chappell of Fortune, the very roiall robe or mantle of Estate, made with her owne hands after the manner of water-chamlor in waue worke, which *Seruius Tullus* vsed to weare. And from hence came the fashion & custome at Rome, that when maidens were to be wedded, they attended vpon them a distaffe, drest and trimmed with kembed wooll, as also a spindle and yarn vpon it. The said *Tanaquil* was the first that made the coat or cassock wouen right out all thorough, such as new beginners (namely, young souldiers, barristers, & fresh brides) put on vnder their white plaine gownes, without any guard of purple. The wauced water Chamelore, was from the beginning esteemed the richest and brauest wearing. And from thence came the branched damaske in broad workes. *Fenestella* writeth, That in the latter time of *Augustus Caesar* they began at Rome to vse their gownes of cloth shorne, as also with a curled nap. As for those robes which are called Crebrae and Papauerata, wrought thick with floure-work, resembling poppies; or pressed euen and smooth; they be of greater antiquitie: for euen in the time of *Lucilius* the Poet, *Torquatus* was noted and reprooued for wearing them. The long robes embrodered before, called *Prætextæ*, were deuised first by the *Tuscanes*. The *Trabeæ* were roiall robes, and I find that kings & princes only ware them. In *Homers* time also they vsed garments embrodered with imagerie and floure worke: & from thence came the triumphant robes. As for embroderie it selfe and needle-work, it was the *Phrygians* inuention: and hereupon embroderers be called in Latine *Phrygiones*. And in the same Asia, king *Attalus* was the first that deuised cloth of gold: and thence come such clothes to be called *Attalica*. In *Babylon* they vsed much to weaue their cloth of diuers colours, and this was a great wearing among them, & clothes so wrought were called *Babylonica*. To weaue cloth of tissew with twisted threds both in woofe and warp, and the same of sundry colours, was the inuention of *Alexandria*, and such clothes and garments were named *Polymita*. But France deuised the scutchion, square, or lozenge damask-work. *Metellus Scipio*, among other challenges and imputations laid against *Capito*, reproched and accused him for this, That his hangings and furniture of his dining chamber, being *Babylonian* worke or cloth of *Arras*, were sold for 800000 sesterces: and such like of late daies stood prince *Nero* in 400 hundred thousand sesterces, 400 millions. The embrodered long robes of *Seruius Tullus*, wherewith he couered and araiied all ouer the Image of *Fortune*, by him dedicated, remained whole and found vnto the end of *Seianus*. And a wonder it was, that they neither fell from the image, nor were moth-eaten in 560 yeares. I haue my selfe seen the sheeps fleeces vpon their backs while they bealiue, died with purple, with scarlet in grain, and the violet liquor of the fish *Murex*: by the means of certaine barkes of a foot and a halfe long dipped in these colors, and so imprinted and set vpon their fleeces: as if riotous wantonnes and superfluitie should force Natures work, and make wooll to grow of that colour. As for the sheep it selfe, she is knowne to be kindly enough by these marks, if she be short legged, and wel woollend vnder the bellie; for such as were naked there and pilled, they condemned and held for naught, and those they called *Apica*. In *Syria*, sheep haue tailes a cubit long, and they beare most wooll there. To lib lambs before they be fise moneths old, it is thought to be with the soonest, and daungerous.

CHAP. XLIX.

¶ Of a beast called *Musmon*.

There is in *Spain*, but especially in the *Ille Corsica*, a kind of *Musmones*, not altogether vnlike to sheep, hauing a shag more like the haire of goats, than a fleece with sheeps wooll. That kind which is engendered between them and sheepe, they called in old time *Vmbri*. This beast hath a most tender head, and therefore in his pasture he is forced to feed with his taile to the sunne. Of all liuing creatures, those that bare wooll are most foolish: for take but one of them by the horne and lead him any whither, all the rest will follow, though otherwise they were afraid to go that way. The longest that they liue in those parts, is 9 yeares; howsoever in *Ethiopia* they come to 13. In which country, goats also liue 11 yeares, whereas in other

other countries of the world, for the most part, they passe not eight. And both sorts, as well the one as the other, be sped within foure leapinges.

CHAP. L.

¶ Of Goats, and their breeding.

Goats bring forth foure kids otherwhiles, but that is very feldome. They goe with young fise months as ewes do. Shee goats waxe barren with fatnesse. When they be come once to be three yeares old, they are not so good to breed: ne yet when they be elder, and namely, being past foure yeares of age. They begin at the seuenth month, euen whiles they sucke their dammes. And as well the bucke as the Doe are held the better for breed, if they be not, and haue no hornes. The first time that the shee goats are leaped, they stand not to it: the second leaping speedeth better, and so forward. They chuse willingly to take the buck in the month of *November*, that they might bring kids in *March* following, when all shrubs put forth and begin to sprout and bud, for them to brouze. And this is sometime when they be a yeare old, but they neuer faile at two yeares: yea and when they be full three, they are not vtterly decayed and done, but are good still: for they beare 8 yeares. Subject they be in cold weather, to cast their young and yeane vntimely. The Doe, when she perceiueeth her cries dimme and ouer-cast either with pin and web or catarrh, pricketh them with the sharp point of some bulrush, and so leteeth them blood: but the bucke goeth to the brier and doth the like. *Mutianus* reporteth, that he had occasion vpon a time to mark the wit of this creature: It happened, that vpon a narrow thinne plank that lay for a bridge, that one goat met another coming both from diuers parts: now by reason that the place was so narrow that they could not passe by nor turne about, ne yet retire backwards blindly, considering how long the plank was & so slender withall, moreover, the water that ran vnderneath ran with a swift streame, and threatened present death if they failed and went besides: *Mutianus* (I say) affirmeth, that he saw one of them to lie flat down, and the other to goe ouer his backe. As for the male goats, they are held for the best which are most camofie or snout nosed, haue long eares, and the same flit in, with great force of shag haire about their shoulders. But the mark to know the kindest female is this, they haue two lappets, locks, or plaits as it were of haire, hanging downe along their bodie on either side from their neck. They haue not all of them hornes, but some are not; but in those which are horned, a man may know their age by the number of the knots therein more or lesse: and in very truth the more shee goats are more free of milke. *Archelaus* writeth, that they take their breath at the eares, and not at the nostrils: also that they be neuer cleare of the ague. And this haply is the cause, that they are hotter mouthed, and haue a stronger breath than sheepe, and more egre in their rut. Men say moreover, that they see by night as well as by day: therefore they that when euening is come see nothing at all, recouer their perfect sight again by eating ordinarily the liuer of goats. In *Cilicia* and about the *Syrtes*, the people call themselves with goats haire, for there they shure them as sheep. Furthermore it is said, that goats toward the Sun-setting, cannot in their pasture feed directly one another, but by turning taile to taile: as for other houres of the day, they keep head to head, & range together with the rest of their fellows. They haue all of them a tuft of haire like a beard hanging vnder their chin, which they call *Aruncus*. If a man take one of them by this beard and draw it forth of the stock, all the rest will stand still gazing thereat, as if they were astonished, and so will they doe if any of them chance to bite of a certaine heare. Their teeth kill trees. As for an olue tree, if they doe but lick it, they spoile it for euer bearing after: and for this cause they be not killed in sacrifice to *Mintyna*.

CHAP. LI.

¶ Of Swine, and their natures.

Wine goe a brimming from the time that the *Westerne* wind *Fauonius* begins to blow, vntill the spring *Equinoctiall*: and they take the bore when they be eight months old: yea in some places at the fourth month of their age, and continue breeding vnto the seuenth yeare. They farrow commonly twice a yeare: they bewish pigge months. One sow may bring at one farrow twenty pigges, but reare so many she cannot. *Nigidius* saith, that those pigs which

which are farrowed ten daies vnder or ten daies ouer the shortest day in the yeare, when the sun entred into Capricorn, haue teeth immediatly. They stand lightly to the first brimming, but by reason that they are subject to cast their pigs, they had need to be brimmed a second time. Howbeit the best way to preuent that they doe not slip their young, is to keepe the bore from them at their first grunting and seeking after him, nor to let them be brimmed before their ears hang downe. Bores be not good to brim swine after they be three yeres old. Sows when they be wearie for age that they cannot stand, take the bore lying along. That a sow should eat her own pigs, it is no prodigious wonder. A pig is pure & good for sacrifice, 5 daies after it is farrowed; a lamb, when it hath been yeared 8 daies; and a calfe, being 30 daies old. But *Gortianus* saith, That all beasts for sacrifice which chew cud, are not pure and right for that purpose, vntill they haue teeth. Swine hauing lost on eie, are not thought to liue long after; otherwise they may continue vntill they be fifteen yeres old, yea & some to twenty. But they grow to be wood and raging otherwhiles: and besides are subject to many maladies more, & most of all to the squinancie, and wen or swelling of the kernels in the neck. Will ye know when a swine is sick or vnfound, pluck a bristle from the back and it will be bloudie at the root: also he will cary his neck at one side as he goeth. A sow, if she be ouer-fat, soone wanteth milke; and at her first farrow bringeth fewest pigs. All the kind of them loue to wallow in dirt and mire. They wrinkle their taile, wherein this also is obserued, that they be more likely to appease the gods in sacrifice, than rather writh & turn their tailes to the right hand, than the left. Swine will be fat and well larded in fixtie daies; and the rather, if before you begin to frack them vp, they be kept altogether from meat three daies. Of all other beasts, they are most brutish; inasmuch as there goes a pleasant by-word of them, and fitteth them well, *That their life is giuen them in stead of salt*. This is known for a truth, that when certain theues had stolne and driuen away a companie of them, the swineheard hauing followed them to the water side (for by that time were the theues inbarged with them) cried aloud vnto the swine, as his manner was whereupon they knowing his voice, leaped all to one side of the vessel, turned it ouer and sunke it, tooke the water, and so swam againe to land vnto their keeper. Moreover, the hogs that vse to lead and goe before the heard, are so well trained, that they wil of themselves goe to the swine-market place within the citie, & from thence home againe to their maisters, without any guid to direct them. The wild bores in this kind, haue the wit to couer their tracks with mire, and for the nones to run ouer marsh ground where the prints of their footing will not be sene; yea and to be more light in running, to void their vrine first. Sows also are splayd as well as camels, but two daies before, they be kept from meat: then hang they by the fore-legs, for to make incision into their matrice, and to take forth their stones: and by this means they will sooner grow to be fat. There is an Art also in cookerie, to make the liuer of a sow, as also of a goose, more daintie (and it was the deuise of *M. Apicius*) namely, to feed them with drie figges, and when they haue eaten till they be full, presently to giue them mead or honied wine to drink, vntill they die with being ouercharged. There is not the flesh of any other liuing creature, that yeeldeth more store of dishes to the maintenance of gluttonie, than this; for fittie sundrie sorts of tastes it affordeth, whereas other haue but one a peece. From hence came so many editis and proclamations published by the Censors, forbidding and prohibiting to serue vp at any feast or supper, the belly and paps of a sow, the kernels about the neck, the brizen, the stones, the womb, and the fore-part of the bores head: and yet for all that, *Publius* the Poet and maker of wanton songs, after that he was come to his freedom, neuer (by report) had supper without an hogs belly with the paps: who also to that dish gaue the name, and called it *Sumen*. Moreover, the flesh of wild bores came to be in great request and was much set by: in such sort, as *Cato* the Censor in his inuictiue orations, challenged men for brawne. And yet when they made three kinds of meat of the wild bore, the loine was alwaies serued vp in the mids. The first Romane that brought to the table a whole bore at once was *P. Sernilius Rullus*, father of that *Rullus*, who in the time that *Cicero* was Consul, published the law *Agraria*, as touching the diuision of lands. See how little while ago it is since these superfluities began, which now are taken vp so ordinarily euery day. And yet the thing was noted and recorded in the Annals, as strange and rare; no doubt for this intent. To repress these inordinate enormities. One supper then or feast was taxed and reprooved therein at the beginning: but now, two and three bores at a time are serued vp whole and eaten together.

CHAP.

CHAP. LII.

¶ Of Parks for wild beasts.

The first man of the long robe that deuised parks as well for these bores, as for other deere and sauage beasts, was *Fulvius Lippinus*, who in the territorie of *Tarquiny* began to keepe and feed wild beasts for his game. And long it was not but others followed his steps, to wit, *L. Lucullus* and *Q. Hortensius*. Sows of the wild kind bring forth pigs but once a yere; and the bores in briming time are exceeding fierce and fel: then they fight one with another, they liden their sides, rubbing them against the bodies of trees, and all to wallow themselves in the mire, coating their backs with dirt. But they are not so raging then, but the sows in their farrowing are much worse, and lightly it is so in all other kind of beasts. Wild bores are not fit for generation before they be a yere old. The wild bores of India haue two bowing fangs or tusks of a cubit length, growing out of their mouth, and as many out of their foreheads like roscals horns. The bristly haire of the wild sort is like to brasse: but of others black. In Arabia swine will not liue.

CHAP. LIII.

¶ Of Beasts halfe sauage.

There is no creature ingenders so soon with wild of the kind as doth swine: & verily such hogs in old time they called Hybrids, as a man would say, halfe wild; inasmuch as this terme by a translation hath bin attributed to mankind. For so was *C. Amani*, colleague with *Cicero* in the Consulship, nicknamed. And not in swine onely, but also in all other liuing creatures, looke where there be any tame and domestical, you may find also wild and sauage of the same kind: seeing that euen of wild men there be also many sorts in diuers places, as wee haue before said. As for the goats kind, how many & how sundry resemblances are to be found in them of other beasts; for among them you shall haue the roebucke, the shamois, the wilde goat called the Eueck, wonderfull swift, albeit his head be loden with huge hornes like sword scabbards: by these they hang and poise themselves from rockes, namely, when they minde to leap from one to another, for by swinging to and fro they skip and jump the more nimble, and fetch a jerk out to what place they list, as it were forth of an engin. Of this kind be the Origes, the only beasts, as some thinke, of all others, that are said to haue their haire growing contrariwise and turning toward the head. To these belong the Does, and a kinde of fallow Deere called *Pygargi*, as also those that are named *Strepticerotes*, and many other not far vnlike. As for the former sort they come out of the Alps. These last rehearsed are sent from other parts beyond-sea.

CHAP. LIV.

¶ Of Apes and Monkeys.

All the kinde of these Apes approach neereft of all beasts to the resemblance of a mans shape: but they differ one from another in the taile. Marvellous crafty and subtil they be to beguile themselves: for by report, as they see hunters doe before them, they will imitate them in euery point, euen to besmeare themselves with glew & birdlime, & shoo their feet within grins and snares, and by that means are caught. *Mutianus* saith, that he hath seene Apes play at chesse and table: and that at first sight they could know nuts made of waxe from others. He affirmes also, that when the moon is in the wain, the monkeys & Marmosets (which in this kinde haue tailes) are sad and heauy, but the new moone they adore and ioy at, which they testifie by hopping and dancing. As for the eclipse of Sun or Moone, all other foure footed beasts also doe greatly dread and feare. The five Apes of all sorts are wondrous fond of their little ones: and such as are made tame within house will carry them in their armes all about for soone as they haue brought them into the world, keepe a shewing of them to euery bodie, and they take pleasure to haue them dandled by others, as if thereby they rooke knowledge that folke ioyed for their safe deliuerance: but such a culling and hugging of them they keep, that

in the end with very clasping and clipping they kill them many times. Apes that be headed and long snouted like dogs, and thereof called *Cynocephali*, are of all other most curst, shrewd and unhappy: like as the Marmozets and Monies called *Sphinges* & *Satyri*, are gentlest and most familiar: as for those called *Callitriches*, they be clean of another form & shape all over in a manner; they have a beard on their visage, & the forepart of their taile spreadeth broad. But this creature is said to live in no other climat but *Ethiopia*, where it breedeth.

CHAP. LV.

¶ Of Hares and Connies.

OF Hares also there be many sorts: vpon the Alps & such high mountains they be white of colour so long as the snow lieth; and it is verily thought, that all Winter long they live with eating of snow: for surely when it is thawed and melted, all the yere after they be brown and reddish as before: and a creature it is otherwise bred in extreme and intolerable cold. Of the Hares kind are they also which in Spain they call *Connies*, which are exceeding fruitful, and of wonderfull increase: in somuch, as hauing deuoured all the corn in the field before harvest, in the Balear Islands, they brought thereby a famine vpon the people. There is a most daintie dish serued vp at the table, made of *Leuerets* or rabbits, either cut out of the dams bellies, or taken from them when they are suckers, without cleansing them at all of the garbage, and such the Latines call *Laurices*. It is know for certain, that the Islanders of *Majorca* & *Minorca* made means to the Emperor *Augustus Caesar*, for a power of soldiery to destroy the infinit increase of *Connies* among them. Ferrets are in great account for chasing and hunting these *Connies*: the manner is to put them into their earths, which within the ground haue many waies and holes like mines, and thereupon these creatures are called *Cuniculi*: and when they are within, they so course the poore *Connies* out of their earth, that they are soon taken about ground at the mouth of their holes. *Archelano* writes, that looke how many receptacles & waies of passage the Hare hath for his dung and excrements, so many yeares old he is iust. And verily some haue more than others. The same writer is of opinion, that euery hare is both male and female, and that any of them can breed without the bucke. Certes herein Nature hath shewed her bounty and goodnesse, in that she hath giuen this creature (so good to eat, and so harmlesse otherwise) the gift of fertilitye and fruitfull wombe. The Hare, naturally exposed to be a prey and game for all men, is the only creature, vnles it be the *Connie* again called *Dafipus*, which after it be once with yong, conceiue again vpon it: in somuch as at one time shee hath some *Leuerets* sucking of her, others in her belly; and those not of the same forwardnesse, for some of them are couered with haire, others are naked without any downe; and there be againe of them that as yet are not shapen at all, but without all forme. Moreouer, men haue assaied to make cloath of Hares and *Connies* haire: but in the hand they are not so soft as is the fur vpon the skin or case: neither will they last, by reason that the haire is short and will soon shed.

CHAP. LVI.

¶ Of Beasts halfe tame.

AS for Hares, seldome be they made tame and to come to hand; and yet iustly they cannot be simply called wild: for many other such creatures there be besides, that neither are fawage, nor tame and gentle, but of a middle nature betwixt both: as namely among flying fowles in the aire, the Swallow; likewise the Bee: and among fishes the Dolphin in the sea.

CHAP. LVII.

¶ Of Mice and Rats, Dormice, Reer-mice, and Bass.

IN the rank of those that be neither tame nor wild, many haue ranged the Mice and rats that haunt our houses. A creature this is of no final reckoning for prelagging somewhat to a state, by some strange and prodigious tokens. By gnawing the siluer shields & bucklers at *Lavinium*, they portended and foresaw the *Marian* war. Vnto *Carbo* the L. Generally, by eating of his hose garters and shooe-strings at *Clusium* they prognosticated his death. Many forts

there be of them in the country of *Cyrene*, some with a broad flat forehead, others with a sharp pointed; and there be of them seen to haue sharp prickles like to vetchins or hedge-gogs. *Theophrastus* reporteth, that these vermin hauing dipteked the *Isle Gyarus*, and driven away the inhabitants, gnawed and deuoured euery thing they could meet withal: euen to their very iron. And surely it seemes that is their nature so to doe: for euen amongst the *Chalybes* they serue them so, in eating their iron and Steele within their very forges: yea, & in gold mines they play the like parts: & therefore being caught, their bellies be ript by the pioners in the mine, where they euermore find their stolen gold again. See what delight this creature takes in theeuing. We reade in the *Chronicles*, that whilst *Amnial* lay in siege before the towne *Caslinum*, a rat was sold within the town for 200 *Sesterces*: the man who bought it at that price liued; but the party who sold it through greedines of money died for hunger. By the learning of Soothsayers obserued it is, that if there be store of white ones bred, it is a good signe and presageth prosperitie. And in truth our stories are full of the like examples, and namely, that if rats be heard to cry or squeak in the time of ceremoniall taking the *Auspices* and signes of birds, all is marred, and that businesse clean dasht. *Nigidius* saith, that rats lie close hidden all winter, like as *Dormice*. By the Edicts of the Censors, and principally by an Act of *M. Scarnus* in his Consulship, provided it was, & streight order taken, that no Rats, Mice, or *Dormice* should be serued vp to the table at their great suppers and feasts: like as all shell fish or fowle set out of foreign countries far remote. Counted are *Dormice* betweene tame and wilde: and verily he that first deuised to keepe wilde bores in parkes, found means also to nourish and feed these creatures in great tuns, pipes, and drifats. In the experiment and triall whereof this hath bin found & obserued, That willingly these little creatures will not sort together vnlesse they were countenraied it were, and bred in one & the same sort: and if it chance that there be intermingled among them any strangers, to wit, such as had either some riuier or mountain between the places where they were bred, they kill one another with fighting. The yong *Dormice* are exceeding kind and louing to their fires that begat them; for when they be old and feeble, full tenderly will they feed and nourish them. They renew their age euery yere by sleeping all winter; for they tie by it close snug all the while, and are not to be seen: but come the sommer once they be yong and fresh againe. And thus the field mice likewise take their rest, and do the same.

D

CHAP. LVIII.

¶ What Creatures live not but in certaine places.

A Wonderfull thing it is to see, that Nature hath not only brought forth diuers creatures in sundrie Countries, but also in one region vnder the same climate hath denied some of them to live in euery corner thereof. And namely in the Forrest of *Moesia* in *Italie*, these *Dormice* are found but only in one part thereof. And in *Lycia*, the wild goats, roe-bucks, and Does neuer passe the mountains that confine vpon the *Syrians*: no more than the wilde Asses transmount that hill which diuides *Cappadocia* from *Cilicia*. Within *Hellepont* the Stags and Hinds neuer go forth and enter into the marches of other countries: and those about *Arginussa* passe not the mountaine *Elatus*: which may be knowne by this, that all vpon that hill haue their eares marked and flit. In the Island *Poroselenum* the weezels will not crosse ouer the highway. And about *Lebadia* in *Bœotia*, those moldwarps or warts that are brought thither from other parts, will not abide the very soile, but flie from it; which neere-by in *Orchomenus*, undermine and hollow all their corn fields: and such store there is of them, that I haue seen all the hangings, carpets, counterpoints, and couerlets of chambers made of their skinned. See how men for no religion and feare of the gods will be kept from taking their pleasures and making their delights of these creatures, otherwise prodigious & portending things to come. The strange Hares that be brought into *Ithaca* will not liue there, but seeking to escape, are found dead vpon the very banks of the sea side. In the Island *Ebusus* be no *Connies* at all: and yet in Spain and the Balear Isles there are so many, that they pester the whole country. Frogs were euer in *Cyrene* naturally mute, and would not cry: but brought there were thither out of the continent such as would erie in the water: and that whole kind still remaineth vocal. In the Island *Scriphos* you shall not yet heare a Frogge to cry: let the same be carried forth to other

other places, they will keep a singing as well as the rest: And (by report) the like hapned in a lake of Theffaly named Sicendus. In Italy the hardy fawes are venomous in their biting: but passe over the Apennine once there are no more such to be found. In what country soener they be, let them go over the track of a cart wheele they die presently. In Olympus a mountaine of Macedony there are no wolues, ne yet in the Isle of Candy: and there verily are to be found no Foxes nor Beares, and in one word, no hurtfull or noisome beast, vnlesse it be a kinde of spider called *Phalangium*, whereof we will speake more in due time and place. And that which is more wonderfull, in the same Isle there are no stags or hinds, save only in the region and quarter of the Cydoniars: no wild bores likewise, nor the fowle called the Godwit or Attagene, ne yet Virehins. To conclude, in Africk ye shall find no wild bores, no Stags and Hinds, no roe-bucks and Does, ne yet Beares.

CHAP. LIX.

¶ *What Creatures are hurtfull to strangers.*

Now, some living creatures there be that do no harm at all to the inhabitants of the same countries, but kill all strangers. Namely, certain serpents in Tirimthe, which are supposed to breed of themselves out of the very earth. Semblably, in Syria there be snakes, and specially along the banks of Euphrates, that will not touch the Sirians lying along asleep: ray, if a man that leans vpon them be stung or bitten by them, he shal find no hurt or mischief thereby. But to men of all other nations whatsoeuer they are most spitefully bent, them they will with great greedinesse eagerly assaile and fly vpon, yea, and kill them with extreme paine and anguish: and therefore it is that the Sirians destroy them not. Contrariwise *Aristotle* reporteth, That in Latmos (a mountain in Caria) the Scorpions will do no harm to strangers, marie the inhabitants of the same country they will sting to death. Now let vs proceed to other, liuing creatures besides those of the land, and discourse of their sundry sorts and kinds.



THE NINTH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

CHAP. I.

¶ *The nature of water Creatures.*



Haue thus shewed the nature of those beasts that liue vpon the land, and therein haue some societie & fellowship with men. And considering, that of all others besides in the world, they that fise be the least, we will first treat of those fish that keep in the sea, not forgetting those also either in running fresh riuers or standing lakes.

CHAP. II.

¶ *What the reason is why the sea should breed the greatest liuing creatures.*

The waters bring forth more store of liuing creatures, and the same greater than the land. The cause whereof is euident, even the excessive abundance of moisture. As for the fowls & birds, who liue hanging, as it were, & hovering in the aire, their case is otherwise. Now

A in the sea, being so wide, so large and open, readie to receive from heauen above the genital feeds and causes of generation, being so soft and pliable, so proper & fit to yeeld nourishment and encrease; assisted also by Nature, which is neuer idle, but alwaies framing one new creature or other: no maruell it is if there are found so many strange and monstrous things as there be. For the feeds and vniuersall elements of the world are so interlaced sundry waies, and mingled one within another, partly by the blowing of the winds, and partly with the rolling and agation of the waues, inso much as it may truly be said, according to the vulgar opinion, that whatsoeuer is engendred and bred in any part of the world besides, is to be found in the sea: and many more things in it, which no where else are to be seen. For there shall ye meet with fishes, resembling not only the forme and shape of land creatures liuing, but also the figure and fashion of many things without life: there may one see bunches of grapes, swords, and fawes, represented, yea, and also cowcumbers, which for colour, smell, and taste, resembleth those growing vpon the earth. And therefore we need the lesse to wonder, if in so little shell fishes as are cockles, there be somewhat standing out like horse-heads.

CHAP. III.

¶ *Of the monstrous fishes in the Indian sea.*

The Indian sea breedeth the most and biggest fishes that are: among which, the Whales and Whirlepooles called Balæne, take vp in length as much as foure acres or arpens of land: likewise the Priettes are two hundred cubits long: and no maruell, since Locusts are there to be found of foure cubits in length: and yeelles within the ruer Ganges of thirtie foot in length. But these monstrous fishes in the sea, are most to be seen about the middest of Summer, & when the daies be at the longest with vs. For then by the means of whirle winds, storms, winds, and blustering tempests which come with violence down from the mountains and promontories, the seas are troubled from the very bottome, and turned vpside downe: whereupon the surging billowes thereof, raise these monsters out of the deep, and roll them vp to be seen. For in that manner fo great a multitude of Tunnies were discovered and arose, that the whole armada of king *Alexander* the great, seeing them coming like to an armie of enemies in order of battell, was driuen to range & make head against them, close vnited together: for otherwise, if they had failed scattering asunder, there had bin no way to escape, but ouerturned they had bin, with such a force and sway came these Tunnies in a skull vpon them. And verily, no voice, crie, hollaing and houting, no nor any blowes and raps affrighted this kind of fish, only at some cracke or crashing noise they be terrified: and neuer are they troubled and disquieted so much as when they perceiue some huge thing ready to fall vpon them.

In the red sea there lies a great demie Island named Cadara, so farre out into the sea, that it maketh a huge gulfe vnder the wind, which king *Ptolomeus* was 12 daies and 12 nights a rowing through: forasmuch as there is no wind at all vses to blow there. In this creeke so close and quiet, there be fish and Whales grow to that bignes, that for their very weight and vnwieldines of their bodie, they are not able to stirre. The Admirals and other captaines of the fleet of the foresaid *Alexander* the great, made report, That the Gedrosi, a people dwelling vpon the ruer *Arbis*, vse to make of such fishes chawes, the dores of their houses; also that they lay their bones ouerthwart from one side of the house to another, in stead of beames, joists and rafters to beare vp their floores and rouses: and that some of them were found to be fortie cubits long.

In those parts there be found in the sea certaine strange beasts like sheep, which goe forth to land, feed vpon the roots of plants and herbes, and then returne againe into the sea. Others also which are headed like Horses, Asies, and Bulls: and those many times eat downe the standing corne vpon the ground.

CHAP. IIII.

¶ *Which be the greatest fishes in any coast of the Ocean sea.*

The biggest and most monstrous creature in the Indish Ocean, are the whales called Priettes & Balæna. In the French Ocean there is discovered a mighty fish called Phyteter, [i.e. a Whirlepoole] rising vp aloft out of the sea in manner of a colunne or pillar, higher than the

the very failles of the ships: and then he spouteth and casteth forth a mightie deale of water, as it were out of a conduit, enough to drowne and sinke a ship. In the Ocean of Gades, betwene Portugale and Andalusia, there is a monstrous fish to be seen like a mightie great tree, spreading abroad with fo mightie armes, that in regard thereof onely, it is thought verily it neuer entered into the streights or narrow sea thereby of Gibraltar. There shew themselves otherwhiles fishes made like two great wheelles, and thereupon fo they be called: framed distinctly with foure armes, representing as many spokes: and with their eies they seem to couer close the naues from one side to the other, wherein the said spokes are fastened.

CHAP. V.

¶ Of Tritons, Nereides, and sea-Elphants, and their formes.

IN the time that *Tiberius* was Emperour, there came vnto him an Embassador from *Vlissipon*, sent of purpose to make relation, That vpon their sea-coast there was discovered within a certain hole, a certain sea goblin, called Triton, founding a shell like a trumpet or cornet: and that he was in forme and shap like those that are commonly painted for Tritons. And as for the Meremaids called Nereides, it is no fabulous tale that goes of them: for look how painters draw them, fo they are indeed: onely their bodie is tough & skaled all ouer, euen in those parts wherein they resemble a woman. For such a Meremaid was seen and beheld plainly vpon the same coast neere to the shore: and the inhabitants dwelling neere, heard it a far off when it was a dying, to make pitteous mone, crying & chattering very heauily. Moreouer, a lieutenant or gouernor vnder *Augustus Caesar* in Gaule, aduertised him by his letters, That many of these Nereides or Mearmaides were seen east vpon the sands, and lying dead. I am able to bring forth for mine authors diuers knights of Rome, right worshipfull persons and of good credit, who testifie, that in the coast of the Spanish Ocean neer vnto Gades, they haue seen a Meremaid, in euery respect resembling a man as perfectly in all parts of the bodie as might be. And they report moreouer, that in the night season he would come out of the sea aboord their ships: but look vpon what part sooner he settled, he waied the same downe, & if he rested and continued there any long time, he would sinke it cleane. In the daies of *Tiberius* the Emperour, in a certain Island vpon the coast of the prouince of Lions, the sea after an ebbe left vpon the bare sands 300 sea-monsters and about, at one flore together, of a wonderfull varietie and bignesse, differing a funder. And there were no fewer found vpon the coast of the Sanrones. And among therest there were sea-Elphants and rams, with teeth standing out, & bornes also, like to those of the land, but that they were white like as the fore-said teether: and besides, many Meremaids. *Turanus* hath reported, That a monster was driuen and cast vpon the coast of Gades, betwene the two hindmost fins whereof in the taile, were 16 cubits: it had 122 teeth, whereof the biggest were a span or nine inches in measure, and the least halfe a foot. *M. Scaurus* among other strange and wonderfull sights that he exhibited to the people of Rome, to doe them pleasure in his *Ædific* ship, shewed openly the bones of that sea-monster, before which ladie *Andromeda* (by report) was cast to be deuoured: which were brought to Rome from Ioppe, a towne in Iudæa: and they caried in length fortie foot: deeper were the ribs than any Indian Elephant is high, and the ridge-bone a foot and halfe thicke.

CHAP. VI.

¶ Of the Balænes and Orca.

THESE monstrous Whales named Balæne, otherwhiles come into our seas also. They say that in the coast of the Spanish Ocean by Gades, they are not seen before midwinter when the daies be shortest: for at their set times they lie close in a certain calme deep and large creeke, which they chuse to cast their spawn in, and their delight about all places to breed. The Orca, other monstrous fishes, know this full well, and deadly enemies they be vnto the foresaid whales. And verily, if I should pourtrai them, I can resemble them to nothing else but a mightie maffe and lump of flesh without all fashion, armed with most terrible, sharpe, and cutting teeth. Well, these being ware that the Whales are there, breake into this secret by-creek out of the way, seeke them out, and if they meet either with the young ones, or the dammes that haue newly

A newly spawn'd, or yet great with spawn, they all to this & hack them with their trenchant teeth: yea, they run against them as it were a foist or ship, of ware armed with sharp brazen pikes in the beake-head. But contrariwise, the Balænes or Whales aforesaid, that cannot wind and turne aside for defence, and much lesse make head and resist, fo vnwelldie as they bee by reason of their owne weightie and heauie bodie, (and as then eith big bellied, or else weakened lately with the paines of travell and caluing their young ones) haue no other meanes of helpe and succor but to shoot into the deepe, and gaue sea, soome to defend themselves from the enemy. On the other side, the Orca labour (to cut them short of their purpose) to lie betwene them and home in their very way, and otherwhiles kill them vnwares in the streights, or driue them vpon the shelles and shallows, or else force them against the very rocks, & so bruite them; B When these combats and fights are seen the sea seemes as it it were angry with it selfe: for albeit no winds are vp, but all calme in that creek and gulf, yet ye shall haue waues in that place where they encounter (with the blaits of their breath, and the blowes giuen by the assailant) so great, as no tempestuous whirle windes whatsoeuer are able to raise. In the haue of Oliba likewise there was discovered one of these Orcas, and the same assailed by *Claudius* the Emperour. It chanced to come as he was making the said harbour or pere, drawne and trained thither with the sweetnes of certaine beasts hides that were brought out of Gaule, and were cast away and perished by the way. Of them for certaine daies she had fed, and still following them, with the weight of her heauie bodie had made a furrow and channel (as it were) with her bellie in the bottome among the shelles: and by reason of the flowing of the sea she was fo inuelted and compassed in with the sands, that by no means possible she could turn about: but still while C she goes after these hides whereof she fed, she was by the billows of the sea cast afloat on the shore, so as her back was to be seene a great deale about the water, much like to the bottome or keele of a ship turned vpside downe. Then the Emperour commanded to draw great nets and cords with many folds along the mouth of the haue on euery side behind the fish, himselfe accompanied with certaine Pretorian cohorts, for to shew a pleasant sight vnto the people of Rome, came against this monstrous fish, and out of many hoies and barks the souldiers launced darts and iaelines thicke. And one of them I saw my selfe sunke downe right with the abundance of water that this monstrous fish spouted and filled it withall. The Whales called Balæne haue a certaine mouth or great hole in their forehead, and therefore as they swim afloat aloft on the water, they send vp on high (as it were) with a mighty strong breath a great quantity of water when they lift, like stormes of raine.

CHAP. VII.

¶ Whether fish do breath and sleep, or no.

ALL writers are fully resolu'd in this, That the Whales aforesaid, as well the Balæne as the Orca, and some few other fishes bred & nourished in the sea, which among other inward bowels haue lights, doe breath. For otherwise it were not possible, that either they or any other beast, without lights or lungs should blow: and they that be of this opinion, suppose likewise, that no fishes hauing gills, do draw in and deliuer their wind again to and from many other kinds besides, although they want the foresaid gills. Among others, I see that *Aristotle* was of that mind, and by many profound and learned reasons perswaded & induced many more to hold the same. For mine owne part, if I should speake frankly what I think, I professe that I am not of their judgment. For why? Nature if he be so disposed, may giue in steed of light some other organs and instruments of breath: to this creature one, to that another: like as many other creatures haue another kind of moist humor in lieu of blood. And who would maruel, that this vital spirit should pierce within the waters, considering that the seeth evidently how it riseth againe and is deliuered from thence: also how the aire entrenchen into the earth, which is the grofset & hardest of all the elements: As we may perceiue by this good argument, that some creatures, which albeit they be alwaies couered within the ground, yet liue and breath neuertheless, and namely, the Wants or Mold-warpes. Moreouer, I haue diuers pregnant & effectual reasons inducing me to beleue, that all water creatures breathe each one after their manner, as Nature hath ordained. First and principally, I haue obserued oftentimes by experience, That fishes evidently breath and pant for wind (after a sort) in the great heat of Summer: as also that they

they yawne and gape when the weather is calme & the sea still. And they themselves also who hold the contrarie, confesse plainly, that fishes doe sleepe. And if that be true, How, I pray you, can they sleepe if they take not their wind? Moreover, whence come those bubbles which continually are breathed forth from vnder the water? and what shall we say to those shell fishes which wax and decay in substance of bodie, according to the effe& of the Moones encrease or decrease? But about all fishes haue hearing and smelling, and no doubt both these senses are performed and maintained by the benefit and matter of the aire: for what is smell and sent, but the verte aire, either infected with a bad, or perfumed with a good saueur? Howbeit I leaue euery man free to his own opinion, as touching these points. But to returne againe to our purpose: this is certaine, that neither the Whales called Balanes, nor the Dolphins, haue any gills: and yet do both these fishes breathe at certaine pipes and conduits, as it were reaching downe into their lights: from the forehead, in the Balanes, and in the Dolphins, from the backe. Furthermore, the Sea-calues or Seales, which the Latines call *Phoca*, doe both breath and sleepe vpon the drie land. So do the sea Tortoises also, whereof we will write more anon.

CHAP. VIII.

¶ Of Dolphins.

THE swiftest of al other liuing creatures whatsoeuer, & not of sea-fish only, is the Dolphin, quicker than the flying fowle, swifter than the arrow shot out of a bow. And but that this fish is mouthed far beneath his snout, and in manner towards the mids of his belly, there were not a fish could escape from him, so light and nimble he is. But nature in great providence fore-seeing so much, hath giuen these fishes some let & hinderance, for vlesse they turned vpright much vpon their backe, catch they can no other fish: and euen therein appeareth most of all their wonderfull swiftnesse and agilitie. For when the Dolphins are driuen for very hunger to course and pursue other fishes down into the bottom of the sea, and thereby are forced a long while to hold their breath, for to take their wind againe, they lance themselves aloft from vnder the water as if they were shot out of a bow; and with such a force they spring vp againe, that many times they mount ouer the very sailes and mastes of ships. This is to be noted in them, that for the most part they sort themselves by cotes like man and wife. They are with yong nine moneths, and in the tenth bring forth their little ones, and lightly in Summer time; and otherwhiles they haue two little dolphins at once. They suckle them at their teats, like as the whales or the Balanes do; yea, & so long as their little ones are so yong that they be feeble, they carry them too and fro about them: nay when they are growne to be good big ones, yet they beare them companie still a long time, so kind and louing be they to their yong. Young Dolphins come very speedily to their growth, for in ten yerres they are thought to haue their full bignes: but they liue thirtie yerres, as hath bin known by the experience and triall in many of them, that had their taile cut for a marke when they were yong, and let go againe. They lie close euery yerre for the space of thirty daies, about the rising of the Dog-starre; but it is strange how they be hidden, for no man knows how: and in very deed a wonder it were, if they could not breath vnder the water. Their manner is, to breake forth of the sea and come a land, and why they should so do, it is not known: for presently as soon as they touch the dry ground, they die: and so much the sooner, for that their pipe or conduit aboue-said incontinently closeth vp and is stopped. Their tongue stirreth within their heads, contrary to the nature of all other creatures liuing in the waters: the same is short and broad fashioned like vnto that of a swine. Their voice resembleth the pittifull groining of a man: they are saddle-backed, & their snout is camoise and flat, turning vp. And this is the cause that all of them (after a wonderfull sort) know the same *Nemo*, and take great pleasure that men should focall them. The Dolphin is a creature that carries a louing affection not only vnto man, but also to musick: delighted he is with harmony in song, but especially with the sound of the water instrument, or such kind of pipes. Of a man he is nothing affraid, neither auoides from him as a stranger: but of himselfe meeteth their ships, plaith and disports himselfe, and fetcheth a thousand frisks and gambols before them. He will swim along by the mariners, as it were for a wager, who should make way most speedily, and alwaies outoeth them, saile they with neuer so good a fore-wind.

In the daies of *Augustus Caesar* the Emperour, there was a Dolphin entred the gulfes or poole *Lucrinus*,

A *Lucrinus*, which loued wondrous well a certain boy a poore mans son: who vsing to goe euery day to schoole from *Baianum* to *Puteoli*, was wont also about noone-tide to stay at the water side, and to call vnto the Dolphin, *Simo*, *Simo*, and many times would giue him fragments of bread, which of purpose he euer brought with him, and by this meanes allured the Dolphin to come ordinarily vnto him at his call. [I would make scruple and bash to insert this tale in my storie and to tell it out, but that *Mecenas Fabianus*, *Flautius Alfus*, and many others haue set it downe for a truth in their chronicles.] Well in proesse of time, at what houre soeuer of the day, this boy lured for him & called *Simo*, were the Dolphin neuer so close hidden in any secreet and blind corner, out he would and come abroad, yea and skud amaine to this lad: and taking bread and other victuals at his hand, would gently offer him his back to mount vpon, and then downe went the sharpe pointed prickles of his fins, which he would put vp as it were within a sheath for fear of hurting the boy. Thus when he had him once on his back, he would carry him ouer the broad arme of the sea as farre as *Puteoli* to schoole; and in like manner conuey him backe againe home: and thus he continued for many yerres together, so long as the child liued. But when the boy was fallen sicke & dead, yet the Dolphin gaue not ouer his haunt, but vsually came to the wonted place, & missing the lad, seemed to be heauie and mourne againe, vntill for very grieffe & sorrow (as it is doubtles to be presumed) he also was found dead vpon the shore.

Another Dolphin there was not many yerres since vpon the coast of *Africke*, neere to the citie *Hippo*, called also *Diarrhytus*, which in like manner would take meat at a mans hand, suffer himselfe gently to be handled, play with them that swam and bathed in the sea, and carrie on his backe whoeuer would get vpon it. Now it fell out so, that *Flautianus* the Proconfull or lieutenant Generall in *Africke* vnder the Romans, perfumed and besmeared this Dolphin vpon a time with a sweet ointment: but the fish (as it should seem) smelling this new & strange smell fell to bedrowlie and sleepe, and lulled to and fro with the waues, as if it had bin halfe dead: and as though some iniurie had bin offered vnto him, went this way and kept close, and would not conuerse any more for certaine moneths with men, as before-time. Howbeit in the end he came againe to *Hippo*, to the great wonder & astonishment of all that saw him. But the wrongs that some great persons and lords did vnto the citizens of *Hippo*, such I mean as vsed to come for to see this sight: and namely, the hard measure offered to those townemen, who to their great cost gaue them entertainment, caused the men of *Hippo* to kill the poore Dolphin.

The like is reported in the citie *Iassos*, long before this time: for there was scene a Dolphin many a day to affe& a certaine boy, so as he would come vnto him where soeuer he chanced to espy him. But whiles at one time about the rest he followed egerly after the lad going toward the towne, he shot himselfe vpon the dry sands before he was aware, and died forthwith. In regard hereof, *Alexander* the Great ordained that the said yong boy should afterwards be the chiefe priest and sacrificer to *Neptune* in *Babylon*: collecting by the singular fancie that this Dolphin cast vnto him, that it was a great signe of the speciall loue of that god of the sea vnto him, and that he would be good and gracious to men for his sake.

Egefidemus writeth, that in the same Iassus there was another boy named *Hermias*, who hauing vsed likewise to ride vpon a Dolphin ouer the sea, chanced at the last in a foudaine storme to be ouerwhelmed with waues as he sat vpon his backe, and so died, and was brought backe dead by the Dolphin: who confessing as it were that he was the cause of his death, would neuer retire againe into the sea, but launced himselfe vpon the sands, and there died on the drie land.

The semblable happened at *Naupactum*, by the report of *Theophrastus*. But there is no end of examples in this kinde: for the *Amphilocheians* and *Tarentines* testifie as much, as touching Dolphins which haue bin enamoured of little boies: which induceth me the rather to beleue the tale that goes of *Arion*. This *Arion* being a notable musitian & plaier of the harpe, chanced to fall into the hands of certain mariners in the ship where he was, who supposing that he had good store of money about him, which he had gotten with his instrument, were in hand to kill him and cast him ouer boord for the said monie, and so to intercept all his gaines: he, seeing himselfe at their deuotion and mercie, besought them in the best manner that he could deuise, to suffer him yet before he died, to play one fit of mirth with his harpe; which they granted: (at his musick and sound of harpe, a number of Dolphins came flocking about him :) which done, they turned him ouer shipbord into the sea; where one of the Dolphins rooke him vpon his backe, and carried him safe to the bay of *Tanarus*.

To conclude and knit vp this matter: In Languedoc within the prouince of Narbon, and in the territorie of Nemaufum, there is a standing poole or dead water called Latera, wherein men and Dolphins together, vse to fish: for at one certain time of the year, an infinite number of fishes called Mulletts, taking the vantage of the tide when the water doth ebbe, at certain narrow weares and passages with great force break forth of the said poole into the sea: and by reason of that violence, no nets can be set and pitched against them strong enough to abide and beare their huge weight, and the streame of the water together, if so be men were not cunning and craftie to wait and espie their time to lay for them, and to entrap them. In like manner the Mulletts for their part, immediately make speed to recouer the deepe, which they do very soon by reason that the channell is neere at hand: and their onely haile is for this, to escape and passe that narrow place which affordeth opportunitie to the fishers to stretch out and spread their nets. The fisher-men being ware thereof, and all the people besides (for the multitude knowing when fishing time is come, run thither, and the rather for to see the pleasant sport) crye as lowd as euer they can to the Dolphins for aid, & call *Simo, Simo*, to help to make an end of this their game and pastime of fishing. The Dolphins soon get the care of their crye, and know what they would haue; and the better, if the North-winds blow and carrie the sound vnto them: for if it be a Southerne wind, it is later ere the voice be heard, because it is against them. Howbeit, be the wind in what corner soeuer, the Dolphins resort thither flock-meale, sooner than a man would thinke, for to assit them in their fishing. And a wondrous pleasant sight it is to behold the squadrons as it were of those Dolphins, how quickly they take their places and be aranged in battell array euen against the very mouth of the said poole, where the Mulletts vse to shoot into the sea: to see (I say) how from the sea, they oppose themselves and fight against them, and driue the Mulletts (once affrighted and skared) from the deep, vpon the shelles. Then come the fishers and beset them with net and toile, which they beare vp and fortifie with strong forkes: howbeit for all that, the Mulletts are so quicke & nimble, that a number of them whip ouer, get away, and escape the nets. But the Dolphins then are ready to recieve them: who contenting themselves for the present to kill only, make foule worke and haucke among them; & put off the time of preying and feeding vpon, vntill they haue ended the battell & archieued the victorie. And now the skirmish is hot, for the Dolphins also perceiuing also the men at worke, are the more egre and couragious in fight, taking pleasure to be enclosed within the nets, and so most valiantly charge vpon the Mulletts: but for feare lest the same should giue an occasion vnto the enemies & prouoke them to retire and flie backe, between the boats, the nets, and the men there swimming, they glide by so gently and easily, that it cannot be seen where they gat out. And albeit they take great delight in leaping, & haue the cast of it, yet none assaith to get forth, but where the nets lie vnder them: but no sooner are they out, but presently a man shall see braue pastime between them, as they scuffle & skirmish as it were vnder the rampier. And so the conflict being ended, and all the fishing sport done, the Dolphins fall to spoile and eat those which they killed in the first shock and encounter. But after this seruice performed, the Dolphins retire not presently into the deep againe, from whence they were called, but stay vntill the morrow, as if they knew very well that they had so carried themselves, as that they deserued a better reward than one daies refection and vituals: and therefore contented they are not and satisfied, vnlesse to their fish they haue some fops and crums of bread giuen them soaked in wine, & that their bellies full. *Mutinus* makes mention of the semblable manner of fishing in the gulfe of Iassos: but herein is the difference, for that the Dolphins come of their own accord without calling, take their part of the bootie at the fishers hands: and euery boat hath a Dolphin attending vpon it as a companion, although it be in the night season & at torch light.

Ouer and besides, the Dolphins haue a kind of common wealth and publick society among themselves: for it chanced vpon a time, that a king of Caria had taken a Dolphin, and kept him fast as a prisoner within the harbor: whereupon a mighty multitude of other Dolphins resorted thither, and by certain figures of sorrow and mourning that they made, euident to be perceived and vnderstood, seemed to craue pardon and mercie for the prisoner: and neuer gaue ouer vntill the king had giuen commandement that he should be enlarged and let goe. Also the little ones are euermore accompanied with some one of the bigger sort, as a guide to guard & keep him. To conclude, they haue beene seene to carry one of their fellows when he is dead, into some place of securitie, that he should not be deuoured and torne of other sea-monsters.

CHAP. IX.

¶ Of Porpusses.

The Porpusses, which the Latines call *Tursiones*, are made like the Dolphins: howbeit they differ, in that they haue a more sad and heauie countenance: for they are nothing so gamefome, playfull, and wanton, as be the Dolphins: but especially they are snouted like dogges when they startle, grin, and are ready to doe a fewd turne.

CHAP. X.

¶ Of sea Tortoises, and how they are taken,

Here be found Tortoises in the Indian sea so great, that one only shell of them is sufficient for the roofe of a dwelling house. And among the Islands principally in the red sea, they vse Tortoise shells ordinarily for boats and wherries vpon the water.

Many waies the fisher-men haue to catch them; but especially in this manner: They vse in the mornings when the weather is calm and still, to stote aloft vpon the water, with their backs to be seen all ouer: and then they take such pleasure in breathing freely & at libertie, that they forget themselves altogether: inso much as their shell in this time is so hardened and baked with the sun, that when they would they cannot diue and snke vnder the water againe, but are forced against their wills to stote aboue, and by that meanes are exposed as a prey vnto the fishermen. Some say that they go forth in the night to land for to feed, where, with eating greedily, they qe wearie; so that in the morning, when they are returned againe, they fall soon asleep about the water, and keepe such a snorting and routing in their sleepe, that they bewray where they be, and so are easily taken: and yet there must be three men about euery one of them: and when they haue swom vnto the Tortoise, two of them turne him vpon his backe, the third casts a cord or halter about him, as hee lyeth with his belly vpward, and then is he haled by many more together, to the land. In the Phoenician sea, they make no great ado to take them; for why, at a certain time of the yere they resort of themselves by great multitudes in skulls vp into the riuier Eleutherius.

The Tortoise hath no teeth, but the sides and brimmes of his nebe or becke, are sharpe and keene: whereof the vpper part or chaw shutteth close vpon the nether, like to the lid of a boxe. In the sea they liue of muscles, cockles, and such small shell-fishes, for their mouths are so hard that they be able to crush and break stones therewith. Their manner is to goe a land; where among the grasse they lay egges as bigge as birds egges, to the number commonly of a hundred. When they haue so done, they hide them within the earth in some little hole or gutter, sure enough from any place where the water cometh, they couer them with mould, beat it hard downe with their brest, and so pat it smooth, and in the night time sit vpon them: they couie a whole yere before they hatch. Some say, that the looking wistly vpon their egges with their eies seneth in stead of sitting. The female flieth from the male, and will not abide to encounter, vntill such time as he pricketh her behind and sticketh somewhat in her taile for running away from him so fast.

The Troglodites haue among them certaine Tortoises, with broad hornes like the pegs in a Lute or Harpe, and the same will wagge and stirre, so as in swimming they helpe themselves therewith, and are guided and directed by them. And this kind of Tortoise is called *Celtium*: of exceeding great bignesse, but rare to be found, and hard to come by: for their exceeding sharpe prickles like rockes, among which they keepe, fright the Chelomophagi (who delight to feed vpon them) that they dare not search after them. And the Troglodites, vnto whom these Tortoises vse to swim, adore them as holy and sacred things.

There be also land Tortoises (called thereupon in the workes that are made of them in pannell wise, Cherfins) found in the deserts and wildernesse of Affrick, and principally in that part which is drie and full of sands: and they are thought to liue on nothing elsse but the moist dew. And in very truth, no other liuing creature there breedeth besides them.

CHAP. XI.

¶ *Who first deuised the cleauing of Tortoise shells into thin plates like pannell.*

THe first man that inuented the cutting of Tortoise shells into thin plates, therewith to seele beds, tables, cupbords, and presses, was *Carbilius Pollio*, a man very ingenious and inuentiue of of such toies, seruing to riot and superfluous expence.

CHAP. XII.

¶ *A diuision of water beaſts into their ſeueral kinds.*

THe creatures that breed and liue in the water, be not all couered and clad alike: for some haue a skin ouer them, and the same hairie, as the Seales and Water horses. Others haue but a bare skin, as the Dolphins. There be againe that haue a shell like a barke, as the Tortoises: and in others, the shell is as hard as the flint, and such be the oysters, muscles, cockles, and winkles. Some be couered ouer with cruſts or hard pills, as the locuſts: others haue besides them, sharpe prickles, as the vchins. Some be scaled, as fishes: others are rough coated, as the Soles, and with their skins folke vse to polish and smooth wood and yuorie. Some haue a tender and soft skin, as Lampreys: others none at all, as the Pourcuttle or Pourcontrell.

CHAP. XIII.

¶ *Of the Sea-calf, or Seale.*

THe great Whales, called Puffits and Balæna, bring forth their young alieue, and perfect liuing creatures: likewise all those that are couered with haire, as the Sea-calf or Seale. She calueth on the drie land as other cattell, and whensoever she calues, she gleans afterwards as kine do. The female is tied and lined to the male, like as bitches to dogges: she neuer bringeth more than two at once, and she giueth milke at her dugs and paps, to her young. Shee bringeth them to the sea not before they be twelue daies old, and then she traines and acquainteth them to swim and keepe the water ordinarily. These Seales be hardly killed, vntill a man dash out their braines. In their sleepe, they seeme to low or blea, and thereupon they be called Sea-calues. Docible they be & apt to learn whatsoeuer is taught them. They will salute folke with a kind of countenance and regard, also with a voice such as it is, resembling a certain rude and rumbling noise. If a man call them by their name, they will turn againe, and in their language answer. There is no liuing creature sleepeeth more soundly than they. The fins which they vse to swim withall in the sea, serue their turnes in stead of feet to go vpon, when they be on land. Their skins, after they be flailed from their bodies, retaine still a proprietic and nature of the seas; for euer as the water doth ebbe, they are more rugged, and the haire or bristles stand vp. Moreover, their right finnes or legs are thought to haue a power and vertue to prowke sleepe, if they be laid vnder ones beds head.

CHAP. XIII.

¶ *Of fishes that be without haire, how they breed, and how many, sorts there be of them.*

OF such creatures as want haire, two only there be that bring forth their young with life: and namely, the Dolphin and the Viper. Of fishes, properly so called, there be 74 kinds: besides those that haue rough cruſtick skins, which I count not; whereof there be 30 sorts. Of euery one of them in particular, we will speake else where, and at another time: for now we are to treat of the natures of the chiefe and principall.

CHAP. XV.

¶ *Of the names and natures of many fishes.*

THe Tunies are exceeding great fishes: we haue seene some of them to weigh 15 talents. and the taile to be 2 cubits broad and a span. In some fiue riuers also, there be fish found full

A full as bigge: and namely, the riuier-Whale called *Silurus*, in Nilus, the *Lax*, in the Rhene, the *Artillus*, in the Po. This fish growes so fat with ease & lying still, that otherwhiles it weigheth 1000 pounds, and being taken with a great hooke fastened and linked to a chaine, cannot be drawne forth of the riuier but with certaine yokes of oxen. And yet as big as he is, there is one little fish in comparison of him called *Clupea*, that killeth him: for vpon a maruelous desire that he hath to a certain vein that he hath within his iawes, he bites it in sunder with his teeth, and so dispatcheth the forenamed great fish *Artillus*.

As for the *Silurus*, a cut-throat he is wheresoever he goeth, a great deuourer, and maketh soule worke: for no liuing creatures come amisse vnto him, he fettereth vp all indifferently. The very horses oftentimes as they swim, he deuoures, and specially in *Moenusa* riuier of Germany neere to *Lisboa* or *Erlisbornis*.

B Moreover, in the riuier *Donow*, there is taken the *Mario*, a fish much like to a ruffe or *Porpuiſ*, also in the riuier *Boryllhenes*, there is found a fish by report, exceeding great, with no chine nor bone at all betwene; and yet the meat thereof is passing sweet and pleasant.

Within *Ganges* a riuier of India, there be fishes snouted and tailed as Dolphins, 15 cubits long, which they call *Platanistæ*. And *Statius Sebosus* reports as strange a thing besides, namely, that in the said riuier there be certaine wormes or serpents with two finnes of a fide, sixtie cubits long of color blew, and of that he take their name [and be called *Cyonoides*.] He saith moreover, that they be so strong, that when the Elephants come into the riuier for drinke, they catch fast hold with their teeth by their trunks or muzzles, and mauer their hearts force them downe vnder the water; of such power and force they are.

The male *Tunies* haue no finnes vnder their bellies. In the spring time they goe out of the great [Mediterranean] sea, and by whole flocks and troupes enter into *Pontus*; for in no other sea doe they bring forth their young. Their young frye, which accompanie their dams (when they are lightened of their burden) into the sea againe in the autumn, are called *Cordylæ*. Afterwards, they begin to call them *Pelamides*, and in Latine *Limosa*, of the mud wherein they are kept; and when they be aboute one yere old, then they be *Tunies* indeed, & so called. These *Tunies* are cut into pieces, whereof the nape of the necke, the belly, and the flesh about the canell bone of the throat, are most commendable for meat, but these parcels only when they be fresh and new killed, and yet then will they rise in a mans stomacke, and make him belch slower. The other parts being full of good meat and oleous withall, are laid in salt, and so put vp in barrels and kept. And these pieces of the *Tunie* thus conduit and powdered, are called *Melandrya*, cut in slices like to oke shingles for all the world. The worst pieces of all others, be those that are next the taile, because they are not fat: but the best is that which is toward the throat: howsoever in other fishes the taile-peece is in greatest request, as being most stirred & exercised. As for the young *Tunies* called *Pelamides*, they are diuided & cut into parcels, that be named *Apoleci*: but when they be cut peece-meale into certain squares, those pieces are named *Cybia*.

All kind of fishes grow exceeding soon to their bignesse, and especially in the sea *Pontus*: the reason is, because a number of riuers bring fresh water into it, & in some sort make it sweet: and namely in it, there is one called *Amia*, which grows so fast & so euidently, that a man may perceiue how it waxeth from day to day. These fishes, together with the old *Tunies* and the young, called *Pelamides*, enter into great flocks & skuls into the sea *Pontus*, for the sweet food that they there find: and euery companie of them hath their severall leaders and captaines: and before them al, the *Maquerels* lead the way, which, while they be in the water, haue a colour of brimstone; but without, like they be to the rest. The *Maquerels* serue the market well in *Spaine*, and furnish the fish shambles; namely, when as the *Tunies* repaire not into their seas. As for the sea *Pontus*, there enter into it few or no rauenours that haunt and deuoure fishes, vntill it be the Seales & little Dolphins. The old *Tunies*, when they come into it, chuse the right fide (vpon the coast of Asia) but go forth at the left. And this is the reason thereof, as it is thought, For that they see better with their right eie; & yet the sight of either of them is very good. Within the channell of the *Thracian Bosporus*, by which *Propontis* is ioyneth to the sea *Euxinus*, in the very streight of the Firth that diuides Asia from Europe, neere to *Chalcedon* vpon the coast of Asia, there standeth a rocke, exceeding white and bright withall, which is so transparent and shining from the verie bottome of the sea to the top of the water, that the *Tunies* (as frighted at the sodaine sight thereof) to avoid it, goe alwaies amaine in whole flocks, toward the cape

ouer against Bizantium, which cape therupon beareth the name of Auricorum. And therefore it is, that the Bizantines make great gaine by fishing for them: whereas the Chalcidians haue a great misse of that commoditie, and yet the arme of the sea or frith betwene them, is not past halfe a mile, or a mile at the most, ouer. Nott they euer wait for the North wind, that (together with the tide) they might with more ease passe cut of Pontus. Howbeit, the onely taking of them at Bizantium, is when they return again into Pontus. In Winter the Tunnies stirre not nor range abroad: but looke, wherefoeuer they are then found to be, there they take vp their Winter herbour, and make their abode vntill the spring Equinoctiall about mid-March. Many times they will accompanie the ships that saile thereby with wind, and it is a wonderfull pleasant sight for the sailers to see them from the sterne, how for certaine houres together, and for the space of some miles, they will follow and attend vpon the poupe, be the wind neuer so good, nay, although they strike at them with the trout-spear sundry times, or lance at them some three-tined instrument, yet will they not be chased away, nor skared. These Tunnies that thus wait vpon the ships vnder faile, come cal Pompili. Many of them passe the Summer-time in Propontis, and neuer enter into Pontus. Soles likewise vse the same manner, and yet wee shall haue many Turbots there. Neither shall a man finde the Cuttl there, although there be good store of Sea-cuts or Calamaries. Moreouer, of stone fishes, such as liue among rocks, the sea Thrush, the sea Merle, and the purple shel-fishes are not to be found, where Oysters notwithstanding are in great abundance. For all such Winter in the Egean sea, called now Archipelago. Of them that enter into the sea Pontus, there is none staies there, but goes forth again, saue only the shell fish called the Saredane, or Trichia: for I thinke it good, in such diuersitie of fishes names, seeing that one and the self same fish is in many countries called diuersly, to vse the Greeke name for the most of them. These fish, I say, alone go vp the riuier Ister, and out of it they paise againe by certain issues and conduits vnder the ground, and so descend into the Adriatick sea: and euermore a man shall see this kind of fish coming down thither, but neuer mounting vp again out of that sea. The right fishing for the Tunnies, & the only taking of them is from the rising of the star* Virgilie, to the setting of Arcturus. All the winter time besides they lie hidden in the deep, at the bottom of pits and gulfs within the sea, vnlesse they come forth to take their pleasure in some warme season, or otherwhiles when the Moon is at the full. They grow sometime so fat, that their skins will not hold, but they are ready to cleaue and burst withall. The longest time that they liue is 2 yeres and not aboue. Moreouer, there is a little creature or vermine, made somewhat like a Scorpion, & as big as a spider, which vsually will set her sharpe sting vnder the finne, both of the Tunnies and also of the sword-fish (which many times is bigger than the Dolphin) and put them to such pain, that to auoid them they oftentimes are driuen to lance themselves, and skip into the very ships. Which propertie they haue also at other times, for feare of the violence of other fishes: & most of all, the Mullers haue this cast with them; and this they doe with such exceeding swiftnesse and agilitie, that they will sting themselves otherwhiles crosse ouer the ships.

CHAP. XVI.

¶ Of prefiges and foretellings by fishes, and of their diuersitie.

Nature willing to endue this Element also of the water with some Auguries, hath giuen to fishes likewise a kind of prescience and foreknowledge of things to come. And verily during the Sicilian war, as *Augustus Caesar* walked along the shore vpon the sands, there was a certain fish leapt out of the sea, and light at his very feet. The Soothsaiers and wifards vpon this occurrent, being fought vnto, gaue this construction thereof, and prefiged thereby, That they who at that time were lords of the sea, and held it in subiection, should be ranged vnder the obedience of *Cesar*, and at his deuotion. And yet at that present it is thought and said, That god *Neptune* had adopted *Scx. Pompeius* for his son, so fortunate he was, and such exploits had he archiueued vpon the sea.

The female kind of fishes are commonly bigger than the males. And there are some sorts of them, whereof there be no males at all, but all females, as the Erythini and the Chani. For they be taken alwaies spawners, and full of eggs.

Fishes that be skaled, for the most part swim in troups, and fort together. The best fishing is before the sun be vp: for then fishes see least or not at all. For if the nights be cleere and Moon-shine

shine, they see as well by night as day. Moreouer, they say that it is good fishing twise in one and the same hole: for commonly vpon the second cast, the draught is better than the first. Fishes loue passing well to tast oile; they ioy also and like well in soft & gentle shewers, & therewith they will feed and grow fat. And good reason there is of it: for why? we see by experience that canes & reeds, although they breed in meers and standing waters, yet they grow not to the purpose without rain. Moreouer, it is obserued, that fish keeping euermore in one dead poole and neuer remoued, wil die wherefoeuer it be, vnlesse there fall rain water to refresh them. All fishes feeble the cold of a sharpe and hard winter, but those especially, who are thought to haue a stone in their head, as the Pikes, the Chromes, Sciæna, & Pagri. It be a bitter season in winter, many of them are taken vp blind. And therefore during those cold moneths, they lurk hidden in holes, and within rocks, like as we haue said, certain land creatures doe. But aboue all others the Lobstars called Hippuri, and the Goracini, cannot abide extremity of cold, & therefore be neuer caught in winter, vnles it be at certain times when they come forth of their holes, which they keep dully and neuer stir but then. In like sort, the Lamproie, the Orphe, the Conger, Perches, and all Stone-fishes that loue rocks and grauell. Men say verily, that the cramp-fish, the Plaiace, and the Sole lie hidden all winter in the ground, that is to say, in certain crevices and chinks which they make in the bottome of the sea. Contrariwise, some again be as impatient of heat, and can as ill away with hot weather, and therefore about Mid-summer for 60 daies they lie hidden and are not to be seen: as the fish Glaucus, the Cud, and the Gilt-head. Of riuier fishes, the Silurus or Sturgeon in the beginning of the dog-daies is blasted and stricken with a planet: at other times also in a thunder & lightning he is smitten, so as therewith he is astonied and lieth for dead. And some thinke that the like accident befalleth to the sea Bream Cyprinus. And verily, all quarters of the sea throughout, seele the rising of the dog-starre: but mozt of all the influence and power thereof is to be seen in the streight of Bosporus: for thei may a man perceiue ordinarily the reits of the sea, and the fishes store aloft, and the sea so troubled, that euery thing is cast vp from the bottome to the upper part of the water.

CHAP. XVII.

¶ Of the Muller and other fishes: and that the same in all places are not of like request.

THE Mullers haue a naturall ridiculous qualitie by themselves, to be laughed at: for when they be afraid to be caught, they will hide their head, and then they thinke they be sure enough, weening that all their body is likewise hidden. These Mullers neuertheless are so lecherous, that in the season when they vie to ingender in the coasts of Phoenice & Languedock, if they take a milter out of their stews or pooles where they vie to keep them, and draw a long string or line through the mouth and gills, and so tie it fast, and then put him into the sea, holding the other end of the line still in their hands, if they put him again vnto them, they shall haue a number of spawners or femals follow him hard at taile to the bank side. Semblably, if a man do the same with a female in spawning time, hee shall haue as many milters follow after her. And in this manner they take an infinite number of Mullers.

In old time our ancestors set more store by the Sturgeon, & it carried the name aboue all other fishes. He is the only fish that hath the scales growing ouer the head: hee swims against the streame, but now adaies there is no such reckoning & account made of him: wherat I maruell much, considering he is so hard and seldom to be found. Some call him *Elops*: afterwards *Cornelius Nepos*, and *Laberius* the Poet and maker of mery rimes haue written, that the sea Pikes and the cods got away all the credit from the Sturgeon, & were of greatest request. As for the Pikes afore said, the best and most commendable of all others be they which are called *Lanati*, as a man would say cotton Pikes, for the whitenesse & tendernesse of their flesh. Of cods there be two sorts, *Callariæ*, or Haddockes, which be the lesse, and *Bacchi*, which are neuer taken but in the deep, and therefore they are preferred before the former. But the Pikes that are caught in the riuier be better than all others. The fish called *Scarus* now carrieth the price & praise of all others, & this fish alone is said to chew cud, to leaue of grasse and weeds, and not to prey vpon other fishes. In the Carpathian sea great store of them is found: & by their good will they neuer passe the cape or promontorie *Leætos* in Troas. In the daies of *Tiberius Claudius* the Emperor,

Optatus his freed man (who sometime had bin a slave of his) and then Admiral and Lieutenant general of a fleet vnder him, brought them first out of that sea, and with them stored the whole coast of our seas betwene *Ostia* and *Campania*. Order was taken by straight inhibitions for the first five yeares, to kill those that were put into those seas, but if any were taken, that they should be cast in againe. In proceesse of time many of them came to be found and taken vp all along the coast of Italy, whereas before, they were not to be had in those parts. See how gluttonie, and the desire to please a dainty tooth, hath deuised means forsooth to sow fish, & to transplant them as it were, so to store the sea with strange breed: so that now we need no more martell, that foraine birds and fowles, set out of far countries, haue their aires at Rome, and breed there. Next to those fishes aboue named, the table is serued with a kinde of Lampreys or Elepoints like to sea Lampreys, which are bred in certain lakes about the Alps, and namely, in that of *Rhoetia* called *Briganinus*: & a strange thing it is, that they should be so like in proportion to those of the sea. Of all other fishes of any good account, the Barbell is next, both in request, and also in plenty. Great in quantity they are not: for hardly shall you find any of them weigh about two pound, neither wil they feed & grow in stews and ponds. They are bred only in the Northern sea: and neuer shall you see them in the coast of the West Ocean. Moreover, of this Fish there be sundry sorts. And they liue all of Reits and Seawds, of Oysters, of the fat mud, & of the flesh of other Fishes. They haue all of them 2 beards, as it were, hanging down evidently from their nether jaw. The worst of all this kind, is that which is called *Lutarius*: & this fish hath another named *Sargus*, that willingly euermore beareth him company: for whilst hee is rooting into the mud (whereof he taketh his name) then commeth the *Sargus*, and deuoures the food that is raised therewith. Neither are the Barbells much accepted that keep neere the shore and in the river within land. But the best simply are those that rast like vnto the shel-fish *Conchylium*: *conchella* gaue them the name *Mulli*, of certaine moyles or fine shoes, which in colour they do resemble. They cast spawn three in one yere at the least: for so often their young Fry is seen. Our great belligods say, that a Barbell when he is dying, changeth his hue, and turneth into an hundred colours: the prooffe and experience whereof may be seen if he be put into a glasse: for through it, it is a pretty sport to see how he altereth and changeth his skales beeing ready to die, one way into a pale and wan colour, otherwhiles into a reddish hue, one after another for many times together. *M. Apicius* (who was a man of all others most inuentiue and wonderful for his witty deuises to maintain riot and excess) thought it was a singular way to itide and kill these Barbells in a certain pickle, called the Roman Allies sauce: (see how euen such a thing as that, hath found a byname for sooth & a proper addition.) And he also went about to prouoke men to deuise a certain manger or broth made of their liuers, like to that dripping or graue called *Alec*, that commeth of Fishes when they pine and corrupt. For surely it is more easie for me to say who set men a work that way: first, than set down who woon the best game in the end, and was the greatest glutton. *Asturius Celsus*, a man of great calling and high place, who sometime had bin Consul, shewed his prodigallitie in this Fish, & it was when *C. Caligula* was Emperor: for he gaue for one Barbell eight thousand Sesterces. Certes, the consideration hereof raieth my mind, and carrieth it away to behold & wonder at those, who in their reproffs of L of gluttonie and gourmandise, complained that a Cooke carried a greater price in the market than a good horse of seruice. For now adaeas a Cooke will cost as much as the charge of a triumph: and one Fish as deare as a Cooke. And to conclude, no man is better esteemed and regarded more, than he that hath the most cunning cast to wast the goods, & consume the substance of his lord and master.

CHAP. XVIII.

¶ Of the Barbil, the fish *Coracinus*, Stock-fish, and Salmon.

Teinius Mutianus reporteth, That in the red sea there was taken a Barbell that weighed 80 M pounds. Oh, what a price would he haue borne among our gluttons here with vs! What would he haue cost our prodigall spendthrifts, if hee had bin taken vpon our coasts neere Rome? Moreover, this is the nature of fish, that some are chiefe in one place, and some in another. As for example, the *Coracinus* in Egypt carrieth the name for the best fish. At *Gades* in Spain, the *Doree* or Goldfish, called *Zeus* and *Faber*. About the Isle *Ebusus*, the *Stock-fish* is much

A much called for; whereas in other places it is counted but a base muddy and filthy fish; and which no where else they know how to seeth perfectly, vlesse it be first well beaten with cudgels. In the country of *Aquitaine* or *Guienne* in France, the river *Salmon* passeth all other sea Salmons whatsoeuer.

Of fish, some haue many folds of gills, some single, others double. At these gills they deuier again and put forth the water that they take in at the mouth. You may know when fish be old by their hard scales: and yet all fishes are not scaled alike. There be two lakes in Italy at the foot of the Alps, named *Larus* and *Verbanus*, wherein fishes are to be seen euery yere at the rising of the star *Vergilia*, thicke of scales, and the same sharp pointed like to the tongues of buckles, where with horsemen or men at arms do fasten their grieues: and neuer els but about that moneth do they appeare.

CHAP. XIX.

¶ Of the fish *Exocoetus*.

The *Arcadians* make wonderous great account of their *Exocoetus*; so called, for that hee goeth abroad and taketh vp his lodging on the dry land to sleep. This fish (by report) about the coast *Clitorius* hath a kind of voice, and yet is without gills. And of some he is named *Adonis*. But besides him, the sea *Tortoises* also, (called *Mures Marini*) the *Polypes* & *Lampreys* vse to go forth to land. Moreover, in the rivers of *India* there is one certaine fish doth so, but it leaps back again into the water: for whereas many other fishes passe out of the sea into rivers and lakes, there is great and euident reason thereof, namely, for that they are in more safetie there, both to cast their spawn vnder the wind where the water is not so rough, and full of waves: and also to bring forth their little ones, because there be no great fishes to deuour them. That these dumb creatures should haue the sense herof, thus to know these causes, and obserue duly their times, is very strange and wonderful, if a man would found the depth thereof: but more he would maruell to consider, how few men there be that know which is the best season for fishing, while the Sun passeth through the signe *Pisces*.

CHAP. XX.

D ¶ A diuision of fishes according to the forme and shape of their bodies.

Of sea fishes some be plain and flat, as *Byrts* or *Turbots*, *Solds*, *Plaice*, & *Flounders*. And these differ from the *Turbots* onely in the making of their body: for in a *Turbot* the right side turns vpward, and in a *Plaice* the left. Others again be long and round, as the *Lamprey* and *Congre*. And hereupon it is that they haue a difference in their fins, which Nature hath giuen to fish in stead of feet. None haue aboue foure, some two, some three, others none at all. Only in the lake *Fucinus* there is a fish which in swimming vseth 8 fins. All that be long and slipperie, as *Eeles* and *Congres*, haue ordinarily two in all, and no more. *Lampreys* haue none to swim with, ne yet perfect gills: all of this kind winde and wriggle with their bodies within the water, and so erre forward like as serpents doe vpon the earth. They creeze also when they are vpon dry land, and therefore such liue longer than the rest out of the water. Also of the foresaid flat fishes some haue no finnes, as the *pum* or *fork-fish*: for their bredth serueth them sufficiently to beare them vp, and to swim. And amongst those that are counted soft, the *Pourcuttill* hath no fins, for his feet standeth him in stead of fins to swim with.

CHAP. XXI.

¶ Of Yeates.

Yeates liue 8 yeares. And if the Northwind blow, they abide aloue without water 6 daies, but not so long in a Southern wind. But yet in Winter time they may not endure to be in a little water, nor if it be thick and muddy: wherupon, about the rising of the star *Virgilia* they be commonly taken, for that the rivers about that time vse to be troubled. Their feeding most commonly is in the night. Of all fish, they alone, if they be dead, store not about the water.

¶ *The manner of taking them in the lake Benacus.*

THere is a lake in Italy called Benacus, within the territorie of Verona, through which the riuer Mincius runs: at the issue whereof euerie yere about the moneth of October, when the Autumne star Arcturus riseth, whereby (as it evidently appeareth) the lake is troubled as it were with a winter storme and tempest, a man shall see rolling amongst the waues a wonderfull number of these Yeels wound & tangled one within another: in somuch as in the leap yeeres and weernets deuised for the nonce to catch them in this riuer, there be found fowntime a thousand of them wrapped together in one ball.

¶ *Of the Lamprey.*

The Lamprey spawneth at all times of the yeare, whereas all other fishes are deliuered of their yong at one certain season or other. The eggs or spawne grow to a great paffe exceeding soon. If they chance to slip out of the water to dry land, the common sort is of opinion that they ingender with serpents. The male or milter of this kinde *Aristotle* calls Myrus. And herein is the difference, that the spawner, properly called Murena, is of sundry colors, and withall but weake: but the Mylter or Myrus is of one hue, & withall very strong, hauing teeth standing without his mouth. In the North parts of France all the Lampreys haue in their right jaw seuen spots, resembling the seuen stars about the North pole, called *Charlemaignes* Waïne. They be of a yellow colour, and glitter like gold so long as the Lampreies be aliue; but with their life they vanish away, and be no more scene after they be dead. *Vedius Pollio*, a gentleman of Rome by calling, and one of the great fauorits and followers of *Augustus Caesar*, deuised experiments of cruelty by means of this creature: for hee caused certain ilaues condemned to die, to be put into the stewes where these Lampreies or Murenes were kept, to be eaten and deuoured by them: not for that there were not wilde beasts ynow upon the land for this fear, but because he tooke pleasure to behold a man torne and plucked in pieces all at once: which pleasant sight he could not see by any other beast vpon the land. It is said, if they taste vineger, of all things, they become enraged and mad. They haue a very thin and tender skinned: contrariwise, Yeels haue as thick & tough. And *Ferris* writeth, that boyes vnder 17 yeres of age were wont to be swunged and whipped with Yeels skinned, and therefore they were freed from all other mulct and punishment.

¶ *Of flat and broad Fishes.*

Of flat and broad fishes there is another sort, which in lieu of a chine or backe bone haue a gristle. As the Ray or Skait, the Puffin like vnto it, the Maids or Thornbacke, and the Crampfish: moreover, those which the Greekes haue termed by the names of their sea Cow, their Dog-fish, their Ægle and Frog of the sea. In this rank are to be ranged the Squali also, albeit they are not so flat and broad. All this kind in general *Aristotle* hath called in Greek *Selache*, and he was the first that gaue them that name: we in Latine cannot distinguish them, vntil we call them all Cartilaginea, that is to say, Gristly fish. But all the sort of them that deuoure flesh are such: and their manner is to feed lying backward, like as we obserued in the dolphins. And whereas other fishes cast spawn which resemble knots of eggs, these gristly fishes only, as also those great ones which we call Cetei, Whales, bring forth their yong aliue. And yet I must except one kind of them which they call *Rana*, i. sea Frogs.

¶ *Of Echeneis [i. the Stay-ship.]*

There is a very little fish keeping vsually about rocks, named Echeneis: it is thought, that if it settle and stick to the keele of a ship vnder water, it goeth the slower by that means: whereupon

A whereupon it was so called: and for that cause also it hath but a bad name in matters of loue, for enchanting as it were both men and women, and bereauing them of their heart and affection that way: as also in law cases, for delay of issues and iudicial trials. But both these imputations and slanders it recompenseth again with one good vertue and commendable quality that it hath: for in great bellied women if it be applied outwardly it stayeth the dangerous flux of the womb, and holds the child vnto the full time of birth: howbeit it is not allowed for meat to be eaten. *Aristotle* thinketh, that it hath a number of feet, the fins stand so thick one by another.

B As for the shell fish Murex, *Matianus* saith it is broader than the Purple, hauing a mouth neither rough nor round, ne yet with a becke pointed cornered-wife, but plain and euen, hauing a shell on both sides winding and turning inward. These fishes chanced vpon a time to cleaue fast vnto a ship, bringing messengers from *Pertander*, with commission to guelld all the Noblemens sonnes in *Gnidos*, and stayed it a long time, notwithstanding it was vnder saile, and had a strong gale of a fore-winde at the poupe. And hereupon it is, that these Shell fishes for that good seruice are honoured with great reuerence in the Temple of *Venus* amongst the *Gnidians*.

But to returne again vnto our Stay-Ship Echeneis, *Trebius Niger* saith it is a foot long, and five fingers thicke, and that oftentimes it stayeth a ship. And moreover, as he saith, it hath this vertue being kept in salt, to draw vp gold that is fallen into a pit or well being neuer so deep, if it be let downe and come to touch it.

¶ *The changeable nature of Fishes.*

The Cackarels change their colour: for these fishes being white all Winter, wax blacke when Summer comes. Likewise the Mole or Lepo called Phycis, doth alter her hue: for howeouer all the yeare besides it be white, in the Spring it is speckled. This is the only fish that builds vpon the reites and mosse of the sea, and layes her eggs or spawne in her nest. The sea Swallow fieth, and it resembleth in all points the bird so called. The sea Kite doth the same.

¶ *Of the fish called the Lanterne, and the sea Dragon.*

There is a fish comes ordinarily about the water, called Lucerna, for the resemblance that it hath of a light or lantern: for it lillith forth the tongue out of the mouth, which seemeth to flame and burne like fire, and in calme and still nights giues light and shineth. There is another fish that puts forth hornes about the water in the sea, almost a foot and halfe long, which thereupon tooke the name Cornuta. Again, the sea Dragon if he be caught and let go vpon the sand, worketh himselfe a hollow trough with his snout incontinently, with wonderfull celeritie.

¶ *Of bloudlesse fishes.*

Some fishes there be which want bloud, whereof wee now will speake. Of them are three sorts: first, those which be called Soft: secondly, such as be couered within crusts: & in the last place, they that are inclosed within hard shells. Of the first sort, counted soft, be reckoned the sea Cutt or Calamarie, the Cuttle, the Polype, and the rest of that sort. These haue their head betwene their feet and the belly, and euery one of them haue 8 feet. As for the Cuttill and Calamarie, they haue two feet apiece longer than the rest, and the famerough, wherewith they conuey and reach meat to their mouths: and with those they stay themselves as it were with anchor hold against the surging waues: the rest of their feet be smal like hairs, and with them they hunt and catch their prey.

¶ Of the Calamaries, Cuttles, Polypes, and Boat-fishes
called Nautili.

ALfo the Calamarie lanceth himselfe out of the water, as if he were an arrow, and euen so doth little Scalops. The male of the Cuttles kind are spotted with sundry colors more dark and blackish, yea and more firme and steady than the female. If the female be smitten with a Trout-speare, or such like three-forked weapon, they will come to aid & succor her: but she again is not fo kind to them, for if the male be stricken she will not stand to it, but runs away. But both of them, the one as well as the other, if they perceiue that they be taken in such freights that they cannot escape, shed from them a certain black humor like to ink, and when the water therewith is troubled and made duskyish, therein they hide themselves and are no more seen.

Of Polypes or Pourcontrels there be sundry kinds. They that keep neere the shore are bigger than those that haunt the deep. All of them help themselves with their fins and armes, like as we do with feet and hands: as for their taile, which is sharp and two forked, it serueth them in the act of generation. These Pourcontrels haue a pipe in their back, by the help whereof they swim all ouer the seas; and it they can shift one while to the right side, & another while to the left. They swim awry or sidelong with their head aboue, which is very hard and as it were puffed vp so long as they be aliue. Moreouer, they haue certain hollow concauities dispersed within their claws or armes like to ventoses or cupping glasses, whereby they will stick to, and cleaue fast as it were by sucking, to any thing, which they clasp & hold so fast, lying vpward with their bellies, that it cannot be plucked from them. They neuer settle so low as the bottom of the water, and the greater that they be, the lesse strong they are to clasp or hold any thing. Of all soft fishes they only goout of the water to dry land, especially into some rough place, for they cannot abide those that are plaine and euen. They liue vpon Shell-fishes, and with their hairens or strings that they haue they will twine about their shels and crack them in pieces: wherefore a man may know where they lie and make their abode, by a number of shels that lie before their nest. And albeit otherwise it be a very brutish and senselesse creature, so foolish withall, that it will swim and come to a mans hand; yet it seems after a sort to be witty and wise, keeping of house and maintaining a familie: for all that they can take they carry home to their nest. When they haue eaten the meat of the fishes, they throw the empty shels out of dores, and lie as it were in ambushado behind, to watch and catch fishes that swimme thither. They change their colour oftsoons, and resemble the place where they be, & especially when they be afraid. That they gnaw and eat their own elces and arms, is a meere tale; for they be the congres that do them that shrewd turn: but true it is that they will grow againe, like as the taile of snakes, adders, & lizards. But among the greatest wonders of nature, is that fish which of some is called Nautilus, of others Pompos. This fish, for to come aloft aboue the water turns vpon his back, and raiseth or heaueth himself vp by little and little: and to the end he might swim with more ease, as disburdened of a sinke, hee discharge all the water within him at a pipe. After this, turning vp his two foremost claws or armes, hee displaith and stretcheth out betwene them a membrane or skin of a wonderfull thinnesse: this serueth him in stead of a saile in the aire aboue water: with the rest of his arms or claws he roweth and laboreth vnder water, & with his taile in the mids he directh his course, & secreteth as it were with an helme. Thus holds he on and maketh way in the sea, with a faire shew of a foist or gally vnder saile. Now if he be afraid of any thing in the way, he makes no more ado, but drawes in water to ballace his body, and so plungeth himselfe down, and sinketh to the bottom.

Of the many-foot fish called Ozena, of the Nauplius, and
Locusts of the sea, or Lobster.

OF the Polypus or Pourcontrell kind with many feet, is the Ozena, so called of the strong fauor of their heads, for which cause especially, the Lampreys follow in chase after him.

As

As for the Many-feet or Pourcuttels, they lie hidden for two months together: and aboue two yeares they liue not. They die alwaies of a consumption or Phthisicke: the female sooner than the males, and ordinarily after that they haue brought forth their yong frye. I cannot ouerpasse but record the reports of *Trebius Niger*, one of the traine and retinue of *L. Lucullus* Proconfull in Boetia, which he vpon his knowledge deliuered as touching these Many-feet fishes called Polyp, namely, That they are most desirous and greedie of cockles, muſcles, and such like shell-fishes; and they againe on the contrarie side, so soone as they feele themselves touched of the Polypes, shut their shels hard, and therewith cut asunder their claws or armes, that were gotten within; and thus fall they to feed vpon those, who sought to make a prey of them. [Now in very truth these shell-fishes, all of them feed not on all, neither haue they any other sense, but tasting of their meat, & feeling of their drinke.] These Polyp foreseeing all this, lie in wait to spie when the said cockles, &c. gape wide open, and put in a little stone between the shels, but yet beside the flesh & bodie of the fish, for feare left if it touched and felt it, he would cast it forth againe: thus they theewe, and without all daunger and in securitie get out the fleshe substance of the meat to deuoure it: the poore cockles draw their shels together for to clasp them close (as is aboue said) but all in vaine, for by reason of a wedg between, they will not meet close nor come neere together. See how subtle and craftie in this point these creatures be, which otherwise are most forth and senselesse. Moreouer, the said *Trebius Niger* affirmeth, that there is not any other beast nor fish in the sea more dangerous to doea man a mischief within the water, than is this Pourcuttle or Many-feet Polypus: for if he chance to light on any of these diuers vnder the water, or any that haue suffered shipwacke and are cast away, he assailes them in this manner: He catcheth fast hold of them with his claws or armes, as if he would wrestle with them, and with the hollow concauities and noukes between, keepeth a sucking of them; and so long he suckes and fokes their blood (as it were cupping-glasses set to their bodies in diuers places) that in the end he draweth them drie. But the only remedie is this, to turne them vpon their backe, and then they are soone done and their strength gone: for let them lie so, they stretch out themselves abroad, and haue not the power to clasp or comprehend any thing. And verily all liuing creatures in the sea loue the smell of them exceeding well, which is the cause that fishers besmear and anoint their nets with them, to draw and allure fishes thither.

The rest which mine author hath related as touching this fish, may seem rather monstrous lies and incredible, than otherwise: for he affirmed, that at Carteia there was one of these Polyp, which vsed commonly to go forth of the sea, and enter into some of their open cisterns and vaults among their ponds and stewes, wherein they keep great sea-fishes, and otherwhiles would rob them of their salt-fish, and so go his waies againe: which he practised so long, that in the end he gat himselfe the anger and displeasure of the maisters and keepers of the said ponds and cisterns, with his continuall & immeasurable filching: whereupon they staked vp the place and empalled it round about, to stop all passage thither. But this thiefe gaue not ouer his accustomed haunt for all that, but made meanes by a certaine trece to clamber ouer and get to the fore-said salt fish; and neuer could he be taken in the manner, nor discovered, but that the dogges by their quick sent found him out and baied at him: for as he returned one night toward the sea, they assailed and set vpon him on all sides, and therewith raised the fore-said keepers, who were affrighted at this so sudden an alarm, but more at the strange light which they saw. For first and foremost this Polype fish was of an vmeasurable and incredible bignesse: and besides, he was befneared & beraied all ouer with the brine and pickle of the fore-said salt-fish, which made him both hideous to see to, and to sinke withall most strongly. Who would euer haue looked for a Polype there, or taken knowledge of him by such marks as these? Surely they thought no other, but that they had to deale and encounter with some monster: for with his terrible blowing and breathing that he kept, he draue away the dogs, and otherwhiles with the end of his long stringed winding feet, he would lash and whip them; sometimes with his stronger claws like arms he tapped and knocked them well and surely, as it were with clubs. In summe, he made such good shift for himselfe, that hardly and with much adoe they could kill him, albeit he receiued many a wound by trout-spears which they launced at him. Wel, in the end his head was brought and shewed to *Lucullus* for wonder, & as big it was as good round hoghead or barrel that would take and containe 15 Amphores: and his beards (for so *Trebius* termed his claws and long-stringed feet) carried such a thickeſſe and bulke with them, that hardly a man could fathome

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one of them about with both his armes, such knockers they were knobbed and knotted like clubs, and withall 30 foot long. The concavities within them, and hollow vessels like great basons, would hold 4 or 5 gallons apiece, and his teeth were answerable in proportion to the bigness of his bodie. The rest was faued for a wonder to be seene, and weighed 700 pound weight. This author of mine *Trebinus* affirmeth, that Cuttels also and Calamarie have been caftt vpon that shore, full as big. Indeed in our sea there be Calamarie taken of 5 cubits long, and Cuttels of twaine, in length: and these liue not about two yeares

Mutianus reporteth, that himselfe saw in Propontis another kind of fish carying as it were a ship of his owne, and making saile with it like to some galley: and a shel-fish it was fashioned with a keele like to a barge or barke, with a pouce embowed and turned vp; yea and armed as it were in the prow with a three-forked pike. Within which lay hidden (as he saith) another liuing creature called Nauplius, resembling a Cuttle fish; and for no other reason in the world, but to make sport and play with it for companie. Now the manner of this pastime and sailing was in two sorts: for if it were a calme sea and the winds downe, the Nauplius afore-said that went as a passenger in this shell, would put downe his feet into the water like ores, and row therewith; but if a gale of wind were aloft, he would stretch the same alength & make them serue in stead of an helme to steere withall; and then the Coquill or shel-fish would spread and display it selfe like sailes, to gather wind: so as the one of them tooke a pleasure to carrie, in manner of the vessell, the other had his delight to labour as a mariner, and to direct withall like a pilot. Thus these two fishes (otherwise senselesse & blockish) take their pleasure together, vnles peraduenture it fall out vnhappy (for certain it is that such a fight as this prelagos no good to failers) that men marre their sport, and either part them asunder, or force them to sinke vnder water.

The Lobsters (being of that kinde which wanteth bloud) haue a tender and brittle crust to couer and defend them. For five months they lie hidden. The Crabs likewise, who at the same time keepe close & secret: and both of them in the beginning of euery spring cast their old coats or shels as snakes do their skins, & take them that be new & fresh. All others of this kind swim within the water: but the Lobsters steele aloft, and creepe as it were vpon the water. So long as they are secure of any feare and danger, they go directly straight, letting downe their hornes at length along their sides, which naturally by themselves haue a round point or bob at the end: but if they be in any feare, govp those hornes straight, and then they creepe byas and goe side-long. With these hornes they oftentimes maintaine battaile one with another. Of fall creatures, this only hath a tender and short kind of flesh, which in the seething will not hang together, vnlesse it be foddren aliue in scalding water, and then it will be stiffe and callous as brawne.

CHAP. XXXI.

Of Sea-crabs, Vrchins of the sea, and great Vrchins called Echinometra.

AS for the Lobsters, they loue rocks and stonie places: but Crabs delight in soft and delicate places. In winter, they seeke after the warme or sun-shine shore: but when summer come, they retire into the coole and deepe holes in the shade. All the sort of them take harme and paire by winter: in autumn and spring, they battle and wax fat, and especially when the moon is at the full: because that planet is comfortable in the night time, & with her warme light mitigateth the cold of the night. Of these Crab-fishes, there be many kinds: to wit, Lobsters, Creyfishes of the sea, crabs of Barbarie called Maize, Grampels, Grits or Pungiers, Crabs of Heraclea, yellow ruer Creyfishes, and diuers others of more base account. As for the Lobsters, they differ from the rest in taile. In Phoenicia, there is a kind of Crabs called Hippoe, or rather Hippis (that is to say, Horses or Horsuen) which are so swift, that it is impossible to ouertake them. Crabs liue long: eight clees or feet they haue apiece, all crooked and hooked: the female hath the fore clee double, the male but single. Moreover, two of the legs or arms are forked and toothed like pincers. The vpper part of these foreclawes doth stir: the nether part moeth not. The right leg in them all is bigger than the left. When they come in skuls all together (as fometimes they doe) they are not able to passe one by another the streights of the sea Pontus about Constantinople, whereupon they are forced to returne back againe and fetch a compasse about, and the beaten way with their tracks may be seene. The least of all these kind of Crabs, is

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called

A called Pinnotheres [or Pinnoreres] and for his smallnesse most subtile and exposed to iniurie. But as subtilly and crafty he is as he is little; for his maner is to shroud and hide himselfe within the shels of empty oysters, and euer as he grows bigger and bigger, to go into those that be wider. Crabs when they be afraid will recule backward as fast as they went forward. They will fight one with another, and then ye shall see them jur and butt with their hornes like rams. Singular good they are against the birtings and stings of serpents. It is reported, that while the Sun is in the signe Cancer, the bodie within of dead crabs that lie without the water vpon drie land, will turne to be scorpions. Of the same sort that the crabs be are the vrchins of the sea called Echini; and these in stead of feet haue certain pointed prickles: Their maner of going is to roll themselves and tumble round; and therefore many times shall ye finde them with their prickles worne. And of this sort be they that are called Echinometra. The longest prickles they haue of all others, and the least shels or cases wherein they are. Neither are they all of the same colour of glasse; for about Torone they are found to be white, hauing small prickles. They haue all of them five eggs when they lay, but they are bitter. Their mouths stand in the mids of their bodies, bending down toward the earth. It is said they haue a fore-knowledge of a sea tempest: for by reason that they are so round, and therefore soone whirled and caried here and there, they fall then to labor and gather stones, wherewith they charge and peise their bodies as with ballast, that they may abide more stedfast, for that they are not willing to weate their prickles with rolling and turning ouer and ouer: which when the mariners and sailers perceiue once, they presently cast many anchors and stay their ships.

CHAP. XXXII.

Of Winkles and sea Snails.

IN the same ranke are to be reckoned the Winkles as well of land as water. When they put themselves out of their shels they thrust out two hornes that they haue, and will pluck them in again when they list. Eyes they haue none to see withall, and therefore these little hornes sense them in good stead to sound, as it were, and try the way as they go.

CHAP. XXXIII.

Of Scallops: of the greatest Winkle called Murex, and other kinds of shell-fishes.

THE great Scallops in the sea are counted for the same race which lie hid also in the time as well of great heat as cold. They haue certaine nailes as it were shining like fire in the night season, yea in their very mouthes that eat them. As for the Pourcelanes or Murexes, they haue a stronger scaled shell; as also all the kind of Winkles great and small. Wherin a man may see the wonderfull varietie of Nature in this play and pastime of hers, giuing them so many and sundry colours, with such diuersitie of formes and figures; for of them yee shall haue flat and plain, hollow, long, horned like the moon croissant, full round, halfe round, & cut as it were iust through the mids, bow-back, and rising vp, smooth, rough, toothed and indented like a saw, ridged and chamfered between, wrinkling and winding vpward to the top like Caltropes, bearing out sharpe points in the edges, without forth broad and spread at large, within rolled in pleits. Moreover, there be other distinct shapes besides all these: some be striped and raised with long streaks, others crested and blasing with a bush of long haire: some againe crisped and curled, others made like an hollow gutter or pipe: some fashioned as it were a comb, others waving with plaits one aboue another tile-wise, others framed in the manner of a net or lattise: some are wrought crooked and byas, others spread out directly in length. A man shall see of them those that are made thick and mossie thrust together and compact, others stretcht at large: ye shall haue of them wrapt and lapte one within another: and to conclude, yee shall find them run round into a short fast knot, and all their sides vnited together in one: some flat and plain good to giue a clap, others turning inward crooked like a cornet, made as it were to found and wind withall. Of all these sorts, the Pourcelanes or Venus-Winkles swim aboue the water, and with their concavities or hollow part which they set into the weather, help themselves in stead of sailes, and so gathering wind, saile as it were aloft vpon the sea. The manner

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of

of the Scalops is to skip, and otherwhiles they will leap forth of the water. They also can find the means to make a boat of themselves, and so float about and saile handfomly.

CHAP. XXXIV.

¶ *The riches of the sea.*

BVt what meane I all this while to stand vpon these small trifling matters, when as in very truth the ouerthrow of all honestie, the ruin of good manners, and in lieu thereof all riot and superfluitie proceeds from these shell-fishes, and from nothing so much? for now the world is grown to this passe, that there is nothing in it whatsoeuer so chargeable to mankind, nothing so hurtfull and dangerous as is the very sea, and that so many waies, namely, in furnishing the table with such varietie of dishes, in pleasing and contenting the taste with so many, dainty and delicate fishes; and those carry the highest price that be gotten with greatest hazard and danger of those that take them, otherwise they be of no regard and value to speake of.

CHAP. XXXV.

¶ *Of Pearles, how and where they be found.*

Howbett al that before named is nothing in comparifon of the Purples, pretious Coquils and Pearls that come from thence. It was not sufficient belike to bring the seas into the kitchen, to let them down the throat into the belly, vnlesse men and women both caried them about in their hands and eares, vpon their head, and all ouer their body. And yet what societie and affinitie is there betwixt the sea and apparel? what proportion betwixt the waues and surging billowes thereof, and wooll? for surely this element naturally receiues vs not into her bosom vnlesse we be stark naked: and yet the case there were so great good fellowship with it and our bellies, how comes our backe and sides to be acquainted with it? But wee were not contented to feed with the perill of so many men, vnlesse we be clad and araied also therewith. O, the folly of vs men! see how there is nothing that goeth to the pampering and trimming of this our carcasfe, of so great price and account, that is not bought with the vtmost hazard, and costeth not the venture of a mans life! But now to the purpose. The richest merchandise of all, and the most foueraigne commoditie throughout the whole world are these Pearles. The Indian ocean is chief for sending them: and yet to come by them, we must go and search among those huge & terrible monsters of the sea, which we haue spoken of before: we must passe ouer so many seas, and saile into far countries so remote, and come into those parts where the heate of the sun is so excessive and extreme; and when all is done we may perhaps misse of them: for euen the Indians themselves are glad to seeke among the Islands for them, & when they haue done all they can, meet with very few. The greatest plenty of them is to be found in the coast of Taprobane and Toidis, as hath bin said before in our Cosmographie and description of the world: and likewise about Perimula a promontorie and city of India. But the most perfect and exquisite of all others be they that are gotten about Arabia, within the Persian gulfes. This shell-fish which is the mother of Pearle, differs not much in the manner of breeding and generation from the Oysters: for when the season of the yeare requireth that they should engender, they seeme to yawne and gape, and so do open wide; and then (by report) they conceiue a certaine moist dew as feed, wherewith they swell and grow big, and when time cometh labour to be deliuered hereof: and the fruit of these shell-fishes are the Peares, better or worse, great or small, according to the qualitie and quantitie of the dew which they receiued. For if the dew were pure and cleare which went into them, then are the Pearles white, faire, and Orient: but if grosse and troubled, the Pearles likewise are dimme, foule, and dusky; pale (I say) they are, if the weather were close, darke, and threatening raine in the time of their conception. Whereby (no doubt) it is apparant and plaine, that they participate more of the aire and sky, than of the water and the sea; for according as the morning is faire, so are they cleere: but otherwise, if it were misty and cloudy, they also will be thicke and muddy in colour. If they may haue their full time and season to feed, the Pearles likewise will thriue and grow bigge; but if in the time it doth chance to lighten, then they close their shells together, and for want of nourishment

A rishment are kept hungrie and fasting, and so the pearles keepe at a stay and prosper not accordingly. But if it thunder withall, then suddenly they shut hard at once, and breed only those excrescences which be called Phymata, like vnto bladders putt vp and hooded with wind, & no corporal substance at all: and these are the abortiue & vntimely fruits of these shell-fishes. Now those that haue their full perfection, and be found and good indeed, haue many folds and skins wherein they be lapt, not vnproperly as it may be thought, a thicke, hard, and callous rind of the body, which they that be skillfull do pill and cleanse from them. Certes, I cannot chuse but wonder how they should so greatly be affected with the aire, and joy so much therein: for with the same they wax red, and lose their native whitenesse and beauie, even as the bodie of a man or woman that is caught and burnt with the sun. And therefore those shels that keep in the maine sea, and lie deeper than that the sun-beames can pierce vnto them, keep the finest and most delicate pearles. And yet they, as orient as they be, waxe yellow with age, become riuelled, and looke dead without any liuely vigor: so as that commendable orient lustre (so much sought for of our great lords and costly dames) continueth but in their youth, and decayeth with yeares. When they be old, they will proue thicke and grosse in the very shels, and stick fast vnto their sides, so as they cannot be parted from them, vnlesse they be filed asunder. These haue no more but one faire face, and on that side are round, for the backe part is flat and plaine, and hereupon such are called Tympania, as one would say, bell bearies. We see daily of these shels which serue as boxes to carrie sweet perfumes and precious ointments, and most commendable they are for this gift, that in them there be pearls of this sort naturally growing together like twins.

C The pearle is soft and tender so long as it is in the water, take it forth once and presently it hardeneth. As touching the shell that is the mother of Pearle, as soon as it perceiueh and seeleth a mans hand within it, by and by she shutteth, and b that means hideth and couereth her riches within: for well woteh she that therefore she is sought for. But let the fisher looke well to his fingers, for if he catch his hand between, off it goeth: so trenchant and sharp an edge she carrieth, that is able to cut it quite a two. And verily this is a iust punishment for the theefe, and none more: albeit she be furnished and armed with other means of freuenge. For they keep for the most part about craggie rocks, and are there found: and if they be in the deepe, accompanied lightly they are with curst Sea-dogs. And yet all this will not serue to skar men away from fishing after them: for why? our dames and gentlewomen must haue their eares beghed with them, there is no remedie. Some say, that these mother-pearles haue their kings and captaines, as Bees haue: that as they haue their swarmes led by a master Bee, so euery troupe and companie of these, haue one speciall great and old one to conduct it, and such commonly haue a singular dexteritie and wonderfull gift to prevent and auoid all daungers. These they be that the dyvers after pearles are most carefull to come by: for if they be once caught, the rest scatter asunder and be soone taken vp within the nets. When they be thus gotten, it is said that they be put vp into earthen pots and well couered with salt: and when the salt hath eaten and consumed all the flesh within, then certaine kernels that were within their bodies (and those be the very pearles) fall down and settle to the bottome of those pots. There is no doubt but with much vfe the: will weare, yea and change colour thorough negligence, if they be not well looked vnto. Their chief reputation consisteth in these five properties, namely, if they be orient white, great, round, smooth, and weightie. Qualities I may tell you, not easily to be found all in one: inso-much as it is impossible to find out two perfectly sorted together in all these points. And hereupon it is, that our dainties and delicacies here at Rome, haue deuided this name for them, and call them Vnions, as a man would say, Singular, and by themselves alone. For surely the Greeks haue no such names for them, neither know they how to call them: nor yet the Barbarians, who found them first out, otherwise than Margaritæ. In the very whitenesse it selfe, there is a great difference among them. That which is found in the red sea, is the cleare and more orient. As for the Indian pearle, it resembleth the scales and plates of the stone called Specularis; howsoeuer otherwise it passeth all others in greatness. The most commendation that they haue is in their colour, namely, if they may be truly called Exaluminati, orient and cleare as Alume.

F They that be goodly great ones, are commendable in their degree. As for those that are long and pointed vward, growing downward, broader and broader like a pearle, or after the manner of Alabastrer boxes, full and round in the bottome, they be called Elenchi. Our dames take a great pride in a brauerie, to haue these not only hanging at their fingers, but also two or three

three of them together pendant at their eares. And names they haue forsooth newly deuised for them, when they serue their turne in this their wanton excesse and superfluitie of riot: for when they knocke one against another as they hang at their eares or fingers, they call them *Crotalia*, i. Cymbals: as if they tooke delight to heare the sound of their pearles ratling together. Now adays also it is growne to this passe, that meane women and poore mens wiues affect to wear them, because they would be thought rich: and a by-word it is amongst them, That a faire pearle at a womans eare is as good in the street where the goeth as an huishier to make way, for that euerie one will giue such the place. Nay, our gentlewomen are come now to wear them vpon their feet, and not at their shoo latches only, but also vpon their startops and fine buskins, which they garnish all ouer with pearle. For it will not suffice nor serue their turne to carie pearles about them, but they must tread vpon pearles, goe among pearles, and walke as it were on a pavement of pearles.

Pearles were wont to be found in our seas of Italie, but they were small & ruddie, in certain little shell fishes which they call *Myæ*: but more plenty of such were taken vp in the streights of Bosphorus nere Constantinople. Howbeit, in Acarnania there is a little Cochle called *Pinna*, (i. a Naere,) which engendreth such. Vv hereby it may appeare, that there be more than one sort of Mother-pearles. For king *Tuba* likewise hath left in writing, that in Arabia there is a kind of shell fish like vnto a Scallop, saue that it is not chamfered, but thick and rough like a sea Vrecheon, which beares Pearles within the very flesh of the fish, like vnto haile stones. But now adays there be no such mother-pearles come to our coasts. Neither be there found in Acarnania any of value and reputation. For why they are all in manner without proportion, neither round nor weighty, and of a marbled colour. They rather about the cape of Actium are better, and yet they be but little ones: like as they also which are taken in the coasts of Mauritania. *Alexander Polyhistor*, and *Suides*, are of opinion that they will age, and in the end lose their colour. That they bee tollid and not hollow within, is euident by this, that with no life they will breake. But they be not alwaies found in the midst of the flesh within the mother-pearles, but here & there, sometime in one place, and sometime in another. Verily I haue seene of them about the brim and edges of the shell, as if they were readie to goe forth: and in some 4, in others five together. Vnto this day few of them haue beene knowne to weigh about halfe an ounce and one scruple. In * Brittain it is certain that some dogrow; but they be small, dim of colour, and nothing orient. For *Iulius Caesar* (late Emperour of famous memorie) doth not dissimule, that the euirace or breast-plate which he dedicated to *Venus* mother within her temple, was made of English pearles.

Imy selfe haue seene *Lollia Paulina* (late wife, and after widow, to *Caius Caligula* the emperor) when she was dressed and set out, not in statelie wife, nor of purpose for some great solemnity, but only when she was to go to a wedding supper, or rather vnto a feast when the assurance was made, & great persons they were not that made the said feast: I haue seene her, I say, so beset and bedeckt all ouer with hemeraulds and pearles, disposed in rewes, ranks, and courses one by another: round about the attire of her head, her cawle, her borders, her peruk of hair, her bondgrace and chaplet, at her eares pendant, about her neck in a carcaner, vpon her wrist in bracelets, & on her fingers in rings; that she glittered & shon again like the sun as she went. The value of these ornaments, she esteemed and rated at * 400 hundred thousand Sestertij: and offered openly to proue it out hand by her bookes of accounts of reckonings. Yet were not these jewels the gifts and presents of the prodigall prince her husband, but the good, and ornaments from her owne house, fallen to her by way of inheritance from her grandfather, which he had gotten together euen by the robbing and spoiling of whole prouinces. See what the issue and end was of those extortions and outrageous exactions of his: this was it, That *M. Lollius* slandered and defamed for receiuing bribes & presents of the kings in the East; and being out of fauor with *C. Caesar*, sonne of *Augustus*, and hauing lost his amitie, dranke a cup of poison, and presented his iudiciall triall: that forsooth his neece *Lollia*, all to be banded with jewels of 400 hundred thousand Sestertij, should be seene glittering, and looked at of euerie man by candle-light all a supper time.

If a man would now of the one side reckon what great treasure either *Curius* or *Fabricius* carried in the pompe of their triumphs; let him cast a proper and imagine what their thews were, what their seruice at the table was: and on the other side, make an estimate of *Lollia*, one only woman

A man, the dowager of an Emperor, in what glory she sitteth at the boud, would not he wish rather, that they had been pulled out of their chariots, and neuer triumphed, than that by their victories the state of Rome should haue growne to this wastfull excesse & intolerable pride? And yet this is not the greatest example that can be produced of an excessive riot and prodigallitie.

Two only pearles there were together, the fairest and richest that euer haue beene knowne in the world: and those possessed at one time by *Cleopatra* the last queen of *Ægypt*, which came into her hands by means of the great kings of the East, and were left vnto her by descent. This princeesse, when *M. Antonius* had strained himselfe to doe her all the pleasure he possibly could, & had sealed her day by day most sumptuously, & spared for no cost: in the height of her pride and wanton brauerie (as being a noble curtezian, and a queene withall) began to debase the expence and prouision of *Antonie*, and made no reckoning of all his costly fare. When he thereat demanded againe how it was possible to goe beyond this magnificence of his, the answered againe, that she would spend vpon him at one supper * 100 hundred thousand Sestertij. *Antonie*, who would needs know how that might bee (for he thought it was impossible) laid a great wager with her about it, and free bound it againe, and made it good. The morrow after, when this was to be tried, and the wager either to be won or lost, *Cleopatra* made *Antonie* a supper (because she would not make default, and let the day appointed to passe) which was sumptuous and roial ynough: howbeit, there was no extraordinary seruice seene vpon the board: whereat *Antonie* laughed her to scorne, and by way of mockerie required to see a bill with the account of the particulars. She again said, that what soeuer had beene serued vp already, was but the ouerplus about the rate & proportion in question, affirming still that she would yet in that supper make, vp the full summe that she was leazed at yea, her selfe alone would eat about that reckoning, and her owne supper should cost * 600 hundred thousand Sestertij, and with that commanded the second seruice to be brought in. The seruitors that waited at her trencher (as they had in charge before) set before her one only cresset of sharpe vineger, the strength whereof is able to resolute pearles. Now she had at her eares hanging these two most precious pearles, the singular and only jewels of the world, and euen Natures wonder. As *Antonie* looked wistly vpon her, and expected what shee would doe, these tooke one of them from her eare, steeped it in the vineger; and so soon as it was liquified, dranke it off. And as shee was about to doe the like to the other, *L. Plancius* the iudge of that wager, laid fast hold vpon it with his hand, and pronounced withall, That *Antonie* had lost the wager. Whereat the maie fell into a passion of anger. There was an end of one pearle: but the fame of the fellow thereof may goe with it: for after that this braue queen the winner of so great a wager, was taken prisoner and deprived of her roiall estate, that other pearle was cut in twaine, that in memoriall of that one halfe supper of theirs, it should remaine vnto posteritie, hanging at both the eares of *Venus* at Rome, in the temple of Pantheon. And yet as prodigall as these were, they shall not go away with the prize in this kinde, but shall lose the name of the chiefe and principall, in superfluitie of expence. For long before their time, *Cladius* the sonne of *Asop* the Tragedian Poet, the only heire of his father, who died exceeding wealthie, practised the semblable in two pearles of great price: so that *Antonie* needeth not to be ouer proud of his Triumirature, seeing that he hath to match him in all his magnificence, one little better than a stage-plaier: who vpon no wager at all laid, (and that was more princely, and done like a king) but only in a brauerie, and to know what tast pearles had, mortified them in vineger, and drunke them vp. And finding them to content his pallat wondrous well, because he would not haue all the pleasure by himselfe, and know the goodnesse thereof alone, he gaue to euerie guest at his table one pearle apiece to drinke in like manner.

Ænscella writeth, that after *Alexandria* was conquered and brought vnder obedience to the Romans, Pearles were rife at Rome, and commonly vsed of euerie man allso, that about the trouble some time of *Sylla* they began first to be in request: and those were but small ones, and of no price. Howbeit, he is grossely deceiued, and in a great error. For *Ælius Stilo* doth report in his Chronicle, that in the time of warre against *Ingritha*, the faire and goodly great pearles began to be named *Vinones*.

These Pearles (to say a truth) are of the nature (in a manner) of an inheritance to descend by perpetuities. They follow commonly in right the next heires. When they passe in sale, they go with warrantize, in as solemne manner as a good lordship.

As for the rich Purples, and the precious Conchyles, euerie coast is full of them. And yet to that

that excesse and prodigallitie we are now growne, and out wanton riot (the mother of all inordinate and wastfull expence) hath made them well neere as deere as Pearles.

CHAP. XXXVI.

¶ The nature of purple fishes, and the Murice or Burrets.

Purples liue ordinarily seuen yeers. They lie hidden for 30 daies space about the dogdaies, like as the Murices or Burrets do. They meet together by troupes in the spring, and with rubbing one against another, they gather and yeeld a certaine clammy substance and moisture in manner of waxe. The Murices doe the like. But that beautifull colour, so much in request for dying of fine cloth, the Purples haue in the midst of the neck and jaws. And nothing else it is, but a little thin liquor within a white veine; & that is it which maketh that rich, fresh, and bright colour of deepe red purple roses. As for all the rest of this fish, it yeeldeth nothing. Fishers strue to get them alieue, for when they die, they cast vp and shed that precious teinture and iuice, together with their life. Now the Tyrians, when they light vpon any great Purples, they take the flesh out of their shells, for to get the bloud out of the said veine; but the lesfer, they presse and grind in certain milles, and so gather that rich humor which issueth from them. The best purple colour in Asia is this, thus gotten at Tyros. But in Africke, within the Island Meninx, and the coast of the Ocean by Getulia. And in Europe, that of Laconica. This is that glorious colour, so full of state and maiestie, that the Roman Licitors with their rods, halberds, and axes make way for this is it that graceth and setteth out the children of princes and noblemen: this maketh the distinction between a knight and a counsellor of state: this is called for & put on when they offer sacrifice to pacifie the gods: this giueth a lustre to all sorts of garments: to conclude, our great Generals of the field, and victorious captaines in their triumphs wear this purple in their mantles, enterlaced and embrodered with gold among. No maruell therefore if Purples be so much sought for: and men are to be held excused, if they run a madding after Purples. But how should the other shell-fishes called Conchylia, be so deere and high prized, considering the teinture of them carries so strong and stinking a fauor, so fullen and melancholic a colour, enclining to a blew or watchet, and resembling rather the angrie and raging sea in a tempest? But to come to the particular description. The Purple hath a tongue of a finger long, pointed in the end so sharpe, and hard withall, that it is able to bore an hole and pierce into other shell-fishes, and thereby sleepe feeds and gets her liuing. In fresh water they will die all, or if they be plunged and throwe in any riuer: otherwise, after they be taken, they will continue alieue 50 daies, euen with that viscous and slimie humor of their owne. All shell-fish in general grow apace in a very small time: but Purples soonest of all others: for in one yere they will come to their full bignesse. Now, if I should lay a straw here, and proceed no further in this discourse of Purples and such like, surely our luxurious and riotous spendthrifts would thinke they had great wrong, and were defrauded of their right: they might I say complaine of me, & condemne me of idleness, and negligence. Therefore I care not much to put my head within the diers shops and work-houses: that like as euery man for the necessity of this life, knows how the price of come goes; euen so our fine folke and braue dainties, who take such pleasure and delight in these colors, may be perfect what is the reason of their only life. In the first place, these shell-fishes that serue either for purple colors, or other lighter dyes of the Conchylia, are all one in matter: the difference only is in temperature more or lesse. And indeed, reduced they may all be into two principall sorts. For the lesse shell called Buccinum, fashioned like vnto that horn or cornet, wherewith they vse to wind and sound, whereupon in tooke that name, hath a round back, and is cut like a saw in the edges. The other is named Purpura, shooteth out a long backe like a guttur, and within the one side it doth writhe and turne hollow in forme of a pipe, out of which the fish puts forth a tongue. Moreover, this Purple is bestudded (as it were) euen as far as to the sharpe top or turbant thereof round about with sharpe knobs pointed, lightly seuen in number: which the sea-cornet Buccinum hath not. But this is common to both, that looke how many roundles they haue like tendrils clasping about them, so many yeares old they bee. As for the Cornet Buccinum, it sticketh alwaies to great stones and rockes, and therefore is euer found and gathered about them.

CHAP.

CHAP. XXXVII.

¶ How many sorts there be of Purples.

Purples haue another name, and be called Pelagie, as one would say, Fishes of the deep sea. But in truth there be many sorts of them, & those differing either in place where they keep, or in food wherof they liue. The first Lutence, i. muddy, because it is nourished of the corrupt and rotten mud: the second Algenie (the worst of all) feeding vpon reits or sea weeds named Alga: the third, Tanienfe (better than the former twaine) for that it is gathered and taken vp about the brims & borders of the sea, called for the resemblance of fillers or lifts in a cloth, Taniz. And yet this kind yeeldeth but a light colour, and nothing deepe: there be of them also, which they terme Calculose, of the sea grauell, which is wondrous good for all these kinde of wilkes and shell fishes. And last of all, which simply be the very best, the Purples Dialeræ, that is to say, wandring too and fro, changing their pasture, and feeding in sundry soils of the sea (the muddy, the weedie, and the grauelly.) Now these Purples are taken with small nets, and thinn wreught, cast into the deep. Within which, for a bait to bite at, there must be certain winckles and cockles, that will shut and open, & be ready to snap, such as we see these limps be, called Mituli. Halfe dead they should be first, that being new put into the sea again, & desirous to re-viue and liue, they might gape for water: and then the Purples make at them with their pointed tongue, which they thrust out to annoy them: but the other feeling themselves pricked therewith, presently shut their shells together, & bite hard. Thus the Purples for their greedinesse are caught and taken vp, hanging by their tongues.

CHAP. XXXVIII.

¶ The fishing time for Purples.

The best time to take Purples, is after the dog star is risen, & before the Spring: for, when they haue made that viscous mufilage in manner of wax, their iuice and humor for colour is ouer liquid, thin, & waterish. And yet the purple diers know not so much, nor take heed thereof, whereas indeed the skill thereof is a speciall point of their art, and wherein lieth all in all. Well, when they are caught, as is abovesaid, they take forth that vein before mentioned, and they lay it in salt, or else they do not well: with this proportion ordinarily, namely, to euery hundred weight of the Purple liquor, a Sestier or pint and halfe of salt. Full three dayes and no more it must thus lie soaking in powder. For the fresher that the colour is, so much is it counted richer and better. This don, they seeth it in leads, & to euery Amphore, (i. which containeth about eight wine gallons) they put one hundred pound and a halfe just, of the colour so prepared. Boile it ougt with a soft and gentle fire, and therefore the tunnel or mouth of the furnace must be a good way off from the lead and cawdron. During which time, the workemen that tend the lead, must oftsoones skim off and clesne away the fleshie substance, which cannot chuse but stick to the veines which containeth the iuice or liquor of purple before said. And thus they continue 10 daies, by which time ordinarily the lead or vessell will shew the liquor cleere, as if it were sufficiently boile. And to make a triall thereof, they dip into it a fleece of wooll well rensed & washt out of one water into another: & till such time, that they fee it giue a perfect dye, they stil ply the fire, & giue it a higher seething. That which staineth red, is nothing so rich as that which giueth the deepe & sad blackish color. When it is come to the perfection, they let the wooll lie to take the liquor 5 houres: then they haue it forth, touse and card it, and put it in againe, vntill it hath drunke vp all the colour, as much as it will. Now this is to be observed, that the sea-cornet Buccinum makes no good colour of it selfe: for their dye will shed & lose the lustre. And therefore vsually they ioine to it the sea Purple Pelagium, which maketh too deepe and brown a colour: vnto which it giueth a fresh & liuely teinture, as it were in grain, and so maketh that sad purple which they desire. Thus by mixing & medling the force of both together, they mend one another, while the lightnesse or fadnesse of the one doth quicken and raise, or els dore and take downe the colour of the other. To the dying of a pound of wooll, they vse this proportion of two hundred Buccina or sea Cornets, ioined with a hundred and eleuen Pelagian Purples: & so commeth that rich Amethyst or purple violet colour, so highly commended

mended aboue allother. But the Tyrians make their deep red purple, by dipping their wool first in the liquor of the Pelagian purples only, whiles it is not thoroughly boiled to the heigh, but as it were green yre and vnripe; and thereof they let it take what it can drinke. Soone after they change it into another caudron or lead, where the colour of the sea Comets alone is boiled. And then it is thought to haue a most commendable and excellent dye, when it is as deep a red as bloud that is cold and fetled, blackish at the first sight, but looke between you and the light, it carieth a bright and shining lustre. And hereupon it is, that *Homer* calleth bloud, Purple.

CHAP. XXXIX.

¶ When they began at Rome to weare Purple first.

Find in Chronicles, that Purple hath bin vsed in Rome time out of mind. Howbeit, *K. Romulus* neuer wear it but in his roial habit or mantle of estate, called *Trabea*. And wel known it is, that *Tullius Hostilius* was the first Roman king, who after he had subdued the Tuscanes, put on the long purple robe named *Pretexta*, and the cassock broched & studded with scarlet in broad guards. *Nepos Cornelius* who died in the daies of *Augustus Caesar* the Emperor, When (quoth he) I was a yong man, the light violet purple was rise and in great request, & a pound of it was sold for a * 100 deniers: and not long after the Tarentine red purple or skarlet was much called for, and of the same price. But after it, came the fine double died purple of Tyros, called *Dibapha*: and a man could not buy a pound of it for a * 1000 deniers, which was the price of ten pound of the other. *P. Lentulus Spinther* in his Edilship of the chaire, first wore a long robe embroidered with it, and was checked and blamed therefore. But now adaies (quoth *Nepos*) what is he that will not hang his parlour and dining chamber therewith, and haue carpets, cushions, & cupbord clothes thereof. And it is no longer ago when *Spinther* was Edile, than in the feuen hundredth year after the foundation of Rome, euen when *Cicero* was Consul. This purple in those daies was called *Dibapha*, twice died: & that was counted a matter of great cost, & very statefly withall and magnificent. But now ye shall haue no purple cloths at all of any reckoning, but they haue their double die. As for the cloth died with the purple of the shel-fish Conchyliya, the maner of making the colour, and dying in all respects is the same, saue that there be no sea Comets vsed thereto. Moreover, the iuice or liquor for that colour, is tempered with water in stead of the filthy pisse and vrine of a man, altogether vsed in the other: and therein is sodden but the halfe proportion of colours to the foresaid tinctures. And thus is made that light pale stammel so highly commended, for being forth of the deep rich colour: and the lesse while that the wooll is suffered to drinke the fill, the more bright and fresh it seemeth.

CHAP. XL.

¶ The prices of wooll died with these colours.

As for these colours, they are valued dearer or cheaper, according to the coasts where these fishes are gotten more or lesse. Howbeit, it was neuer known that in any place, a pound of the right purple wooll, died with the Pelagian colour, or of the colour it selfe, was more worth than * 500 Sesterces: nor a pound of the Cornets purple cost aboue one hundred. I would they knew so much that pay so deare for these wares by retail here at home, and cannot haue them, but at an excessive rate. But here is notall, neither is this an end of expence that way, for one fill draweth on another: and men haue a delight to spend and lay on still one thing after another: to make mixtures and mixtures again, and so to sophisticate the sophistications of Nature: as namely to paint and die their feelings, euen the very embowed roofs and arches in building: to mix and temper gold and siluer together, therewith to make an artificiall metall *Electrum*: and by adding brasse or copper thereto, to haue another metall, counterfeiting the Corinthian vessels.

CHAP. XLI.

¶ The manner of dying the Amethyst, Violet, or Purple, the Chrymson and Scarlet in grain, and the light stammel or Lustre-gallant.

It would not suffice our prodigal spendthrifts to rob the precious stone Amethyst of his name, and to apply it to a colour; but when they had a perfect Amethyst die, they must haue it be drunken

A drunken againe with the Tyrcan purple, that they might haue a superfluous and double name compounded of both (Tyriamethistius) correspondent to their two fold cost and duple superfluitie. Moreover, after they haue accomplished fully the colour of the Conchylium, they are not content vntill they haue a second die in the Tyrcan purple lead. It should seeme, that these double dies and compounded colours, came first from the errour and repentance of the workman when his hand missed: and so was forced to change and alter that which he had done before, and vnterly misliked. And hereof forsooth is come now a pretty cunning and art thereof: and the monstrous spirits of our wastfull persons are grown to with and desire that, which was a fault amended first: and seeing the two-fold way of a double charge and expence troden before them by the diers, haue found the meanes to lay colour vpon colour, and to ouercast and strike a rich die with a weaker, so that it might be called a more pleasant and delicate colour. Nay it will not serue their turn to mingle the aboue-said tinctures of sea fishes, but they must also do the like by the die of land-colours: for when a wooll or cloth hath taken a crimson or skarlet in graine, it must be died againe in the Tyrcan purple, to make (I would not else) the light, red, and fresh Lustre-gallant.

As touching the Graine, seruing to this tincture, it is red, and commeth out of Galatia, (as we shall shew in our story of earthly plants) or else about Emerita in Portugall, and that of all other is of most account. But to knit vp in one word these noble colours, note this, That when this Graine is but of one yeres age, it maketh but a weak tincture; but after foure yeres, the strength thereof is gone. So that neither young nor old it is of any great vertue. Thus I haue sufficiently and enlarge treated of those means which men and women both, so highly esteem, and thinke to make most for their state and honourable port, and setting out of themselves in the best manner.

CHAP. XLII.

¶ Of the Nacre, or his gide and keeper, Pinnoter: and the percci, name of fishes.

The Nacre also called Pinna, is of the kind of shell-fishes. It is alwaies found and caught in muddie places, but neuer without a companion, which they cal Pinnoter, or Pinnophylax. And it is no other but a little shrimpe, or in some places, the smallest crab, which beareth the Nacre companie, and waites vpon him for to get some victuals. The nature of the Nacre is to gape wide, and sheweth vnto the little fishes her scellie body, without any eie at all. They come leaping by and by close vnto her: and seeing they haue good leaue, grow so hardie and bold, as to skip into her shel & fill it full. The shrimpe lying in spiall, seeing this good time and opportunitie, giueth token thereof to the Nacre, secretly with a little pinch. She hath no sooner this signall, but she shuts her mouth, and whatsoeuer was within, cruethes and kills it presently: and then she deuides the boorie with the little crab or shrimpe, her sentinell and companion. I maruell therefore so much the more at them who are of opinion, that fishes and beasts in the water haue no fence. Why, the very Cramp-fish Torpedo, knowes her own force & power, and being her selfe not benumbed, is able to astonish others. She lieth hidder ouer head and cares within the mud vnseen, ready to catch those fishes, which as they swim ouer her, be taken with a nummednesse, as if they were dead. There is no meat in delicate tendernesse, preferred before the liuer of this fish. Also the fish called the * sea-Frog, (and of others the sea-Fisher) is as crafty euery whit as the other: It puddereth in the mud, and troubleth the water, that it might not be seen: and when the little scelly fishes come skipping about her, then she puts out her little hornes or Barbs which she hath bearing forth vnder her eies, and by little and little tiltheth and coltheth them so neere, that she can easily seaze vpon them. In like manner the Skate and the Turbot lie secret vnder the mud, putting out their finnes, which stir and crawl as if it were some little wormes; and all to draw them neer, that she might entrap them. Euen so doth the Ray-fish or Thorn-back. As for the Puffen or Fork-fish, he lieth in await like a theefe in a corner, ready to strike the fishes that passe by with a sharpe rod or pricke that he hath, which is his weapon. In conclusion, that this fish is very subtill and crafty, this is a good prooffe, That being of all others most heauie and slow, they are found to haue in their bellie the Mulletts, which of all others be the swiftest in swimming.

CHAP.

Alluding to the wouen Amethyst, which resists drunkenness.

* Diabla d' Mer.

* 3 lib. 2 lib. 6. d. perci.

* 3 lib. 18 lib. 1. d. perci.

* 3 lib. 18 lib. 1. d. perci.

CHAP. XLIII.

¶ Of the Scolopendres, the sea-Foxes, and the Glanis.

THese Scolopendres of the sea, are like to those long carewigs of the land, which they call Centipedes, or many-feet. The manner of this fish is this, when he hath swallowed an hook to cast vp all her guts within, vntill he hath discharged her self of the said hook, and then she slips them in againe. But the sea-Foxes in the like danger haue this cast with them, namely to gather in and let it go downe into the throat more and more still of the line, vntill he come to the weakest part thereof, which he may easily fret and gnaw asunder. The Glanis is more flic and warie than they both: for his propertie is to bite at the backe of the hooke, and not to gobble it vp whole, but nibble away all the bait, and leaue the hooke bare.

CHAP. XLIIII.

¶ Of the Ram-fish.

THIS fish is a very strong thief at sea, and makes foule work where he comes: for one while he squats close vnder the shade of big ships that ride at anker in the bay: where he lies in ambush to wait when any man for his pleasure would swim and bath himselfe, that so he might surpriseth them: otherwhiles he puts out his nole about the water, to spie any small fisher boats comming, and then he swimmeth close to them, ouerturneth and sinketh them.

CHAP. XLV.

¶ Of those that haue a third or middle nature, and are neither living creatures nor yet Plants: also of the sea-Nettle-fishes, and Sponges.

IVerily for my part am of opinion, that those which properly are neither beasts nor plants, but of a third nature between or compounded of both (the sea-Nettles I mean, and Sponges) haue yet a kinde of sense with them. As for those Nettles, there be of them that in the night range too and fro, and likewise change their colour. Leaues they carry of a fleshy substance, and of flesh they feed. Their qualitie is to raise an itching smart, like for all the world to the weed on the land so called. His manner is, when he would prey, to gather in his body as close, streight and stiffe as possibly may be. He spieth not so soon a silly little fish swimming before him, but he spradeth and displaith those leaues of his like wings; with them he claspeth the poore fish, and so deuoures it. At other times, he lies as if he had no life at all in him, suffering himselfe to be trodd and cast too and fro among the weeds, with the waues of the sea: and look what fish soeuer he toucheth as he is thus floting, hee sets a smart itch vpon them, and whiles they scratch and rub themselves against the rockes for this itch, hee sets vpon them and eates them. In the night season he lieth for sea-Vrchens and Scalops. When he feelth ones hand to touch him, he changeth colour, and draweth himselfe in close together on a heape: and no sooner toucheth he one, but the place will itch, sting, and be ready to blister: make not good haft to catch him quickly, he is hidden out of hand and gone. It is thought verily, that his mouth lieth in his roote, and that he voideth his excrements at a small pipe or issue about, where those fleshy leaues are.

Of Sponges, we find three sorts: the first thicke, exceeding hard, and rough, and this is called Tragosas: second, not all so thicke, and somewhat softer; and that is named Manon: the third is fine and yet compact, wherewith they make sponges to cleanse and scoure withall, and this is teamed Achilleum. They grow al vpon rockes: and are fed with wilkes or shel-fish, with naked fish and mud. That they are not senseless, appears hereby, for that when they feele that one would pluck them away, they draw in and retire back hard, so as with greater difficulty they are pulled from the rocke. The like doe they when they be beaten vpon with waues. That they liue vpon some food, it is manifest by the little coquill & musle shels that be found within them. And some say, that about Torone they continue still aliuie after they be pulcked from the rockes: and that of the roots which are left behind, they grow againe. Moreover, vpon those rockes from whence they be pulled, there is to be seen as it were some blood sticking; & especially in those of A fricke, which breed within the Syrtis. The Manx, which otherwile be the least, become very great & most soft withall, about Lycia. But they be more delicate which are nourished in the

A the deep gulphes, where least wind or none is stirring. Therough kind are in Hellespont: and the fine and massie, about the cape Malca. In sun-thine places they will corrupt and putrifie; and therefore the best are in the deep gulphes and creeks, not expoled to the Sun. They be of the same dusk and blackish colour when they liue, as they are afterwards being foked & full of moisture. They cleaue to rocks neither by any one part, nor yet entire and whole all ouer: for there are between, certain vnder pipes 4 or 5 commonly, by which they are supposed to receive their food and nourishment. There be more of these pipes and concauities, but about they are grown together hard and not hollow. A certain pellicle or thin skin a man may perceiue them to haue at their roots. For certain it is knowne, that they liue long. The worst kind of them all, be those that are called Aplysiaz, because vnneth they may be separated, nor clenfed and made cleane, they are so foule, for great pipes they haue; thicke they are besides throughout, and very massie.

CHAP. XLVI.

¶ Of Hound-fishes or Sea-dogs.

THe dyuers that vse to plunge into the sea, are annoyed very much with a number of Sea-hounds that come about them, and put them in great jeopardie. And they say, that these fishes haue a certain dim cloud or thin web, growing & hanging ouer their heads, resembling broad, flat, and gristly fishes, which clingeth them hard, and hindreth them from retiring backe and giuing way. For which cause the said dyuers (as themselves say) carry downe with them certain sharp pricks or goads fastened to long poles: for vnlesse they be proked at and pricked with them, they will not turn their backe; by reason (as I suppose) of a mist before their eyes, or rather of some feare & amazement that they be in. For I neuer heard of any man that found the like cloud or mist (for this term they giue vnto that vnhappie thing what-euer it be) in the range of liuing creatures. But yet much ado they haue and hard hold with these Hound-fishes notwithstanding, for they lay at their bellies and groines, at their heeles, and snap at euery part of their bodies that they can perceiue to be white. The onely way and remedy is to make head directly affront them, and to begin with them first, and so to terrifie them: for they are not so terrible to a man, but they are as afraid of him againe. Thus within the deepe they are indifferently euen matched: but when the dyuers mount vp and rise againe above water, then there is some odds betweene, and the man hath the disaduanage, and is in more danger; by reason that whiles he laboureth to get out of the water, he faileth of means to encounter with the beast, against the streame and sources of the water. And therefore his only recourse is, to haue help and aid from his fellows in the ship; for hauing a cord tied at one end about his shoulders, he shaketh it with his left hand, to giue signe what danger hee is, whiles hee maintaineth fight with the right, by taking into it the punchcon with the sharpe point before said; and so at the other end they draw him to them: and they need otherwile to pull and hale him but softly: may when he is neere once to the ship, vnlesse they giue him a sudden jerke and snatch him vp quickly, they may be sure to see him worried and deuoured before their face; yea and when they are at the point to be plucked vp, and euen now ready to go aboard, they are many times caught away out of their fellows hands, if they bestir not themselves the better, and put their owne good will to the help of them within the ship; namely, by plucking vp their legs and gathering their bodies nimblely together round as it were in a ball. Well may some from ship-board proke at the dogs aforesaid with forks; others thrust at them with Trout speares & such like weapons, and all neuer the neerer, so craftie and cautelous is this foule beast, to get vnder the very belly of the barke, and so maintain combat in safety. And therefore all the care that these fishers haue, is to provide for this mischief, and to lie in wait for to entrap these fell, vn-happie, and threwd monstres.

CHAP. XLVII.

¶ Of those fishes that lie within a stonie and hard stonie shell: also of those that haue no sense: and of other massie and fishie creatures.

THe greatest securitie that fishers and dyuers haue of safety, is when they see the broad flat gristly fishes; for certain it is, that they be neuer in any place where hurtfull and noisome beasts

beasts do haunt: which is the cause that these dyuers which ducke and plunge for sponges, call G those fishes Sacred.

We must needs confesse, that fishes within stone shels, haue small or no sense, as namely oysters. Many are of the nature of very Plants, to wit, those that they call Holothuria: also Pulmones, resembling the lungs of a beast: and Star-fishes, made in forme of stars (such stars I meane as it pleaseth the Painter to draw.) In sum, what is there not bred within the sea? Euen the very fleas that skip so merrily in summer time within victuallling houses and Inns, and bite so shroudly: as also lice that loue best to lie close vnder the haire of our heads, are there engendered & to be found: for many a time the fishers twich vp their hooks, and see a number of these skippers and creepers settled thicke about their baits which they laied for fishes. And this vermine is thought to trouble the poore fishes in their sleep by night within the sea, as well as vs on the land. Last of all, some fishes there be, which of themselves are giuen to breed fleas and lice, among which the Chalcis, a kind of Turbot, is one.

CHAP. XLVIII.

¶ Of venomous Sea-fishes.

Moreouer, the sea is not without her deadly poisons: for the Sea-hare, which keepeth in the Indish sea, is so venomous, that the very touching of him is pestiferous; & presently causeth vomiting and ouerturning of the stomacke, not without great danger. They which be found in our sea, seeme to be a peece or lump of flesh without all forme or fashion, in colour only resembling the land Hare. But with the Indians they be full as big, and resemble their Hare, only it is more stiffe and hard. And verily they cannot possibly be taken there a liue. The Dragon or spider of the sea, is as dangerous & mischievous a creature as the other: and with the prick that sticketh forth of his chine and back-bone, hee doth much hurt. But in no place is there any more detestable and pernicious, than is the pike that standeth out vpon the taile of Trigonius, which we in Latine call *Pissinanus*, the Pissin or Forkfish of the sea; the which pike is five inches long. So venomous it is, that if it be stricke into the root of a tree, it killeth it: it is able to pierce a good cuirace, or iacke of buffe, or such like, as if it were an arrow shot or a dart lanced: but besides the force and power that it hath that way answerable to yron & Steele, the wound that it maketh is therewith poisoned.

CHAP. XLIX.

¶ Of Fishes diseases.

We do not heare or reade, that all sorts of fishes in generall be subiect to maladies and diseases, as other beasts, and euen those that are wilde and sauage. But that this or that fish in euery kinde may be sicke, it appeareth evidently, that some of them mislike and come to be carrion leane; whereas others of the same sort, be taken, not only in good plight, but exceeding fat.

CHAP. L.

¶ The wonderfull manner of their generation.

In what sort fishes do engender, if I should not in this place shew, but put it off farther, I should do great wrong to mankind, who desire to know it, as much as they wonder how it should be. In one word, fishes engender by the friction and rubbing of their bellies one against another: which they performe with such celeritie, that no eye is so quick as to note and obserue it. Dolphins, and other great whales, haue no other way but that, many they are longer somewhat about their businesse. The spawner, when the time serueth for generation, followeth after the male, and neuer linneth pecking and iobbing at his belly with her muzzle. Semblably a little before spawning time, the milters follow after the female, only for that they would eat their spawn when they haue cast it. But this is to be noted moreover, that the foresaid mixture & engendering of theirs is not sufficient to accomplish generation, vnlesse when their eggs be laied or spawned cast, both male and female take it betwene them and keepe a turning of it, thereby

A to breathe a liuely spirit into it, and as it were besprinkle it with a vitall dew, as it stotheth vpon the water. But turne they it and toss it, it breatheth they vpon it as much as they will, yett all those little eggs of their spawn do not hit and come to prooffe: for if they did, all seas and lakes, and all riuers and pools would be so pestered full with fishes, that a man would see nothing els: for there is not one of these females, but at once conceiue an infinite number in her belly.

CHAP. LI.

¶ More as touching the generation of fishes, and which they be that do spawn in manner of egges.

The spawn or eggs of Fishes in the sea, do grow vnto perfection, some of them exceeding soon, as that of the Lampreies: others are later ere they do so. All flat and broad Fishes, such namely as haue no tails and sharp prickles to hinder (as haue the Thorn-backe, Skate, and Tortoises) when they engender, leap one another. The many foot Pour-cuttes in this action fasten one of their winding clawes to the nose of the female. The Cuttels and Calamaries do the feat with their tongues or pipes rather thrust into their mouthes, clasping one another with their arms, and swimming one contrary to the other: and as they conceiue at the mouth, so they deliuer their fruit again at the mouth. This only is the difference, that the Calamaries in this businesse, beare their heads downward to the earth. As for those that are soft cruelled, they do it backward as dogs. Thus the Lobsters & Shrimpes engender. Crabs at the mouth. Frogs leap one another: the male with the fore-feet clasps the arm-pits of the female, and with the hind-feet the hanches. That which is ingendered and brought forth, is as it were some little mites of blackish flesh, which they call Tadpoles or Polwigs, shewing no good form, but that they haue some few of eies only, and a taile. Some few daies after, their feet are framed, & then parts their taile in twain, which serueth for their feet behind. And a strange thing it is of them: after they haue liued some 6 months, they resolute into a slime or mud, no man seeth how: & afterward with the first rains in the Spring, retorne again to their former state, as they were first shapen, no man knowes after what sort, by a secret and vnknown way incomprehensible notwithstanding it fals out ordinarily so euery yere. As for the Limpins, Muskles, and Scallops, they breed of themselves in the mud and sands of the sea. Those which are of an harder coat, as the Pourcelanes and Purples, of a certain viscus and slimy substance like a muscilage. As for that little fry, resembling small gnats and flies of the sea, they come of a certaine putrifaction and sowernesse of the water: as the Apues, which are the groundlings and Smics, of the some of the sea set in an heat & chased after some good shewer. They that are couered with a stony shell, as Oysters, breed of the rotten and putrified slime & mud of the sea: or of the some that hath stood long about ships or stakes and posts fer fast in the water, and especially if they bee of Holme wood. Howbeit, it hath bin found of late in Oyster pits, that there passeth from them in stead of Sperm a certain whitish humor like milk. As for Yeels they rub themselves against rocks and stones, and those scrapings (as it were) which are fretted from them, in time come to take life and proue snigs, and no other generation haue they. Fishes of diuers kinds engender not one with another, vnlesse it be the Skate and the Raish: and of them there cometh a fish, which in the forepart resembleth a Ray, & in Greek hath a name compounded of both [Rhinobatos.] Other fishes there be that breed indifferently on land and sea, according to the warme season of the yere. In Spring time Scallops, Snails, and Horleeches do engender, and by the same warmth quicken and come to life; but in Autumne they turne to nothing. The Pike & Sardane breed twice a yere, like as all stone fish: the Barbel thrice, as also a kind of Turbit called Chalcis [i.e. the Shad]: the Carp 6 times: the Scorpenes and Sargi twice, namely, in Spring and Autumne. Of flat broad Fishes, the Skate only twice in the yere, to wit, in Autumne, and at the setting or occultation of the star *Perigee*. The greatest number of Fishes engender for 3 monthes, April, May, & Iune. The Cods or Stockfishes in Autumne. The Sargi, Crampfishes, & Squall about the equinoctiall. Soft skinned Fishes in the spring: and the Cuttel in euery month. The spawn of this Fish, which hangeth together like a cluster of grapes, by the means of a certaine blacke glew or viscositie like inke, the Milters doth blow and breath vpon before it can be good, for otherwise it cometh to no prooffe. The Pour-cuttes engender in Winter, and in the Spring, and then bring forth a spawn cruelled and curled (as it were) like the wreathing

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branches and tendrils of a vine branch, and that in such plenty, that when they are killed they are not able to receiue and containe the multitude of their eggs in the concauitie or ventricle of their head and belly, which they bare when they were great. They hatch them in fifty daies, but many of them proue addle and neuer come to good, there is such a number of them. The Lobsters and the rest with thin shels, lay egges after egges, and sit vpon them in that manner. The female Pourcuttle, one while sitteth ouer her eggs, another while she couereth the cranie or gutter where she hath laid them, with her claws and arms enfolded crosse one ouer another latise wise. The Cuttle laieth also vpon the dry laad among the reeds, or els wherefoeuer she can find any sea-weeds or reits to grow, & by the 15 day hatcheth. The Calamaris lay eggs in the deep, which hang close and thick together, as the Cuttles do. The Purples, Burrets, and such like, do lay in the Spring. The sea Vrchins are with egges euery full moone in the winter time: and the winkles or cocles are bred in the winter likewise. The Crampfish is found to haue 80 young at once within her, and hatcheth her tender and soft eggs within her bodie, shifting them from one place of the wombe to another. In like manner do all they which are called Cartilageneus, or gristly. By which it commeth to passe, that fish alow both conceiue with egges, and yet bring forth a liuing creature. The male sheath-fish or riuer whale Silurus, of al others only is so kind as to keep and looke to the eggs of the female after they be laid, many times for fifty daies after, for feare they should be deuoured of others. Other females hatch in three daies, if the male touch them. The Horne-beaks or Needle-fishes Belonæ, are the only fishes which haue within them fo great eggs that their wombe cleaueth and openeth when they should lay them: but after that they be discharged of them, it groweth together and vniteth againe. A thing vsuall (as they say) in Blind-wormes. The fish called Mus-Marinus, diggeth a gutter or ditch within the ground, and there laieth her eggs, and the same she couereth ouer with earth, and so lets them alone for 30 daies, then she commeth and openeth the place again, findeth her eggs hatched, and leadeth her little ones to the water.

CHAP. LII.

¶ Of fishes wombes.

The shiel-fishes Erythini & Chanæ, haue their wombs or matrices. As for that fish which in Greeke is called Trochos[i], the top] is thought to get it selfe with yong. The frie of all water creatures, at the first see not.

CHAP. LIII.

Of the exceeding long life of fishes.

It is not long since that we heard of one fishes memorable example, which proued the long life of fishes. There is a faire house of retreat and pleasure called Paulslupum, in Campanie not far from Naples, where (as *Anneus Seneca* writeth) there died a fish in the fish-pooles of *Cesar*, 60 yerres after that it had bin put in by *Pollio Vedius*: and there remained two more of that age and of the same kind, which liued still. And since wee are come to make mention of fish-ponds, me thinks I should do well to write somewhat more thereof, before I giue ouer this discourse of fishes and water creatures.

CHAP. LIV.

¶ Of Oyster pits, and who first deuised them.

The first that inuented stewes and pits to keep oysters in, was *Sergius Orata*, who made such about his house in Baianum, in the daies of *L. Craffus* that famous orator, before the Martians war. And this the man did not for his belly and to maintain gourmandise, but of a couetous mind for very gain. And by this and such wittie deuises, he gathered great reuenues: for he it was that inuented the hanging baines and pooles to bathe in aloft vpon the top of an house: and thus when he had set out his manour house for the better sale, he would make good merchandise of them, and sell them againe for commoditie and gaine. He was the first man that brought the Lucrine Oysters into name and credit for their excellent taste. For so it is, that

A that the same kinds of fishes, in one place are better than in another. As the Pikes in the riuer Tiberis, which are taken between the two bridges: the Turbot of Rauenna: the Lamprey in Sicilie: the Elops at Rhodes, and so forth of other sorts of fishes: for I do not meane here to make a bill of all the dainty fish to serue the kitchen. There was no talk then of English oysters, when *Orata* brought those of the Lucrine lake into request, for as yet the Brittain coasts were not ours; which indeed haue the best oysters of all other. But afterwards it was thought it would quit the cost and pay for the pains, to fetch oysters from the furthest part of Italy, euen as far as Brundisium. And because there should grow no quarrell, nor controuersie arise, whether these or the former had the more delicate and pleasant taste, it was of late deuised that the hungrie oysters (which in the long cariage from Brundis were almost famished) should be fed with the best in the Lucrine Lake, and so taste alike. In those very daies, but somewhat before *Orata*, *Licius Murena* deuised pools and stews for to keep and feed other fishes: whose example noblemen followed and did the like after them, namely, *Philip* and *Hortensius*. *Lucullus* cut through a mountain neere vnto Naples for this purpose, namely, to let in an arm of the sea into his fish pooles: the doing whereof cost him more money, than the house it selfe which he there had built. Hereupon *Pompey* the great gaue him the name of Roman *Serxes*, in his long robe. The fishes of that poole of his, after his death, were sold for thirty hundred thousand Sesterces, i. three millions of Sesterces.

CHAP. LV.

¶ Who inuented the stewes for Lampreys.

C *Aius Hirpinus* was the man by himselfe, that before all others deuised a pond to keep Lampreys in. He it was that lent *Cesar* Dictator for to furnish his feasts and great suppers during the time of his triumph, 600 Lampreys, to be paid againe by weight and tale in the same kind: for sel them he would not right out for any money, nor exchange them for other commodities. A house he had for his pleasure in the country, and but a very little one, yet the ponds and fishes about it sold the house for four millions of Sesterces. In proesse of time folk grew to haue a loue and cast a fancy to some one feuerall fish about the rest. For the excellent *Orator Hortensius* had an house at Bauli, vpon the side that lieth to Baie, & a fish-pond to it belonging: and he took such an affection to one Lamprey in that poole, that when it was dead (by report) he could not hold but weep for loue of it. Within the same poole belonging to the said house, *Antonia* the wife of *Drusus* (vnto whom they sell by inheritance) had so great a liking to another Lamprey, that she could find in heart to deerce it, and to hang a paire of golden earings about the gills thereof. And surely for the nouelty of this strange sight, and the name that went thereof, many folke had a desire to see Bauli, and for nothing els.

CHAP. LVI.

¶ The stewes of Winkles, and who first was the deuiser.

E *Plinius Hirpinus* was the first inuentor of warrens as it were for Winkles, which he caused to be made within the territory of *Tarquinius*, a little before the ciuill war with *Pompey* the great. And those had their distinct partitions, for sundry sorts of them: that the white, which came from the parts about Reate, should be kept apart by themselves: the Illyrian (and those were chiefe for greatnesse) alone by their selues: the Africans (which were most fruitful) in one seuerall: and the Solitanes (simply the best of all the rest) in another. Nay more than that, he had a deuise in his head to feed them far, namely, with a certain paste made of cuir & wheat meale, and many other such like: to the end forsooth, that the gluttons table might be serued plentifully with home-fed & franked great Winkles also. And in time, men grew to take such a pride and glory in this artificial feat, and namely, in striuing who should haue the biggest, that in the end one of their shels ordinarily would containe * 80 measures called Quadrants, if *M. Varro* say true, who is mine Author.

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CHAP.

* 3 wine gallons and three quarters
Quadrans is 3 Cyathis, the 4 part of Sextarius, & Sextarius is a wine pint & a halfe, or 18 cupes.

CHAP. LVII.

¶ Of Land-fishes.

Theophrastus also telleth strange wonders of certain kinds of fishes, which are about Babylon, where there be many places subject to the inundations of Euphrates and other riuers, and wherein the water standeth, after that the riuers are returned within their bankes: in which the fish remain in certain holes & caues. Some of them, saith he, vse to issue forth aland for food and reliefe, going vpon their fins in lieu of feet, and wagging their tailed euer as they go. And if any chase them, or come to take them, they will retire back into their ditches afore-said, and there make head and stand against them. They are headed like to the * sea Frog, made in other parts as Gudgeons, and guilled in manner of other fishes. Moreover, that about Heraclea and Croma, and namely neere the riuier Lycus, & in many other quarters of the kingdom of Pontus, there is one kind about the rest that euer hauntheth riuers sides, and the vtmost edges of the water, making her selfe holes vnder the banks, and within the land wherein the liueth, yea, euen when the banks are drie, and the riuers gathered into narrow channels. By reason whereof they are digged forth of the earth: and as they say that find them, alieue they be, as may appeare by mouing and stirring of their bodies. Neere vnto the abovesaid Heraclea & the riuier Lycus, when it is salne and the water ebbe, there be fishes breed of the egges and spawne left vpon the mud and sand, who in seeking for their food, do stir and pant with their little quills: which they vse to do when they want no water, but euen then when as the riuier is full. Which is the reason also that yeeldes liue a long time after they be taken forth of the water. He affirmeth moreover, that the eggs of fishes lying vpon the dry land, will come to their maturity and perfection, and namely those of the Tortoises. Also, that in the same country of Pontus, there be taken fishes vpon the yce, and gudgeons especially, which shew not that they be alieue, but by their stirring and leaping when they come to be sodden in hot caudrons. Hereof may some reason yet be rendered, although the thing be strange and wonderfull. The same author auoucheth, that in Paphlagonia there be digged out of the ground certaine land fishes that be excellent good meat, and most delicate: but they be found in dry places remote from the riuier, & whither no waters flow, wherby they are forced to make the deeper trenches for to come by them. Himself maruellet how they should engender without the help of moisture. Howbeit, hee supposeth that there is a certain mineriall and naturall force therein, such as we see to sweat out in pits, forasmuch as diuers of them haue fishes found within them. Whatfoeuer it is, surely lesse wonderfull this is, considering how the Moldwarps liue (a creature naturally keeping vnder the ground) vnlesse haply we would say that fishes were of the same nature that earth wormes be of.

CHAP. LVIII.

¶ Of the mice of Nilus:

But the inundation of Nilus cleareth all these matters: the ouerflowing whereof is so admirable, and so far passeth all other wonders, that we may well beleue these things. For when as this riuier falleth and returneth againe into his channell, a man may find vpon the mud yong Mice halfe made, proceeding from the generative vertue of water and earth together: hauing one part of their body liuing already, but the rest as yet misshapen, and no better than the very earth.

CHAP. LIX.

¶ Of the fish Anthias, and how he is taken.

I thinke it not meet to conceale that, which I perceiue many do beleue & hold, as touching the fish Anthias. We haue in our Cosmographie made mention of the Isles Cheloniæ in Asia, situate in a sea full of rocks vnder the promontory of Taurus, among which are found great store of these fishes: and much fishing there is for them, but they are suddenly taken, and euer after one sort. For when the time serueth, there goeth forth a fisher in a smal boat or barge for certain daies together, a pretty way into the sea, clad alwaies in apparel of one and the same colour, at one houre, and to the same place stil, where he casteth forth a bait for the fish: but the fish

A fish Anthias is so craftie and warie, that whatfoeuer is thrown forth, he suspecteth it euer more, that it is a means to surprize him. He feareth therefore and distrusteth, and as he feareth, so is he as warie vntill at length, after much practise & often vsing this deuise of flinging meat into one place, one about the rest groweth so hardy and bold, as to bite at it, for now by this time he is grown acquainted with the maner thereof, and secure. The fisher takes good mark of this one fish, making sure reckoning that he will bring more thither, and be the means that he shall speed his hand in the end. And that is no hard matter for him to do, because for certain daies together, that fish, & none but he, dare aduenture to come alone vnto the bait. At length this hardy captaine meets with some other companions, and by little & little he commeth euery day better acquainted with them, vntill in the end he brings with him infinite troupes and squadrons together, so as now the eldest of them all (as crafty as they be) be so well vfed to know the fisher, that they will snatch meat out of his hands. Then hee espying his time putteth forth an hook with the bait, somewhat beyond his fingers ends, flieth and seizeth vpon them more truly, then catcheth them, and speedily with a quick & nimble hand whippes them out of the water within the shadow of the ship, for feare least the rest should perceiue, & giueth them one after another to his companion within, who euer as they be snatcht vp, larcheth them in a course twillie or couering, & keeps them sure enough from struggling or squeaking, that they should not driue the rest away. The speciall thing that helpeth this game and pretty sport, is to know the captain from the rest, who brought his fellows to this feast, & to take heed in any hand that he be not twicht vp and caught. And therefore the fisher spareth him, that he may flie and goe to some other flock for to train them to the like banquet. Thus you see the maner of fishing for these Anthies. Now it is reported moreover, that one fisher vpon a time (of spitefull minde to do his fellow a shrewd turn) laid wait for the said captain fish, the leader of the rest (for he was very well known from all others) and so caught him: but when the foresaid fisher espied him in the market to be sold, and knew it was betaking himselfe misused & wronged, brought his action of the case against the other, and sued him for the damage, and in the end condemned him. *Mitimus* saith moreover, that the plaintife was awarded to haue for recompence, 10 pounds of the defendant. The same fishes, if they chance to see one of their fellows caught with an hook, by report, with their sharp fins which they haue vpon their backe like sawes, cut the line in two: for he that hangeth at it, will of purpose stretch it out streight, that it may be cut asunder more easily. But the Sargots haue another trick for that: for he that finds himselfe taken, fretteth the line in twaine, whereto the hooke hangeth, against a hard rocke.

CHAP. LX.

¶ Of the Sea-fishes called Starres.

Over and besides all these, I see that some deep clerks and great Philosophers haue made a wonder at the Star in the sea. And verily it is no other than a very little fish, made like a star (as we see it painted.) A soft flesh it hath within, but without forth an hard browne skin. Men say it is so scorie hot, that whatfoeuer it toucheth in the sea, it burneth: and look what meat it receiuet, it makes a hand with it, & digesteth it presently. What prooffe there is herof, and how men should come to the knowledge and experience of thus much, I cannot readily set downe. I would thinke that rather more memorable and worthy to be recorded, whereof we haue daily experience.

CHAP. LXI.

¶ Of the Dactyli, and their wonderfull qualities:

Of the shell fish kind are the Dactyli, so called of the likenesse of mens nailes, which they resemble. The nature of this fish is to shine by themselves in the darke night, when all other light is taken away. The more moisture they haue within them, the more light they giue in so much as they shine in mens mouths as they be chawing of them: they shine in their hands vpon the floore on their garments, if any drop of their fatie liquor chance to fall by: so as it appeareth, that doublelesse it is the very iuice & humor of the fish which is of that nature, which we do so wonder at in the whole body.

¶ *Of the enmitie and amitie which is between fishes and other water beasts.*

Such concord there is in some, and such discord in others, as is wonderfull. The Mullet and the sea-Pike hate one another, and be euer at deadly war: likewise the Congre & the Lamprey: inasmuch as they gnaw off one anothers taile. The Lobster is so afraid of the Polype or Pourcuttell, that if he spie him neere, he euer more dieth for very woe. The Lobsters are ready to scratch and teare the * Congre: the Congres againe do as much for the Polype. *Nigidus* writeth, That the sea-Pike biteth off the Mullers taile: and yet the same fishes in certaine set moneths are good friends, and agree well enough. He saith moreover, that those Mullers liue all, notwithstanding their tails be so curtd off. On the other side, there be examples of friendship among fishes, besides those, of whose societie and fellowship I haue already written: and namely, between the great whale *Balena*, and the little *Musculus*. For whereas the Whale aforesaid hath no vse of his eies (by reason of the heavy weight of his eie-browes that couer them) the other swimmeth before him, serueth him in stead of eies and lights, to shew when he is neere the shelles and shallows, wherein he may be soone grounded, so big and huge he is.

Thus much of fish. Hence forward will we write of Foules.

* *Lecus Congre*, is a fish, the sea-Pike biteth off his taile.



THE TENTH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIVS SECVNDVS.

¶ *The nature of Birds and Foules.*

IT followeth now that we should discourse of the nature of Foules. And first to begin with Ostriches. They are the greatest of all other foules, and in manner of the nature of foure footed beasts: (namely, those in Africke and Ethiopia) for higher they be than a man sitting on horsebacke is from the ground: and as they be taller than the man, so are they swifter on foot than the very horse: for to this end only hath Nature giuen them wings, euen to help and set them forward in their running: for otherwise, neither flie they in the aire, ne yet so much as rise & mount from the ground. Clowen houfs they haue like red decre, and with them they fight: for good they be to catch vp stones withall, & with their legs they whurle them backe as they run away, against those that chafe them. A wonder this is in their nature, that whatsoeuer they eat (and great deuourers they be of all things, without difference and choise) they concoct and digest it. But the veriest foolies they be of all others. For as high as the rest of their body is, yet if they thrust their head and necke once into any shrub or bush, and get it hidden, they thinke then they are safe enough, and that no man seeth them. Now two things they doe afford, in recompence of mans pains that they take in hunting and chasing them: to wit, their eggs, which are so big, that some vse them for vessels in the house: and their feathers so faire, that they serue for pennaches to adorne and set out their crests and morions of souldiers in the wars.

CHAP.

¶ *Of the Phoenix.*

THe birds of Ethiopia and India, are for the most part of diuerse colours, and such as a man is hardly able to decipher and describe. But the Phoenix of Arabia passes all others. Howbeit, I cannot tell what to make of him: and first of all, whether it be a tale or no, that there is neuer but one of them in all the world, & the same not commonly seen. By report he is as big as an Aegle: for colour, as yellow and bright as gold, (namely all about the necke;) the rest of the bodie a deep red purple: the taile azure blew, intermingled with feathers among of rose carnation color: and the head brauely adorned with a crest and penach finely wrought; hauing a tuft and plume thereupon, right faire and goodly to be seen. *Manilius*, the noble Roman Senator, right excellently scene in the best kind of learning and literature, and yet neuer taught by any, was the first man of the long Robe, who wrote of this bird at large, & most exquisitely. He reporteth, that neuer man was known to see him feeding: that in Arabia he is held a sacred bird, dedicated vnto the Sun: that he liueth 666 yeares: and when he groweth old, and begins to decay, he builds himselfe with the twigs and branches of the Canell or Cinamome, and Frankincense trees: and when he hath filled it with all sort of sweet Aromaticall spices, yeeldeth vp his life thereupon. He saith moreover, that of his bones and marrow there breedeth at first as it were a little worme: which afterwards proueth to be a prettie bird. And the first thing that this yong new Phoenix doth, is to performe the obsequies of the former Phoenix late deceased: to translate and carry away his whole nest into the citie of the Sun neere Pancha, and to bestow it full deuoutly there vpon the altar. The same *Manilius* affirmeth, that the reuolution of the great yeare so much spoken of, agreeth just with the life of this bird: in which yeare the stars returne againe to their first points, and giue significations of times and seasons, as at the beginning and withall, that this yeare should begin at high noone that very day when the Sun entrencheth the signe *Aries*. And by his saying, the yeare of that reuolution was by him shewed, when *P. Licinius* and *M. Cornelius* were consuls, *Cornelius Valerianus* writeth, That whiles *Q. Plautius* and *Sex. Papinius* were Consuls, the Phoenix flew into Egypt. Brought he was hither also to Rome in the time that *Claudius Caesar* was Censor, to wit, in the eight hundredth yeare from the foundation of Rome: and shewed openly to be seen in a full hall and generall assembly of the people, as appeareth vpon the publick records: showbeit, no man euer made any doubt, but he was a counterfeit Phoenix, and no better.

¶ *Of Aegles.*

OF all the birds which we know, the Aegles carie the price both for honor & strength. Six kinds there be of them. The first named of the Greeks * *Melanactes*, and in Latin, *Valeria*: the least it is of all others, and strongest withall, blacke also of colour: In all the whole race of the Aegles, she alone nourisheth her yong birds: for the rest (as we shall hereafter declare) doe beate them away: the only crieth not, nor keepeeth a grumbling and huzzing as others doe: and euer more conuerseth vpon the mountaines. Of the second sort is * *Pygargus*. It keepes about townes and plaines, and hath a whitish taile. The third is *Morphnus*, which *Homer* calls also *Perceus*: some name it *Plancus* and * *Anaturia*: and she is for bignesse and strength, of a second degree: louing to liue about lakes and meeres. Ladie *Phaenone*, who was supposed & said to be the daughter of *Apollo*, hath reported, that this Aegle is toothed: otherwife mute, as not hauing any tongue: also, that of all other she is the blackest, and hath the longest tail. With her accordeth *Boethus* likewise. Subtle she is and witty: for when she hath seized vpon Tortoises and caught them vp with her talions, she throweth them downe from aloft to breake their shells. And it was the fortune of the Poet *Aeschylus* to die by such a meanes. For when he was foretold by wizards of their learning, that it was his destinie to die on such a day by some thing falling on his head: he thinking to preuent that, got him forth that day into a great open plain, far from house or tree, presuming vpon the securitie of the cleare and open skie. Howbeit, an Aegle let fall a Tortoise, which light on his head, dasht out his braines, and laid him asleepe for euer.

* The Saker is some think.

* *Pygargus* is a bird.

* *Phaenone* is a bird.

Of the fourth knid is *Pernopterus*, the same that * *Orpelargus*, fashioned like to a Geire or Vulture: it hath least wings, a bodie bigger than the rest: but a very coward, fearful & of a bastard and crauen kind, for a rauen will beat her. Besides, she hath a greedie and hungrie vorn alwaies in her georg and craw, and neuer is content, but whining and grumbling. Of all Eagles the onely carrieth away with her the dead prey, & feedes thereupon in the aire: whereas others haue no sooner killed, but they prey ouer them in the place. This bastard buzzard kind maketh that the fifth, (which is the roiall Eagle) & is called in Greek *Gnefos*, as one would say, true and kindly, as descended from the gentle and right aire of Eagles. This Eagle roiall, is of a middle bigneffe and of a reddish colour, a rare bird to be seene. There remaineth now the sixt and last sort, and that is * *Haliartus*. This Eagle hath the quickest and clearest eie of all other, soaring & mounting on high: when (the spiech a fish in the sea, downe the comes with a power, plungeth into the water, and breaking the force thereof with her breast, quickly the catcheth vp the fish, and is gone. That Eagle which we named in the third place, haunting lakes, fens, and standing waters for to prey vpon water-foule, who, to shift from her, are driuen otherwhile to diue vnder the water: but she presseth so hard vpon them, that they be wearied and stoned in the end, and then she catcheth them vp and carrieth them away. A worthy sport it is to see the manner of their scuffling: whiles the filly river bird makes means to gain the bank side for refuge (especially if it be well grown with reeds) and the Eagle for her part driues her from thence with the clap and stroke of the wing, whiles, I say, as the Eagle striketh, and therewith plungeth her selfe down into the water, the poore fowle that swims vnderneath, seeing the shadow of the Eagle hovering about the bank side, riseth vp again in another place far enough off from the Eagle, and where shee imagined the should be least looked for. Which is the cause that these wild fowle in the water commonly swim in flocks. For when they are many together they are not much troubled and annoyed, by reason that with fluttering their pinnions, with dashing and flapping the water with their wings, they dazle the sight of their enemy. Oftentimes also the very Eagles, not able to weld the prey that they haue seized on, are together with it drawne vnder the water, & so drowned. Now as touching the *Haliartus*, or the Osprey, she only before her little ones be feathered, will beat and strike them with her wings, and thereby force them to looke full against the sun beames: now if shee see any one of them towinke, or their eies to water at the raies of the Sun, she turns it with the head forward out of the nest, as a bastard, and not right, nor none of hers; K but bringeth vp and cheriseth that whose eye will abide the light of the Sun, as the looks directly vpon him. Moreouer, the se Orfraies or Ospreies are not thought to be a feuerall kind of Eagles by themselves, but to be mungrels, and ingendred of diuers sorts. And their young Ospraies be counted a kind of Ossifragi: from them come the lesser Geires, they again breed the greater, which ingender not at all. Some reckon yet another kind of Eagle, which they call Barbatz: and the Tuscanes, Ossifrage.

But of the six kinds before rehearsed, the 3 first, and the fift, haue in their nest a stone found named * Aetides, which some call Gagates, and it is therein ingendred. This stone is medicinalle, and singular good for many diseases, and if it be put into the fire it will neuer a whit consume. Now this stone, as they say, is also with child: for if a man shake it, he shall heare another to rattle and sound within, as it were in the bell; or wombe of it. But that vertue medicinalle, aboue said is not in these stones, if they be not gotten out of the very nest from the aire. For when they do and make their nests vpon rocks and trees. Three egs commonly they lay, whereof two only they vse to hatch: howbeit somtimes they haue bin seen to haue 3 yong ones. But lightly one of them they turn out of the nest, because they would not be troubled with feeding & nourishing it. And verily Nature hath well provided, that at such a time the old Eagles should not be able to puruey sufficient for meat: for otherwise, if they should reare their birds, they were enough to destroy the yong breed of deere & wild beasts in a whole country, that there should be no venison nor game at all for gentlemen. Moreouer, by the same prouidence of Nature, all that while their tallons or clees hooke and turne inward very much: also for very hunger they feathers wax gray & white, so as they haue good cause not to abide their yong. But when they hate cast them off, the Ossifrages which are neere of kin vnto them, are ready to take them and bring them vp with their own birds. But the old Eagles their dammes not content therewith, persecute them still when they are growne to be bigge ones, beating and chasing them away farre off, as their very concurrents, and who would intercommune with them, and rob them of their

A their prey. And were it not so, certainly one aire of Eagles needs the reach of a whole country to furnish them with venison sufficient to their full. They haue therefore their feuerall coasts and walks, and without those limits and vsuall haunts they rauen not. When they haue seized of any prey, they carry it not away presently, but first lay it downe, peruse and peise the weight of it, and then away they fly therewith amaine, but not before. They die not for age, nor vpon any sicknesse, but of very famine, by reason that the vpper beake of their bill is so far ouergrown and turns inward so much, that they are not able to open it to feed themselves. Their manner is ordinarily to go to their busines (namely to fly and seek their prey) after noon: for all the forenoon they are perched vp, doing nothing, waiting the time when men be not stirring abroad, but about their markers within the cities and townes, or otherwise busie in their ciuill affaires. The quils or feathers of Eagles laid among those of other fowles, will decour & consume them. B Men say, that of all flying Fowle the Eagle onely is not smitten nor killed with lightning: whereupon folke are wont to say, that these serues *Iupiter* in place of his squire or armor-bearer:

CHAP. IV.

¶ When Eagles began to be the Ensignes and standards of the Roman legions: and what fowles they be that war with Eagles.

C *Aius Marius* in his second Consulship ordained, that the legions of Romane soldiers only should haue the Eagle for their standard, and no other ensigne: for before-time the Eagle marched foremost indeed, but in a ranke of foure others, to wit, of * Volues, Minotaures, C Horses, and Bores, which were borne each one before their own feuerall Squadrons and companies. Not many yeares past, the standard of the Eagle alone began to be advanced into the field to battell, and the rest of the ensignes were left behind in the campe: but *Marius* reiected them altogether, and had no vse of them at all. And euer since this is obserued ordinarily, that there was no standing campe or leaguer wintered at any time without a paire of Eagle standards.

* Names of
Ensignes.

Of Eagles, the first and second kind prey not only vpon the lesse foure footed beasts, but also maintain battell with the red Deere, euen the stag and the hind. The manner of the Eagle is, after she hath wallowed in the dust, and gathered a deale thereof among her feathers, to settle vpon the horns of the Deere afore said, to shake the same off into his eies, to flap and beat him about the face with his wings, vntill she driue him among the rocks, and there force him to fall down from thence headlong, and so to breake his neck. Moreouer, the Eagle hath not enough of this one enemy, but she must war with the dragon also; howbeit the fight betweene them is more sharp and eager, yea, and putteth her to much more danger, albeit otherwhiles they combat in the aire. The Dragon of a naturall spight and greedy desire to do mischief to the Eagle, watcheth euermore where the aire is, for to destroy the egs, and so the race of the Eagles. The Eagle again wherefoeuer she can set an eye vpon him, catcheth him vp and carrieth him away: but the serpent with his taile windeth about his wings, and so intangleth and tieth them fast, that downe they fall both of them together.

CHAP. V.

¶ A strange and wonderfull accident of an Eagle.

T Here happed a maruellous example about the city Sestos, of an Eagle: for which in those parts there goes a great name of an Eagle, and highly is she honored there. A yong maid had brought vp a yong Eagle by hand: the Eagle again to requite her kindnes, would first when shee was but little, flie abroad a birding, and euer bring part of that shee had gotten vnto her said nurse. In proesse of time, being grown bigger and stronger, would set vpon wild beasts also in the Forrest, and furnish her yong mistresse continually with store of venison. At length it fortuned that the damofell died: and when her funeral fire was set a burning, the Eagle flew into the mids of it, and there was consumed into ashes with the corps of the said virgin. For which cause and in memoriall thereof, the inhabitants of Sestos and the parts there adioyning, erected in that very place a stately monument, such as they call Heroum, dedicated in the name of *Iupiter* and the virgin, for that the Eagle is a bird consecrated vnto that god.

CHAP.

CHAP. VI.

¶ Of Vultures or Geires.

THe blacke Vultures are the best of that kind. No man euer could meet with their nests: whereupon some haue thought, but vntruly, that they fly vnto vs out of another world, euen from the Antipodes, who are opposit vnto vs. But the very truth is, they build in the highest rocks they can find, and their yong ones haue many times bin seene, two together, and no more. *Vmbrius*, who was counted the most skillfull Aruspex of our age, saith, they usually lay three eggs, whereof they take one of them to sacre and bleffe (as it were) the other eggs and the nest, and then soon after they caſt it away. Also that the manner of the Geires is to foresee a carnage, and to fly two or three daies before vnto the place where there will be any carions or dead carkasses.

CHAP. VII.

¶ Of the Sangualis and Immusculus.

AS touching the Sangualis and the Immusculus, our Augurs at Rome are in a great doubt and make much question, what they should be. Some are of opinion, that the Immusculus is the chick of the Vulture; and the Sangualis likewise the yong *Ossifraga*. *Maffurius* saith, that the Sangualis and *Ossifraga* be both one: and as for the Immusculus, it is the yong bird of the Eagle before it come to haue a white taile. Some haue affirmed confidently, that after the death of *Mutius* the Augure there was neuer any of them seene at Rome. But I rather am of this mind (and me thinks it sounds more like a truth) such is the supine negligence and carelesse of men in all things else, that no maruell it is if they know them not although they see them.

CHAP. VIII.

¶ Of Hawkes.

WE find in Faulconrie 16 kinds of Hawks or Fowles that prey. Of which the *Circos* K (which is lame and limpeth of one leg) was held in antient time for the luckiest of Augurie in case of weddings and of cattell. Also the Hawke called *Triorchos* (of three stones or cullions that it hath) is reputed a bird of good presage: and in Augurie, lady *Phemonoe* hath giuen vnto it the honor of the best simply and most fortunate. The Romans call it *Buteo*, i. a Buzzard; and there is a worshipping house and family in Rome of that synname, by occasion that a Buzzard fetled and perched himselfe vpon the Admirall ship where *Fabius* himselfe, one of that house, was, preſaging a boone-voyage and happy successe, according as it fell out indeed. As for the Hawk which the Greeks name *Æſalo*, i. the Merlin, he alone is euer seene at all times of the year, whereas the rest are gone when winter commeth. In generall, Hawks are diuided into sundry and distinct kinds, by their greedinesse more or lesse, and their manner in chase and preying: for some there be that neuer seise on a fowle but vpon the ground: others againe neuer assaile any birds, but when they spy them flying about some tree. There be also, that take a bird perching and sitting on high: and ye shal haue of them that ouertake them as they fly in the wide and open aire. The doves therefore and pigeons, knowing the danger of flying aloft, so soon as they espy them, either light vpon the ground and fettle, or else fly neere the earth, and thus help themselves by taking a contrarie course to the Hawks nature, to auoid their talons. There is in the ocean of Africke an Island called *Cerne*, wherein all the hawks of the coasts of the *Maffelyli*, build vpon the very ground, and there breed, and be so accustomed to those countries, you shall not find an aire of them elsewhere. In a part of Thrace, somewhat higher in the country beyond *Amphipolis*, men and hawks ioyn in fellowship and catch birds together; for the men driue the woods, beat the bushes and reeds to spring the fowle; then the hawks flying over their heads, seise vpon them, and either strike or beat them to the ground fit for their hands. On the other side, the hawks and fowlers when they haue caught the Fowle, diuide the booty with the hawks; and by report they let such birds fly againe at libertie aloft into

A into the aire, and then are the hawks ready to catch them for themselves. Moreover, when the time is of hawking, they will by their manner of crie and flying together, giue signe to the faulconers that there is good game abroad, and so draw them forth to hawking for to take the opportunity. It is said, that the wolues doe the like, about the lake *Mœotis*: for vntill they may haue their part with the fishers, they will rend and teare their nets, when they find them stretched forth. Faulcons or Hawkes willingly eat not the heart of any bird. There is an hawk called *Cymindis*, which preyeth in the night: seldom is the seene in the woods, and by day-light seeth little or nothing. There is deadly war between it and the *Ægle*; and oftentimes they be both taken, entangled one with another.

CHAP. IX.

¶ Of the Cuckow, which usually is killed by birds of her owne kind.

AS touching the Cuckow, it seemes that he comes of some hawk changed into his shape at one certaine time of the year: for then those other hawks are not to be seene, vnlesse some very few daies. He sheweth himselfe also but for a small season in summer time, and afterwards appeareth no more. It is the only hawk that hath no talons hooked downward, neither is he headed as other hawks, nor like vnto them, but in colour: and for bill, he resembleth rather the dove. Nay more than that, the hawk will prey vpon him and deuoure him, if haply they be seene both together: and it is the only bird of all other that is killed by those of the owne kind. He altereth his voice also. In the spring, he commeth abroad, and by the beginning of the dog-daies, hides himselfe. These lay alwaies in other birds nests, and most of all in the Stock-doues, commonly one egge and no more (which no other bird doth besides) and seldom twain. The reason why they would haue other birds to sit vpon their eggs and hatch them, is because they know how all birds hate them: for euen the very little birds are readie to war with them: for feare therefore that the whole race of them should be vtterly destroyed by the furie of others of the same kind, they make no nest of their owne (being otherwise timorous and fearefull naturally of themselves) and so are forced by this craftie shift to auoid the danger. The Titling therefore that sitteth, being thus deceived, hatcheth the egge & bringeth vp the chick of another bird. And this yong Cuckow being greedy by kind, beguiling the other yong birds and intercepting the meat from them, groweth hereby fat and faire-looking: whereby it comes into speciall grace and fauour with the dam of the rest, and nource to it. She ioieth to see so goodly a bird toward, and wonders at her selfe that she hath hatched & reared so trim a chick. The rest, which are her owne indeed, she sets no store by, as if they wert changelings: but in regard of that one, counteth them all bastards and misbegotten: yea, and suffereth them to be eaten and deuoured of the other euen before her face: and this she doth so long, vntill the yong cuckow being once fledged & readie to flie abroad, is so bold as to seize on the old Titling, and to eat her vp that hatched her. And by that time there is not another bird againe for goodnesse and sweetnesse of meat, comparable to the yong Cuckow.

CHAP. X.

¶ Of Gleeeds, Kites, or Puttocks.

THe Kites or Gleeeds are of the same kind of Hawkes or birds of prey, only they be greater. This hath been noted & obserued in them: that being a most rauenous bird, & euer more hungry, yet were they neuer knowne to snatch any viands ordained at funerall feasts for the dead, out of the platters; ne yet the flesh of beasts slain in sacrifice, from off the altar of *Iupiter* in Olympia. Nay, it was neuer seene that a Puttock would catch flesh out of their hands that serued at such feasts: but if it did, a great presage it was of some dolefull & heauie misfortune which should fall vpon the whole town, that made these solemne sacrifices. These Gleeeds or Puttocks, seem by the winding and turning of their tails to & fro as they flie, to haue taught pilots the skill of steering, and vse of the helme. See how Nature hath shewed that in the aire a boue, which is so necessary in the deep sea beneath! Kites likewise are not often seene abroad in the dead time of winter: yet go they not away for altogether before the Swallows. Moreover, it is said, that after the Sunnedes, alway in summer, they be troubled with the gout in their feet.

CHAP.

CHAP. XI.

¶ A general diuision of Fowles.

THe first & principall difference and distinction in birds, is taken from their feet: for they haue either hooked talions, as Hawkes; or round long claws, as Hennes; or else they be broad, flat, and whole-footed, as Geese and all the sort in manner of water-fowle. Those that haue hooked talions, for the most part feed vpon flesh and nothing else.

CHAP. XII.

¶ Of vnluckie birds, and namely, the Crow, Rauens, and Scritch-owle.

THe Crow liueth not altogether of carion, for the Rooke eateth of other food. The Crows and Rookes haue a cast by themselves: for when they meet with an hard nut which they be not able to cracke, nor breake their shales with their bills, they will flie aloft and fling it against some rock or tile house once or twice, yea & many times together, till it be so crushed and bruised, that they may easily breake it quite, and then they eat vp the kernell. These birds all of them keep much prating and are full of chat; which most men take for an vnluckie sign and presage of ill fortune: although some there be who think otherwise, that it is a good bird, and highly esteem of her. Obscured it is, that from the going down or occultation of the starre Arcturus, vnto the coming of the Swallow, the Crow is not to be scene else where but about the groues and temples of *Minerva* (and that is but very seldome) and namely, neere to Athens. Moreover, this bird only feedeth her yong cadowes for a good while after they are able to flie. She is most vnluckie at breeding time and cooing, that is to say, after the Sunsted in summer. All other birds, which be as it were of the same race, drue their yong ones out of the nest when they be once fledged, and put them to it, forcing them to flie abroad: like as the Rauens also, who likewise feed not on flesh only: and they likewise when they perceiue their yong, once to be strong, chase and drue them away farre off. Therefore about little villages and hamlets, there commonly be not about two paire of them at once. And about Cranon verily in Thessalie, yee shall neuer see about one paire of them: for the old ones giue place to the yong, and fly away. There are some diuers and different properties in this bird, and that before named: for the Rauens engender before the Sunsted, and for sixtie daies are somewhat ill at ease, and troubled with a kind of drought or thirstines especially, till such time as the figges be ripe in Autumne: and then from that time forward, the Crow beginneth to be diseased and sick. Rauens for the most part lay five egges: and the common sort are of opinion, that they conceiue and engender at the bill, or lay their egges by it: and therefore if women great with child chance to eat a Rauens egge, they shall be deliuered of their children at the mouth: and generally shall haue hard labour, if such an egge be but brought into the house where such a great belied woman be. *Aristotle* denies this, and saith, that the Rauens conceiue by the mouth, no more than the *Egyptian* Ibis: and he affirmeth, that it is nothing else but a wantonnesse which they haue in billing and kissing one another, which we see them to doe oftentimes, like as the Doves and Pigeons also. The Rauens of all other fowles, seeme to haue a knowledge of their owne signification in presages and fore-tokens: for when the mercinarie hired souldiers of Media were all massacred vnder a colour of entertainment and hospitalitie, the Rauens flew all away out of Peloponnesus and the region of Attica. The worst token of ill lucke that they giue, is when in their crying they seeme to swallow in their voice as though they were choked.

The night birds haue also crooked talions, as the Owles, Scritch-Owle, & Howlets. All these see but badly in the day time. The Scritch-Owle alwaies betokeneth some heauie newes and is most execrable and accursed, and namely, in the presages of publick affaires: he keepeth euer in defaults: and loueth not only such vnpeopled places, but also that are horrible and hard of access. In summe, he is the very monster of the night, neither crying nor singing out cleare, but uttering a certaine heauy groane of dolefull mourning. And therefore if he be seen to fly either within cities, or otherwise abroad in any place, it is not for good, but prognosticates some fearful misfortune. Howbeit I my selfe know, that he hath sitten vpon many houses of priuie men, and

A and yet no deadly accident followed thereupon. He neuer flieth directly at ease, as hee would himselfe, but euermore sidelong or byas, as if he were carried away with the wind or somewhat else. Therefortuned one of them to enter the very secret sanctuarie within the Capitoll at Rome, in that year when *Sex. Papellio Ister*, and *L. Pedanius* were Consuls: whereupon at the Nones of March, the city of Rome that yeare made generall processions to appease the wrath of the gods, and was solemnly purged by sacrifices.

CHAP. XIII.

¶ Of the bird Incendiaria.

THis fire-bird Incendiaria is likewise unlucky, and as our Chronicles and Annals doe witness, in regard of her the city of Rome many a time hath made solemne supplications to pacifie the gods, and to auert their displeasure by her portended. As for example, when *L. Cassius* and *C. Marius* were Consuls: in that year when by occasion of a Scritch-Owle scene, the city likewise was purged by sacrifice, as is aboue said, and the people fell to their prayers & deuotions. But what bird this should be, neither do I know, nor yet finde in any writer. Some giue this interpretation of Incendiaria, to be any bird whatsoever, which hath beene scene carrying fire either from altar or chappell of the gods. Others call this bird Spinturnix. But hitherto I haue not found any man that would say directly, That hee knew what bird this should be.

CHAP. XIV.

¶ Of the bird Cluina or Cluina.

Likewise the bird named in old time Cluina, or Cluina, which some call Clamatoria, and which *Labeo* describeth by the name of Prohibitoria, I see is as little known as the other. *Nigidius* also maketh mention of a bird called Subis, which vseth to squash Egles eggs.

CHAP. XV.

¶ Of other unknowne Birds.

IN the Augures bookes which the Tuscanes haue composed, there be many birds described and set out in their colours, which haue not been scene some hundreds of yeares past. And I muse and maruell much, that they should be now extinct, and the race of them cleane gone, considering that the kind of those fowles is not lost, but continueth still in great abundance, which men eat daily at their tables, and consume so ordinarily.

CHAP. XVI.

¶ Of night-flying Birds.

OF strangers and forrein writers, *Hylas* is thought to haue written best and most learnedly, as touching Auguries and the nature of birds. He reports in his book, that the Howlet, Scritch-owle, the Spight that pecketh holes in trees, the Trogone, and the Chough or Crow, when they be hatched come forth of their shels with their taile first: and that by reason of their heads so heauy, the eggs are turned with the wrong end downward, & so the hinder part of the body lieth next vnder the henne or the dam, to sit vpon and cherish with the heat of her body.

CHAP. XVII.

¶ Of Owles or Howlets.

IT is a pretty sight to see the wit and dexteritie of these Howlets when they fight with other birds: for when they are overlaid and beset with a multitude of them, they lie vpon their backs, and with their feet make shift to resist them: for gathering themselves into a narrow compasse, there is nothing in a manner to be seen of them, save only their bill and talons, which couer the whole body. The Faulcon, by a secret instinct and societie of nature, being the poore Howlet thus distressed, cometh to succor and taketh equal part with him, and so endeth the fray.

fray. *Nigidium* writeth, that Howlets for sixty daies in winter, keepe close and remain in couert, G and that they change their voice into nine tunes.

CHAP. XVIII.

¶ *Of the Spight or Woodpecker.*

SOME little birds there are also that haue hooked clees, as the Spights, which are known by the surname of Martius, and be therefore called Pici Martij. These are of great account in Auspices and preface good. They that job and peeke holes in trees, and will climbe vpright like cats, are of this race. As for them, they will rampe vp with their bellies to the tree, bending backward, & when they peeke with their bills against the bark, they know by the found thereof, that there be worms within for them to feed vpon. These birds alone of all others feed and nourish their young ones in crannies and chinks of trees. And if it chance that a shepherd or some such do pin or wedge vp their holes, it is thought commonly that they will vnspott the same again by means of a certaine herbe, which no sooner they touch the stopple with but it will out. *Trebium* writeth, that let a man drie a spike or great naile, or else a wedge or pinne of wood, as hard as euer he will, into that tree wherein this bird hath a nest, incontinently as thee percheth and seeth vpon the tree, it will presently fly out with such a force, that the tree will giue a crack again therewith. Throughout all Latium these birds beare the name for effectual signification of good or bad fortune, by reason of that king or prince [*i. Picius*] who gaue them that name. And one preface of theirs about the rest I cannot passe ouer: It fortuned that one of them light vpon the head of *L. Tubero* L. chief Iustice of the city of Rome, as hee was sitting vpon the iudgement seat in the open face of the Court ministering iustice, and there rested so gently, that it suffered him to take it with his hand. The Soothsayer being asked his aduice in this case, answered by booke, That if the bird were let go, it would portend the ruine and ouerthrow of the whole state and empire: but if it were killed, it denounced the death of the sayd Pretor or L. chief Iustice then in place. But the Pretor *Tubero* immediately vpon this answer, plucked the bird in pieces. It was not long after but the preface of this bird took effect indeed, and was fulfilled in his person. Moreover there be of this kind many that feed on mast, acorns, nuts, apples, and such like fruits, but they be such as liue in manner vpon flesh onely. And yet I must except the Kite, for that propertie in him is noted to be in all Augurie an vnlyckly signe, and preface of some heauy and deadly misfortune.

CHAP. XIX.

¶ *Of Birds that haue hooked talons and round long claws like fingers.*

WHAT fowles sooner haue crooked claws for not together in flocks, but prey each one apart for it self, and lightly all such fly aloft, vnlesse it be the night birds afore said: and the greater sort especially. They are all of them great winged, little bodied, and heauy in their gate vpon the ground. Seldom or neuer they sit and perch vpon a rock: for why, their nails bowing and hooking inward will not giue them leaue. It remains now that we speake of the second kind or ranke of birds, which also is diuided into two sorts; to wit, Of fowles that sing, and Alites that fly only: for the singing of the one and the bignes of the other makes the difference and distinction between them. These therefore that be greater bodied we will by order treat first of.

CHAP. XX.

¶ *Of Peacocks, and who was the first that killed them for the table.*

THE Peacock far surpasses all the rest of this kind, as well for beauty, as also for the wit and vnderstanding that he hath, but principally for the pride and glory he takes in himself. For perceiuing at any time that he is praised and wel liked, he spreadeth his taile round, shewing and setting out his colours to the most, which shine againe like precious stones: and namely when he turnes them against the Sun, as his manner is; for so he giueth them a more radiant and glittering lustre. And for the same purpose also, with his taile, representing fish

shells, he giues a certain shadow to the rest of his feathers, which seeme the brighter when they be a little shadowed; and withall, he sets all those eyes of his feathers together in a ranke, and gathereth them round, knowing full well that hee is the more looked on for them; and therein he taketh no small ioy and pleasure. On the other side, when he hath lost this taile, which usually he moulteth euery yere when trees shed their leaues, vntill such time as trees blossom new, and his taile be grown again, he hath no delight to come abroad, but as if he were ashamed, or moumed, seeketh corners to hide himselfe in. The Peacocke ordinarily liueth 25 yeares. At 3 yeres of age he begins to put forth that varietie of colours in his feathers. Authors who haue written of him say, that he is not only a proud and vainglorious creature, but also as malicious and spightfull, as the Goose is bashfull and modest: for so haue some of them obserued these properties and qualities in these birds. But I for my part like not to make such similitudes.

The first that killed Peacocks to be serued vp as a dish at the table, was *Hortensius* that great Orator, in that solemne feast which he made when he was consecrated high priest: and *M. Aufidius Lurco* denied first to feed them fat; by which inuention of his, he might defend by yere-ly reuenue, 60000 Sesterces. And this was about the time of the last Pirats war.

408 ff. 15 ff.

CHAP. XXI.

¶ *Of Cocks, how they be cut and made Capons: also of a dunghill Cocke that spake.*

NEXT to Peacocks, these birds about our houses for our sentinels by night, & whom Nature hath created to breake men of their sleepe, to awaken and call them vp to their work, haue also a fence and vnderstanding of glory; they loue (I say) to be praised, and are proud in their kind. Moreover, they are Astronomers, and know the course of the stars, they diuide the day by their crowing, from 3 houres to 3 houres: when the Sun goeth to rest, they go to roost: and like sentinels they keepe the reliefe of the fourth watch in the camp; they call men vp to their careful labour and trauell: they will not suffer the Sun to rise and steale vpon vs, but they giue vs warning of it: by their crowing they tell vs that the day is comming, and they foretell their crowing likewise, by clapping their sides with their wings. They are Commanders and rulers of their own kind, be they Hens or other Cocks; and in what house soether they be they will be masters and kings ouer them. This foueraignty is gootten by plain fight one with another, as if they knew, that naturally they had spurs, as weapons, giuen them about their heeles, to try the quarrell: and many times the combat is so sharp and hot, that they kill one another ere they giue ouer. But if one of them happen to be conqueror, presently vpon victory he croweth, and himselfe foundeth the triumph. He that is beaten makes no words, nor croweth at all, but hideth his head in silence; and yet neuertheless he goeth against his stomack to yeeld the gantlet and giue the bucklers. Hardly can he brook to be vnder another, and not only these cocks of game, but the very common sort of the dunghill are as proud and high minded: ye shall see them to march stately, carying their neck bolt upright, with a combe on their head like the crest of a soldiers helmet. And there is not a bird besides himself that so oft looketh aloft to the Sun and sky, and then vp goeth the taile and all, which he beares on high, turning backward again on the top like a hook. And hereupon it is, that marching thus proudly as they do, the very Lions (which of all wilde beasts be most courageous) stand in feare and awe of them, and will not abide the sight of them.

Now of these Cocks, some of them are made for nothing els but war and fighting, and neuer are they well but in quarrels, brawles, and fraies; and these be cocks of kind: and the countries from whence they come are grown into name, being much renowned for their breed: as namely Rhodus and Tenagra in the first and highest degree. In a second ranke and place be those of Melos and Chalcis. Vnto these birds (for their worth & dignity) the purple robe at Rome, and all magistrats of state disdain not to giue honor. These be they, that by their *tripudium* [*alutim*] [*i. hearty feeding*] obserued by the pullitiers, shew good successe. These rule our great rulers euery day: and there is not a mighty L. or state of Rome, that dare open or shut the dore of his house, before he knowes the good pleasure of these fowles; and that which more is, the foueraigne magistrate in his maiestie of the Roman empire, with the regall ensignes of rods and axes caried before him, neither sets forward nor reculeth backe without direction from these birds: they giue order to whole armies to aduance forth to battel, & again command them to stay

stay and keep within the camp. These were they that gaue the signal, and foretold the issue of all those famous foughten fields, whereby we haue atchieued all our victories throughout the whole world: and in one word, these birds command those great Commanders of all nations vpon the earth, as acceptable to the gods in sacrifice with their final fibres & filaments of their inwards, as the greatest and fattest oxen that are killed for sacrifice. Moreouer, their crowing out of order, too soon before their houre, or too late, and namely in the euening, portendeth also and presageth somewhat by it selfe. For well known it is, that by their crowing at one time all night long, they fore-signified to the Beotians that noble victorie of theirs atchieued over the Lacedæmonians. For this interpretation and coniecture was giuen thereupon of a fortunate day, because that bird neuer croweth if he be beaten or ouercome. If they be once carued and made capons they crow no more. And this feat is practised vpon them two manner of wayes; namely, either by burning their ioines toward their kidnies with a red hot yron, or else by cauterizing their legs beneath, and their spurs, and then presently applying a plaister vnto the exulcerate and blistered place, made of potters white clay or chalky earth: and being thus serued they will sooner feed and be fat. At Pergamus euery yeare there is a solemne shew exhibited openly to the people, of Cocke-fighting, as if sword-fencers were brought within the lists to fight at utterance. We finde in record among our Annales, that within the territorie of Ariminum, in that yeare when *Marcus Lepidus* and *Quintus Catulus* were Consuls, there was a dung-hill cocke did speake: and it was about a ferme-houise in the countrey belonging to one *Galerius*. But this hapned neuer but once, for ought that I could euer heare or learne.

CHAP. XXII.

¶ Of Geese, and who first eat the Goose liver. Also of the lease of a Goose of Comagena.

THe Goose likewise is very vigilane and watchfull: witnesse the Capitoll of Rome, which by the meanes of Geese was defended and saved: whereas at the same time, through the default of dogs (which should haue giuen warning) all had like to haue bin lost. Wherefore the first thing that the Censors do by vertue of their office, is to take order for the Geese of the Capitoll, and to appoint some one man of purpose to see vnto them that they haue meat enough. Moreouer, they are said to be giuen much to loue: for at Argos there was a Goose that was wonderously inamour'd of a faire boy named *Olenus*: as also of a damosell whose name was *Glauce*, who vsed to play on the lute before king *Protophantus*: and by report at the same time a Ram made court vnto the said wench, and was in loue with her. It may be credibly thought also, that this creature hath some sparks (as it were) of reason, vnderstanding, and learning, for *Lacrydes* the Philosopher had one of them about him, which would neuer leaue him night nor day, neither in the open street abroad, nor in priuat house at home; but would follow him euen to his clofe and secret baines where he vsed to bathe. But our countrymen and citizens of Rome (beleeue me) are wiser now adaies, who know, forsooth, how to make a dainty dish of their Luer. For in those Geese that are kept vp and cram'd fat in coup, the liuer grows to be exceeding great; and when it is taken forth of the belly, it waxeth bigger still, if it be steeped in milk and sweet mede together. Good cause therefore it is, if at there be some question and controuersie about the first inuenter of this great good and singular commoditie to mankind: whether it were *Scipio Metellus*, a man who lately was called to be Consulor *M. Scipius*, who in those daies was by his birth a gentleman of Rome. But to leaue that still undecided, this is certainly known that *Messallinus Cora*, son to that *Messala* the Orator, found out the secret to broile & fry the flat broad feet of Geese, and together with cocks combs, to make a sauory dish of meat thereof between two platters. For surely I for my part will giue euery man his due and right, and will not defraud them of their singular praise and honour who haue bin benefactors to the kitchen, and proceeded masters in cookerie. A marvellous thing of these birds, that a flock of them should come all the way bare foot, from * Terwin and Torney in France, as far as to Rome. Their order was they had the conduct of them in this large voyage, to bring those forward that were weary and lagged behind, into the vaward & forefront: and so the rest by a certain thick vnited squadron (which naturally they make going together) driue the others before them. A second

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A commoditie that Geese yeeld, (especially those that be white) is their plumbe and downe. For in some places their soft feathers are pluckt twice a yeare: and yet they cary feathers again, and be as well couered with plumbe as before: and euermore the neerer to the skin and flesh. The softer is the downe. But of all other, the finest and best is that which is brought out of Germanie. The Geese there, be all white; but lesse of bodie than from other parts: and there they be called *Ganzæ*. And truly, a pound of such feathers be worth * 5 deniers. Hereupon it is, that so many complaints are made of Colonels and Captaines, ouer companies of auxillarie souldiers for their disorders. For whereas they should keep them together in a standing *corps de gard*, to watch and ward night and day: they license many times whole bands to straggle abroad, to hunt and chafe Geese for their feathers and downe. And now forsooth the world is growne to be so delicate and daintie, that not only our fine smooth dames, but also our men, cannot take their repose and sleep without this ware, but complaine of a paine in their necks and heads, vlesse they may lay them vpon bolsters and pillowes of goose feathers, and their soft downe.

B Now, to that part of Syria called Comagena, we be holden for another proper inuention of theirs. They take me the lease and greafe of Geese and Cinnamon together, which they put into a brazen pot, and couer it all ouer with good store of snow, wherein they let it lie in steepe, well infused in this cold humor, to vse in that notable composition and sweet ointment, which of that countrey is called *Comagenum*.

Of the Geese kind are the Bitganders named *Chelanopeces*: and (than which there is not a daintier dish knowne in England) the *Chenerotes*, lesse than wild Geese.

C As for the pheasant Bustards, they haue a trim shining brightnesse that becommeth and graeceth them exceeding well in their perfect and absolute black hew: and their eie-browes painted red as it were with deep Scarlet.

Another kind there is of them, bigger than Vultures, but in feather and colour much resembling them. And there is not a Foule (setting the Ostrich aside) that poisseth & weigheth more heauy than they: for they grow to that bignes, that a man can hardly lift them from the ground. These breed in the Alpes and the North countries. If they be muzzed up and kept in a pen, they lose their pleasant taste, and are no good meat: nay, they grow so fullen and fell-willed, that they will die with holding their breath. Next to these are those which in Spaine they call the Slow-birds, and in Greece *Otides*: but their meat is naught: for the marow in their bones, if it be let run out, hath such a stinking smell, that a man cannot abide it, but shall be readie to vomite.

CHAP. XXIII.

¶ Of Cranes, Storkes, Swans, Quails, the Glosits, and strange birds of other countries.

THe nation of the prettie Pigmies enjoy a truce and cessation from armes, euery yeare (as we haue said before) when the Cranes, who vse to wage war with them, be once departed & come into our countries. And verily, if a man consider well how far it is from hence to the Leuant sea, it is a mightie great journey that they take, & their flight exceeding long. They put not themselves in their journey, nor set forward without a counsell called before, and a generall consent. They file aloft, because they would haue a better prospect to see before them: and for this purpose a captain they chuse to guide them, whom the rest follow. In the reuerend band there be certaine of them set and disposed to giue signal by their manner of crie, for to range orderly in ranks, and keep close together in array: and this they doe by turns each one in his course. They maintaine a set watch all the night long, and haue their sentinels. These stand on one foot, and hold a little stone within the other, which by falling from it, if they should chauce to sleepe, might awaken them, and reprove them for their negligence. Whiles these watch, all the rest sleepe, couching their heads vnder their wings: and one while they rest on the one foot, and otherwhiles they shift to the other. The captain beareth vp his head aloft into the aire, and giueth signall to the rest what is to be done. These Cranes if they be made tame and gentle, are very playfull and wanton birds: and they will one by one dance (as it were) and run the round with their long shankes stalking full wantonly. This is surely known, that when they mind to take a flight ouer the sea Pontus, they will fly directly at the first to the narrow straits of the sayd sea, lying between the two capes *Criu-Metophon* and *Carambis*, and then presently they

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ballaife themselves with stones in their feet, and sand in their throats, that they flie more steadily and endure the wind. When they be halfe way ouer, down they fling these stones: but when they are come to the continent, the sand also they disgorge out of their craw.

Cornelius Nepos, who died in the daies of *Augustus Caesar* Emperor, in that chapter where he wrote, That a little before his time men began to feed and cram Blackbirds and Thrushes in coupes, faith moreover, That in his daies Storks were holden for a better dish at the board than Cranes. And yet see, how in our age now, no man will touch a Stork if it be set before him vpon the board: but every one is readie to reach vnto the Crane, and no dish is in more request. From whence these Storks should come, or whether they go againe, is not yet knowne. No doubt from far remote countries they visite vs, and in the same manner as the Cranes do: only this is the difference, that the cranes are our guests in Winter, and the Storks in Summer. When they be minded to part out of our coasts, they assemble all together in one certain place appointed: there is not one left out nor absent of their owne kind, vnlesse it be some that are not at libertie, but captiue or in bondage. Thus (as if it had been published before by proclamation) they rise all in one entire companie, and away they flie. And albeit well knowne it might be afore, that they were vpon their remoue and departure, yet was there neuer any man (watched he neuer so well) that could perceiue them in their flight: neither doe at any time see when they are coming to vs, before we know that they be alreadie come. The reason is, because they doe the one and the other alwaies by night. And notwithstanding that they flie too and fro from place to place, and make but one flight of it, yet be they supposed neuer to haue arriued at any coast but in the night. There is a place in the open plaines and champion countrey of Asia, called *Pithon*. Come: where (by report) they assemble all together, and being met, keepe a jangling one with another: but in the end, look which of them lagged behind and came tardie, him they reare in peeces, and then they depart. This also hath been noted, that after the Ides of August they be not lightly seene there.

Some ascribe constantly, that Storks haue no tongues. But so highly regarded they are for slaying of Serpents, that in Thessalie it is accounted a capital crime to kill a Stork, and by law he is punished as a Fellow in the case of manslaughter.

After the same manner wild Geese and Swans do fort together, when they be passengers from countrey to countrey: but all these are seene when they flie. They make way forcibly in a pointed Squadron, like as it were the stem of a foist at sea, armed with a sharp beakehead (for by this meanes they breake and cut the aire better, than if they draue it before with a straight, euen, and square front.) And thus wedg-wise by little and little they spread broader and broader behind, and beare a great length besides with them: by which meanes also they gather more wind to heaue them vp and set them forward. In this their flight they rest their heads vpon the former: and euer as one that leadeah the way is wearie with bearing his head, he retires behind to ease himself vpon him that flieth next before. Storks keepe one nest still from yeare to yeare, and neuer chang: and of this kind nature they are, that the yong will keep and feed their parents when they be old, as they themselves were by them nourished in the beginning.

Some say that the Swans sing lamentably a little before their death, but vntruly, I suppose: for experience in many hath shewed the contrarie. Howbeit, these foules vs to eat and deuour one another.

But since we are entred into this discourse of those foules that make voiaiges by whole flocks ouer sea and land to see strange countries, I cannot put off to speak of lesser birds also, which are of the like nature. For those before named may seeme in some sort to be induced to such great trauell, so bigge they are of bodie, and so strong withall. As touching Quails therefore, they alwaies come before the Cranes depart. A little bird it is, and whiles she is among vs here, mounteth not aloft in the aire, but rather flieth below neere the ground. The manner of their flying is like the former, in troupes: but not without some danger of the failers when they approach neer to land. For oftentimes they settle in great number on their failes, and there perch, which they doe cuermore in the night, and with their poise beare downe barks and small vessels, and finally sinke them. These Quails haue their set gifts, to wit, ordinarie resting and baiting places. When the Southwind blowes, they neuer flie: for why? it is a moist, heavy, and clogie wind, & that they know well ynough. And yet they willingly chuse a gale whensoever they flie, by reason that their bodies are too weightie (in comparison of their wings) to beare them

A them vp and besides, their strength is but small. And hereupon it is, that as they flie, they seem by their manner of crie to complain, as though they flew with paine. Commonly therefore they chuse a Northerne wind to flie with: and they haue one mighty great Quail called *Ortygometra*, to lead the way and conduct them, as their captain. The formost of them, as he approacheth neere to land, paiceth toll for the rest vnto the Hauke, who presently for his welcome preieth vpon him. Whensoever at any time they are vpon their remoue and departure out of these parts, they persuaide other birds to beare them company: and by their inducements, there go in their train the Glottis, * Otis, and the Cychramus. As for the Glottis, he putteth forth a long tongue, whereupon he hath that name. This bird is very forward at the first setting out (as being desirous to be a trauelier, to see far countries, and to change the aire:) and the first daies journey he vndertaketh with pleasure: but soone finding the tediousnesse and paines in flying, he repents that euer he enterprised the voiage. To go backe againe without companie, he is ashamed, and to come lag behind he is as loth: howbeit, for that day he holdeth out so so, and neuer goeth farther; for at the next resting place that they come vnto, hee faire leaueth the companie and staith there, where lightly he meeteth with such another as himselfe, who the yere before was left behind. And thus they do from time to time, yere by yere. As for the Cychramus, he is more staid and resolute to indure the trauel: he maketh halt and hath an earnest longing to come into those parts which he so much desires: & therefore in the night season he is as good as a trumpet to awake the rest, & put them in mind of their iourney. The Otis is a bird lesse than the Like. Owle, bigger than the Howlet, hauing two plumed ears standing vp aloft, whereupon he took that name Otis in Greck. But in Latine some haue called him Afio. This bird besides hath certain qualities by her self, & is skillful to counterfeit and make gestures like a flattering parasite: she can foot it, turn and trip, mount and capre, as if she were a professed dauncer: e as she is to be taken like as the Howlet, for whiles she is amused and looking wistly vpon one that goeth about her, another cometh behind and soon catcheth her. But to return to our Quails afore said, If a contrarie wind should chance to arise and begin to driue against them, and hinder their flight: to prevent this inconuenience, they be well prouided. For they flie well ballasted either with small weightie stones within their feet, or els with sand stuffed in their craw: the feed or grain of the white Elebore (a very poison) they loue passing wel, & it is their best meat.

D, But hereupon it is, that they are not serued vp as a dish to the table. Moreover, they are wont to some and slauer at the mouth, by reason of the falling sicknesse, vnto which they onely of all other creatures, but man againe, are subiect.

CHAP. XXIV.

Of Swallows, Oufles, or Arctes, Thrushes, Stares or Sterlings, Turkie, and Storkedones.

THE Swallows likewise (the birds alone of all those that haue not crooked claws, which feed vpon flesh) are gone from vs all Winter time. Howbeit, they depart not far off, but seeke only the Sun-shine noukes, betweene hills neere at hand, and follow the warmth. Where many times they are found naked, and without feathers altogether, as if they had moulted. It is said, that they wil neuer build their nests under any house in Thebes: because that city had bin many times forced and taken by the enemy. Neither in Bizia, a city of Thrace, by reason of the detestable parts practised by *Tartus* there. *Crimus* of Volaterra, a Gentleman of Rome by calling (gouernour and master of the coaches and coach-horses that vsed to runne for the prize and best game) was wont to bring with him into the city a number of these Swallows, which he had gotten in diuers places where he came, out of his friends houses wherein they were bred. And when the horses which hee had in charge obtained at any time victorie in the race, hee would take the birds, and paint them with that colour which betokened victorie, and so with that luerie (as it were) let them flie to his friends, for to carry tidings vnto them of the good successe which hee had obtained: knowing right well, that euery one would home to the same nest from whence they came. And thus in small space could hee enforme his conorts and well-willers of his good speed. Also *Fabius Pictor* reporteth in his Annals, That when a fort (which the Roman garrison held) was besieged by the Ligustines; there was a mee Swallow newly taken out of her nest within that fort, from her little ones as shee sat ouer them, and brought

* The Biffard
or Hote-owle

brought to him with this watchword, That by a linnen thred tied to her foot in stead of a letter, he should aduertise them within the fort, by so many knots tied in the said thred, as there would daies passe before aid could come from him vnto them, to the end that they also might be ready vpon that day to fallie forth.

Oufles, Throftles, Blackbirds, and Stares, after the same manner depart aside from vs, but go not far. Howbeit, these cast not their feathers, nor lie altogether hidden: but are seen oftentimes in places, from whence they fetch meat to serue them in the Winter. And therefore it is, that Blackbirds are common in Germany, and specially in Winter time.

The Turtle more properly and truly is said to hide her self, and to shed her plume & moult. Stockdoves likewise depart from vs, but whether they go no man knoweth.

As touching Sterlings, it is the property of the whole kind of them to flie by troupes, and in their flight to gather round into a ring or bal, whiles euery one of them hath a desire to be in the middest.

Of all birds, the Swallow alone flieth bias, and windeth in and out in his flight: he is most swift of wing, and flieth with ease; and therefore not so ready to be surpris'd and taken by other birds. To conclude, he neuer feedeth but flying, and doth no other bird besides.

CHAP. XXV.

¶ *What birds continue with vs all the yeare long: which be halfe yeares birds, and which be but for three moones.*

Great difference there is in the seasons and times of birds. Some abide the whole yeare, as house-doves: others halfe the yeare, as Swallows: and some again but a quarter, as blackbirds and Turtle-doves. And there be againe that are gone so soone as they haue hatched and trained their young abroad into the open aire. Such be the Hu-holes, and Houpees [or Lapwings as some thinke.]

CHAP. XXVI.

¶ *Strange stories of birds.*

Writers there be who affirme, That euery yeare certain birds come flying out of Ethiopia to Ilium, and there, about the tombe or sepulchre of Memnon, skirmish and fight a battell. For which cause men call them Memnonides. And Crenutius auoucheth vpon his owne knowledge, That euery fifth yere the same birds do the like in Aethiopia, euen before the roiall palace sometime of the said king Memnon.

Sensibly, the birds named Maleagrides, do fight a field in Boeotia. Now are these Meleagrides a kind of Turkey-cocks, and hens of Africk, hauing a bunch on their back, and bespotted with feathers of sundry colours. Of all strange birds, comming out of forreine parts, these are last receiued and admitted to serue the table, by reason of a certain harsh and vnpleasant strong taste that they haue. But it is the monument and tombe of Meleager which hath giuen them that name and credit which they haue.

CHAP. XXVII.

¶ *Of birds so named Selencides.*

The birds called Selencides, come to succour the inhabitants of the mountaine Casius, against the Locusts. For when they make great waste in their corne and other fruits, Jupiter at the instant prayers and supplications of the people, fendeth these fowls among them to destroy the said Locusts. But from whence they come, or whether they go againe, no man knoweth: for neuer are they seene but vpon this occasion, namely, when there is such need of their helpe.

CHAP. XXVIII.

¶ *Of the bird this.*

The Egyptians likewise haue recourse in their prayers & inuocations to their birds named Ibis, w^hat time as they be troubled and annoied with serpents comming among them: and

A in like case the Eleans seeke vnto their god *Myagros*, for to be rid of a multitude of flies which pester them so, that they breed a pestilence among them. But looke vpon what day they find that Idoll appeard and pacified by their sacrifice, all the flies die forth-with.

CHAP. XXIX.

¶ *What birds they be, which will not abide some places: also which be they that change colour and voice: and then of the Nightingale.*

But that which wee should haue said when wee wrote of the departure and going aside of birds: the Howlers also are reported to lie hidden some few daies. Moreouer, this is known for a truth, That in the Island Candy there be none at all of them: and in case that any one be thither brought, it will die there. A wonderful thing, that nature should make difference of birds and other creatures in that respect. But sure it is, she hath not brought forth all creatures in all places, but hath priuileiged this country more than that: & denied that to one which she hath giuen vnto another. And thus hath she dealt not onely by fruits of the earth, trees, and plants, but also by liuing creatures. That in some parts this or that should not grow or breed, is a thing commonly seen & known: but, that those things should die so soon as they are brought thither, is very strange & wonderfull. What should that be, which is so contrary vnto one kind and no more, as that it will not suffer it to liue? What enue is this of Nature, thus to blinder the breeding or life of any creature? or why should birds be restrained within any limits and bounds in the whole earth? And yet see! In all the Island of Rhodes a man shall not find one Airie of Eagles. In that tract of Italy beyond the Po, and neere vnto the Alpes, there is a lake which they call there Larius; the place about it is right pleasant and delectable, enriched with goodly trees that beare fruit, and faire fields for pasturage: and yet a man shall neuer see any Stork to come thither, no nor within 8 miles of it. And yet in the neighbor quarters of the

C insubrians neer adioyning, ye shall haue infinite and innumerable flocks and fighths of choughes and jack-dawes: the veriest theecues, nay the only theecues of all other birds, especially for siluer and gold, that it is a wonder to see what means they will make to steale and fitch it. Men say that in the territory of Tarentum there be no wood-pecks or tree-jobbers. It is but of late daies

D since that from the mountaine Apennine toward the city of Rome there haue been seen Pyanets with long tailes, partly coloured and flacked, whereupon they be called Varix: and yet such are not common, but very geare to be found. Their property is to be bald euery yeare, what time as men sow rapes or nauewes. The Partridges in the territory of Attica, flie not ouer into the marches of Boeotia. And there is not a bird within the compass of the sea Pontus, & namely, in the Island wherein Achilles was buried, that will passe beyond the temple consecrated vnto him. In the territory of Fidenæ neer to Rome, Storkes build no nests, neither shall a man find a yong Stork there. But into the parts about Volaterræ, there is not a yeare but one shall see a world of Stockdoves flying from beyond sea. At Rome ye shall not haue a fly or dog that will enter into the chappell of Hercules standing in the beast marker. In a word, I could alledge many such like examples, which of purpose I passe ouer, because I would not be tedious in my discourses: seeing that Theophrastus reports, how all the Doves, Peacocks, and Rauen, which are in Asia, haue been brought thither from other parts: like as all the Frogs in Cyrenaica, which do crie, whereas their owne be mute all.

As for singing birds, this is another strange and wondrous thing obserued in them. For at certain times of the yere they change their colour in feathers, and alter their voice in singing: and that in such sort, as of a suddaine a man would say they were other birds. A thing that happeneth not to the great fowles aboue-said, save only vnto Cranes: for they with age wax black. And to begin with the Merle or black-bird, which naturally is blacke, he turnes to be reddish. In Summer he singeth cleare and tunably, in winter he stuttreth and stammereth: but about the sun-fest in December he is mute and dumbe altogether. After they be once a yere old, I mean the cockes or males onely of that kinde, their bills turne to be white like yuorie. The Throftles or Mauiffes all Summer be painted about the necke with sundry colours, but in Winter they be all of a colour.

The Nightingale for fifteene daies and nights together, neuer giueth ouer but chaunterh continually, namely, at that time as the trees begin to put out their leaues thicke. And surely this

this bird is not to be set in the last place of those that deserve admiration: for is it not a wonder that so loud and cleare a voice should come from so little a body? Is it not as strange that she should hold her wind so long, and continue with it as she doth? Moreover, she alone in her song keepeth time and measure truly, she riseth and falleth in her note just with the rules of Musick and perfect harmony; for one while, in one entire breath she drawes out her tune at length treatable; another while she quavereth, and goeth away as fast in her running points; sometime she maketh stops and short cuts in her notes, another time she gathereth in her winde and singeth descant between the plain song: she fetcheth her breath againe, and then you shall haue her in her catches and diuisions: anon all on a sudden, before a man would thinke it, the drownerth her voice, that one can scarce heare her: now and then she seemeth to record to her selfe; and then she breaketh out to sing voluntarie. In sum, she varieth and altereth her voice to all keyes: one while, full of her larges, longs, briefs, semibriefs, and minims; another while in her crotchets, quauers, semiquauers, and double semiquauers: for at one time you shall heare her voice full of loud, another time as low; and anon it will and on high: thick and short when she list, drawe out at leisure againe when she is disposed; and then (if she be so pleased) shee riseth and mounteth vp aloft, as it were with a wind-organ. Thus she altereth from one to another, & sings all parts, the Treble, the Mean, and the Base. To conclude, there is not a pipe or instrument againe in the world (deuised with all the art and cunning of man so exquisitely as possibly might be) that can afford more musick than this pretty bird doth out of that little throat of hers. So as no doubt there was fore-signified most excellent and melodious musick, by an excellent preface of a nightingale which setteth vpon the mouth of *Stesichorus* the Poet, and there sung full sweetly: who afterwards proued to be one of the most rare and admirable musitians that euer was. And that no man should make a doubt that there is great Art and cunning herein, do but marke, how there is not one Nightingale but hath many notes and tunes. Again, all of them haue not the same, but every one a speciall kind of Musick by her selfe: say, they strue who can do best, and one laboreth to excell another in varietie of song and long continuance: yea, and euident it is, that they contend in good earnest with all their will and power: for oftentimes shee that hath the worse and is not able to hold out with another, dieth for it, and sooner giueth she vp her vitall breath, than giueth ouer her song. Ye shall haue the young Nightingales studie and meditate how to sing, by themselves; ye shall haue them listen attentiuely to the old birds when they sing, and to take out lessons as it were from them, whom they would seeme to imitate staffe by staffe. The schoher when she hath giuen good care vnto her mistresse, presently rehearseth what she hath heard; and both of them keep silence for a time in their turns. A man shall euidently perceiue when the young bird hath learned well, & when againe it must be taught how to correct and amend wherein it did amisse; yea, and how the teacher will seeme to reprove and finde a fault; no maruell therefore if one of these Nightingales carrie the price (in the market) of a bond-slave; yea and a higher too, than a man might in old time haue bought a good page & harnesse-bearer. I my selfe haue knowne one of them (many it was white, which was a rare thing and not commonly seene) to haue bin sold for 6000 Sesterces, for to be giuen as a Present vnto the Emperesse *Agrippina*, wife of *Claudius Caesar* late Emperor of Rome. And now of late we haue known many of them taught to begin to sing, only when a man would haue them: and keep their responses in course after others, in good consent and harmony. As also there haue bin found men, who by a deuise of a reed or cane had out of the water, put croffe ouerthwart their mouth, and by putting their tongue into an hole made of purpose in it, and blowing withal, could counterfeit the Nightingale so perfectly, that one might not discern and distinguish the one from the other. Well, these little Nightingales, so great chanters as they be, so cunning and full of their conceits, after 15 daies begin to abate and slack their musick; yet so, as a man cannot say, they were either wearie, or satisfied with singing: for soone after, when the weather groweth hotter, their voice is cleane altered: for neither are they musickall and tuneable in their measures with varietie as before, but only sing plain song and keep them to one tune. And more than so, they change their colour in processe of time: and last of all, when winter comes, be no more seene. Tongued they are not like other birds, with a thin tip before. They begin to breed with the first in the prime of the Spring, and commonly lay six eggs.

The Gnat-snapper, *Ficedula*, a bird somewhat like vnto the Nightingale, doth otherwise: for at one time it changeth both colour, form, and song. They haue not that name *Ficedula* properly

perly but in the Autumne, as one would say, fig-feeders: for when that season is once past, they be called *Melanocoryphi*, i. Black-heads.

In like sort, the bird which is named *Erithacus* (i. Robin, or Redbreast) in winter; the same is *Phoenicurus* (i. Red-taile) all summer long.

The Houpe or Vpupa (as *Aeschylus* the Poet saith) changeth also her hew, voice, and shape. This is a * nasty and filthy bird otherwise, both in the manner of feeding, and also in nestling: but a goodly faire creft or comb it hath, that will easily fold and be plaited: for one while shee will draw it in, another while set it thiffe vpriht along the head.

As for the bird *Oenanthe*, it also for certain daies lieth close and vnseen; & namely, when the Dog-star ariseth, it is hidden: but after the occultation thereof, commeth abroad & sheweth her selfe a strange thing, that in those daies it should do both. Last of all, the * *Vitwall* or *Larior*, which is all ouer yellow, being not seen all winter time, appeareth about the Sun-steads.

CHAP. XXX.

¶ Of the Merles.

About *Cyllene* in *Arcadia*, and nowhere els, ye shall find white Merles or Oufles. And *Ibis*, about *Pelusium* only in *Egypt*, is blacke; in all places else of *Egypt*, white.

CHAP. XXXI.

¶ The kind of birds breeding and hatching.

All singing birds, save only those that are excepted before, lightly breed not nor lay their eggs before the spring *Aequinoctiall* in mid-March, or after the Autumnnall, in mid-September. And those that they hatch before the Summer Sunstead (i. Mid-June) hardly come to any perfection: but after that time, they do well enough and liue.

CHAP. XXXII.

¶ Of the Halcyones, or Kings-fishers: and the daies good for nauigation which they shew. Of the Sea-gulls and Cormorants.

And in this regard especially, namely for breeding after the summer Sunstead, the Halcyones are of great name and much marked. The very seas, and they that saile thereupon, know well when they sit and breed. This very bird so notable, is little bigger than a Sparrow: for the more part of her pennage, blew, intermingled yet among with white and purple feathers, hauing a thin smal neck and long withall. There is a second kind of them breeding about the sea side, differing both in quantitie and also in voice; for it singeth not as the former doe which are lesser; for they haunt riuers, & sing among the flags & reeds. It is a very great chance to see one of these Halcyones, & neuer are they seen but about the setting of the star *Virgilis*, [i. the Brood-hen:] or els neere Mid-summer or Mid-winter: for otherwhiles they will flie about a ship, but soone are they gone againe and hidden. They lay and sit about Mid-winter when daies be shortest: & the time whiles they are broody, is called the Halcyon daies: for during that season, the sea is calme and nauigable, especially in the coast of *Sicilie*. In other ports also the sea is not so boisterous, but more quiet than at other times: but surely the *Sicilian* sea is very gentle, both in the Streights and also in the open Ocean. Now about seuen daies before Mid-winter, that is to say, in the beginning of December, they build; and within as many after they haue hatched. Their nests are wonderously made, in fashion of a round ball: the mouth or entrie thereof standeth fomewhat out, and is very narrow, much like vnto great punges. A man cannot cut and pierce their nest, with sword or hatchet; but breaketh it with some strong knock, like as the dry some of the sea: and no man could euer find of what they be made. Some thinke they are framed of the sharpe pointed prickles of some fishes, for of fish these birds liue.

They come vp also into fresh riuers within land: and there do lay ordinarily five eggs.

As touching the Gulls or Sea-cobs, they build in rocks: and the Cormorants both in them, and also in trees. They usually lay foure eggs apiece. The Gulls in summer time, but the Cormorants in the beginning of the spring.

CHAP.

¶ *The industrie and wit of birds in building their nests. Of the Swallow, the Argatilis, Cinnamologi, and Partridges.*

THe Architeſture and building of the Halcyones neſt, hath put me in mind of other birds dexteritie in that behalfe: and ſurely in no one thing is the wit of ſilly birds more admirable. The ſwallows frame their neſts of clay & earth, but they ſtrengthen and make them ſaſt with ſtraw. In fallowes at any time they cannot meet with ſoft and tough clay, for want thereof they drench and wet their feathers with good ſtore of water, and then beſtrew them ouer with duſt. Now when they haue made and trimmed their bare neſt, they floore it in the bottom within, and dreſſe it all ouer with downe feathers or fine ſtow, as well to keep their eggs warm, as alſo that their yong birds ſhould lie ſoft. In feeding of their little ones, they keepe a very good order and euen hand, giuing them their pittance and allowance by courſe one after another. Notable is their care in keeping them neat and cleane; for euer as they meut, they turne the excrements out of the neſt: but be they once growne to any ſtrength and bigneſſe, they teach them to turne about and lay their tails without.

Another kinde there is of Swallows, that keep in the country villages and the fields, which ſeldom neſtle vnder mens houſes: and they likewiſe build of the ſame matter as the former do, namely, of clay and ſtraw, but after another faſhion: for their neſts are made turning all vpward, with the hole or mouth that leadeth vnto it, ſtretched out in length ſtraight and narrow, but the capacitie within is very large, in ſuch ſort, as it is a wonder to ſee how proudent & ſkilful they ſhould be to frame them in this manner, ſo handſome & conuenient to couer their yong ones; ſo ſoft again for their couch and bed. In the mouth of Nilus neere Heraclea in Ægypt, there is a mightie banke or cauſey raiſed only of a continual ranke and courſe of Swallows neſts, piled one vpon and by another thicke, for the length almoſt of halfe a quarter of a mile; which is ſo firme and ſtrong, that being oppoſed againſt the inundations of Nilus, it is able to breake the force of that riuer when it ſwelleth, and is it ſelfe inexpugnable: a piece of work that no man is able to turne his hand vnto. In the ſame Ægypt neere vnto the towne Coptos, there is an Iſland conſecrated vnto the goddeſſe *Iſis*, which euery yere theſe Swallows do rampier and fortiſe, for feare leſt the ſame Nilus ſhould eat the banks thereof and break ouer into it. In the beginning of the Spring, for three nights together, they bring to the cape of that Iſland, ſtraw, chaffe, and ſuch like ſtuffe, to ſtrengthen the front thereof and for the time, they ply their buſineſſe ſo hard, that for certaine it is knowne, many of them haue died with taking ſuch paines and moiling about this worke. And verily euery yere they go as daily to this taſke againe, as the Spring is ſure to come about; and they faile not, no more than ſouldiers that by vertue of their militarie oath and obligation, go forth to ſeruiſe and warfare.

A third fort there is of theſe Swallows and Martins, which hollow the banks of riuers, and ſo neſtle within between. The yong birds of theſe Martins, if they be burnt into aſhes, are a ſingular and ſoueraine remedy for the deadly ſquinnacy, and helpe many other diſeaſes of mans body. Theſe build not at all, but if they perceiue that the riuer Nilus when it ſwelleth, will riſe as high as their holes, they are gone many daies before.

There be certaine birds of the kind of Parra, which of drie moſſe make a neſt, reſembling ſo perfectly a round ball, that vnneſs hardly a man can ſee which way they ſhould goe in. And another there is called Argatilis, which contriueſh her neſt after the ſame forme, but it is of hurds and flaxe.

There is a kind of Woodpecker, maketh a neſt in manner of a cup or goblet, and hangeth it at a twig vpon the vppermoſt boughs and branches of a tree, that no foure footed beaſt ſhould reach it. And as for the birds called Gulguli, men ſay for a truth, that they take their ſleep hanging all by their legges to ſome branch, thinking by that means they are in more ſafety. True it is indeed and commonly known, that all theſe birds in great forecaſt & prouidence, chuſe ſome croſſe boughs in ſtead of rafters, to ſupport and beare vp their neſts; and then to ſaue them from the raine, either vault them ouer with an arched rooſe, or elſe couer them cloſe and thicke with leaues.

A bird there is in Arabia called Cinnamologus, which with the twigs and branches of the Cinnamon

A Cinnamon tree buildeth her neſt. The inhabitants of that country being ware thereof, ſhake the ſame downe by ſhooting arrowes headed with lead, for to make a commoditie thereby. In Scythia, there is a bird of the bigneſſe of an Otis, which commonly laith two eggs, and when they are lapped within a hares ſkin, alwaies hangeth them vpon the top of tree boughs. The Pyanets, when they perceiue (by a watching eie that they haue) that a man hath ſpied their neſt, preſently build in another place, and remove their eggs thither. Now for thoſe birds which haue no hooked nailes, how they ſhould tranſlate their eggs from one place to another, conſidering their feet are not made to claſpe them, it is a wonderfull thing, and reported after a ſtrange manner, for they lay a ſtick ouer two eggs, and ſouder it faſt to them with a certain viſcoſitie which commeth forth of their own guts when they meut: which done, they put their neckes vnder the ſticke between both eggs, which hanging equally poieſed of either ſide, they carry eaſily whither they would.

No leſſe induſtrious are they that make their neſts in the ground, as being not able to fly into the aire by reaſon of their weightie bodies. Among which there is one called Merops, that vſeth to feed her parents, lying hidden within the earth. The inſide of her feathers in the wing is pale, the outſide blew; and yet thoſe above about their neck, are ſomewhat red. She makes her neſt in an hole ſix foot deep within the ground. Again, the Partridges do ſo fortiſe and impale their neſts with thornes and twigs of ſhrubs and buſhes, that they be ſufficiently fenced againſt the inuaſion of wilde beaſts. They couer their eggs with a ſoft carpet or hilling as it were of fine duſt: neither do they ſit where they laid them firſt, nor yet in a place which they ſuſpect to be much frequented with reſort of paſſengers, but conuey them to ſome other place. The hennes verily of this kind, hide themſelues from their males the cocks; for ſo lecherous they be and giuen to intemperate luſt, that they would ſquaſh their eggs, becauſe they ſhould not be amuled and occupied about ſitting. Then, for want of the females, the males go together by the eies: and (as they ſay) he that is ouercome, ſuffereth himſelfe to be troden like an hen. *Trogon* verily reporteth the very ſame of the Quails, yea, and of doughtill cocks otherwhiles. He ſaith moreover, that tame Partridges vſe to tread the wild: alſo that thoſe which are new taken or beaten, be troden of others indifferently one with another. This libidinous heat of theirs is ſuch, and maketh them ſo quarrellſome, that oftentimes they are taken by that meanes. For when the Foulers commeth with his pipe or call (reſembling the female) to allure and traine them forth, out goeth the captain of the whole flocke directly againſt him: and when he is caught, another ſolloweth after, and ſo the reſt one after another, one by one. In like manner, they vſe to take the females, at what time as they ſeeke the male to tread them: for then, forth they goe againſt the foulers chantedell or watch which calleth them out, that with their quarrelling and brawling which they make, they might chace and driue it away. In ſum, there is not to be found in any other liuing creature, the like againe for luſt and leacherie in the ſaid of generation. If the hen do but ſtand directly ouer againſt the cocks, the very wind and aire that paſſeth from them, cauſe them to conceiue as well as if they were troden. For ſo hot they be in that ſeaſon, that they gape again for aire, and hang the tongue out of their heads. And if the males do but ſtic ouer them, with the very breath and aire that commeth from them, they will be ready to conceiue: yea and many times, if they do but heare their call. And that which more is, ſo lecherous they are, that ſetting aſide their naturall affection and loue to their yong couie, when they are broody (and in which regard they ſteale from the cocke, and ſit apart in ſome ſecret and blind corner) yet if they heare once the Foulers chantedell comming toward the male, and that he doth call, preſently they will leaue the neſt and ſuffer the eggs to chile, and for very iealouſie cry again and call backe the males, and offer themſelues to be troden, for feare they would goe to others. Nay more than that, their fury and rage that way many times is ſuch, that otherwhiles in this blind fit and fearfull luſt, not knowing where they are nor what they do, they will light and ſettle vpon the very head of the fouler. Alſo, if he chance to approach the neſt of the brood hen, ſhe will run forth and be about his feet, ſhe wil counterfeit that ſhe is very heauy and cannot ſearſe go, that ſhe is weak and enfeebliſhed: and either in her running, or ſhort flight that ſhe taketh, ſhe wil catch a fall, and make ſemblance as if ſhe had broken a leg or a wing: then will the run out againe another way, and when he is ready to take her vp, yet will the ſhift away and eſcape, and ſo put him beſides his hope. And all this doth ſhe to amuſe the Foulers after her, vntill ſhe haue trained him a contrary way from the couey. Now by that time that ſhe is paſt that

feare, and freed of the motherly care the hen yong ones, then will they get into the furrow of some land, lie along on her back, catch a clot of earth vp with her feet, and therewith hide her whole body, and so saue both her selfe and her coney. To conclude, Partridges (by report) liue 16 yerres.

CHAP. XXXIV.

¶ Of House-doues.

NExt after Partridges, the nature of Doues would be considered, since that they haue in a manner the same qualities in that respect: howbeit, they be passing chaste, and neither male nor female change their mate, but keep together one true vnto the other. They liue (I say) as coupled by the bond of mariage: neuer play they false one by the other, but keep home still, and neuer visit the holes of others. They abandon not their owne nests, vnlesse they bee in state of single life or widowhead by the death of their fellow. The females are very meek and patient; they will indure and abide their emperious males, notwithstanding otherwhiles they be very churlish vnto them, offering them wrong and hard measure, so jealous be they of the hens, and suspicious, though without any cause and occasion giuen: for passing chaste and continent by nature they are. Then shall ye heare the cocks grumble in the throat, quarrell and complain, and all to rate the hens: then shall ye see them peck and job at them cruelly with their beakes, and yet soone after, by way of satisfaction, and to make amends again for their curst vface, they will fall to billing and kissing them lovingly, they will make court vnto them and wooe them kindly, they will turne round about many times together by way of flatterie, and as it were by praies seeke vnto them for their loue. As well the male as the female be careful of their yong pigeons, and loue them alike; nay ye shall haue the cocke oftentimes to rebuke, yea chastise the hen, if she keep not the nest well; for hauing bin abroad, for comming no sooner home againe to her yong. And yet, kind they be to them, when they are about to build, lay, and sit. A man shall see how ready they be, to helpe, to comfort and minister vnto them in this case. So soon as the eggs be hatched, ye shall see them at the very first, spit into the mouths of the yong pigeons salt brackish earth, which they haue gathered in their throat, thereby to prepare their appetite to meat, and to season their stomacks against the time that they should eat. Doues and Turtles haue this property, in their drinking not to hold vp their bills between whiles, and draw their necks backe, but to take a large draught at once, as horses and kine do.

CHAP. XXXV.

¶ Of Stockedoues.

Some authors we haue, who affirme that Stockdoues liue ordinarily 30 yerres, and some vnstill they be 40 yerres old. In which time they find no infirmities nor discommodity at all but only this, That their clawes be ouergrowne, which is a signe of their age: howbeit they may be pared without danger. They haue all of them one and the same manner of tune in their singing, and commonly they make three rests in their song, besides the fa-burden in the end, which is a kind of grone. All winter they be silent in spring they are loud enough, & the woods resound with them. *Nigidius* is of opinion, that if a man call vnto a Stockdove within-houfe as she is sitting vpon her eggs, she will leaue her nest, and come at the call. They doe lay after Midsummer. These doues and Turtles liue eight yerres.

CHAP. XXXVI.

¶ Of Sparrowes.

Contrariwise, the Sparrow is but short liued, howbeit as lecherous as the best. The cocke Sparrow (by report) liueth but one yeare; the reason why men so thinke, is, because in the spring there is not one of them found with a blacke bill, and yet in summer before, it began to be blacke. The hens liue somewhat longer. But to come againe to Doues, it is generally held, that they haue a certaine sense and feeling of glory: and a man would verily thinke, that they haue a knowledge of their gay feathers, and how they are changeably coloured as a man looketh

A looketh vpon them & as they stand. Moreover, they seem to take a pride in their flying, whiles they keep a clapping of their wings and cutting of the aire euery way, as if they had a pleasure to be flying abroad. In which brauerie of theirs, whiles they flap with their wings and keepe a glorious noise (which cannot be without the beating of their very pinions together) they are exposed to the Faulcon and other hawks, as prisoners fast bound and tied: for otherwise if they would flie at liberty and ease, without keeping such ado with their clapping, they were much more swift of wing, than the very hawks that prey vpon them. But the hawks like a very theefe lieth hidden among the boughes and branches of trees, marketh the Dove how he fetcheth his flight and taketh his pleasure in the aire; and when he seeth his time (in all this glory of his and the mids of his brauerie) seizeth vpon him and carrieth him away.

CHAP. XXXVII.

¶ Of the Kestrell.

TO prevent this danger therefore, the Doues need to haue with them the bird which is called Tinnunculus, a Kestrell, or Stannell: for the defendeth them, and (by a certaine natural power that she hath) skareth and terrifieth all other haukes in so much, as they cannot abide either to see her, or to heare her cry. Wherevpon Doues aboute all others, loue these birds. And (as men say) pigeons will not leaue their owne douecote to flie to another, if in the four corners thereof there be entered foure Kestrells aboue said, in foure new earthen pots well nested, and neuer used before. But others haue vsed means to keep pigeons in their doucote, (for otherwise they be birds that loue to be ranging and wandering abroad) namely, by flitting, and cutting the joints of their wings with some thin sharp peece of gold: for if you do not so, their wounds will fester and be dangerous. And in very truth, these birds be soon seduced and trained away from their owne homes: and they haue a craft with them to flatter and entise one another: they take a great delight to inueigle others, and to steale away some pigeons from their owne flocks, and euermore to come home better accompanied than they went forth. Moreover, Doues haue serued for posts and couriers between, and bin imploied in great affairs, and namely, at the siege of Modenna, *Decimus Brutus* sent out of the town letters, tied to their feet, as far as to the camp where the Consuls lay, and thereby acquainted them with newes, and in what estate they were within. What good then did the rampier and trench, which *Caesar* cast before the towne? To what purpose serued the streight siege, the narrow watch and ward that he kept? wherefore serued the riuier Po betwene, where all passages are, stopped vp as it were with net and toile, so long as *Brutus* had his posts to flie in the aire ouer all their heads? To be short, many men are growne now to cast a speciall affection and loue to these birds: they build Turrets about the tops of their houses for doue-coats. Nay they are come to this passe, that they can reckon vp their pedigree and race, yea they can tel the very places from whence this or that pigeon first came. And indeede one old example they follow of *L. Axius* a Gentleman of the time of Rome, who before the ciuill war with *Pompey*, sold euery paire of pigeons for 1400 denizes, as *M. Varro* doth report. True it is, that there goeth a great name of certaine countries where some of these pigeons are bred: for Campanie is voyced to yeld the greatest and fairest bodied of all other places. To conclude, their manner of flying induceth and traineth me, so thinke and write of the flight of other fowles.

CHAP. XXXVIII.

¶ Of the gate and flight of birds.

ALl other liuing creatures haue one certaine manner of marching and going, according to their severall kind, vnto which they keep and alter not. Birds only vary their course, whether they go vpon the ground or flie in the aire. Some walke their stations, as Crows and Choughs; others lop and skip, as Sparrows and Oufels: some run, as Partridges, Woodcocks, and Snites; others againe cast out their feet before them, stalk and jet as they go, as Storks and cranes: now for flying, some spread their wings abroad, stirring or shaking them but now & then, hanging

hanging and houching with them all the while [as Kites:] others again ply them as fast; but the ends only of their wings, or the utmost feathers are seen to moue [as the Chaffinch:] Yee shall haue some birds to stretch out their whole wings & sides, mouing them as they flie [as Ravens] and others a man shall see in their flight to keep them in, for the most part close [as the Woodpeckers:] Some of them are known to giue one or two claps with their wings at first, and then glide smoothly away, as if they were carried and borne vp with the aire [as Linnetts:] and others are seen (as if they kept still the aire within their wings) to shoot vp aloft & mount on high, to flie straight forward, & to fall down again flat [as Swallows:] Yee would think and say that some were hurled out of a mans hand with violence [as the Partridge:] and others again to fall down plumb from on high [as Larks,] or els to leap & jump [as the Quails,] Ducks, Mallards, and such like, spring presently from the ground vp aloft, and suddenly mount vp into the skie, euen out of the very water: which is the cause, that if any chance to fall into those pits wherein wee take wild beastes, they alone will make good shift to get forth and escape. The Geirs or Vulturs, and for the most part all weightie and heauy foules, cannot take their flight & flie, vnlesse they fetch their run and biere before, or els rise from some steepe place with the vantage. And such are directed in the aire by their tails. Some looke about them euery way, others bend and turne their necks in flying: and some fly with their prey within their talons, & eat it as they fly. Most birds cry and sing as they flie, yet some there be contrariwise, that in their flight are euer silent. In one word, some flying carry their brefts and bellies halfe vpright: others again beare them as much downward. Some flie side-long and bias: others directly forward, and follow their bills: and last of all there be that bend backward as they flie, or els bolt vpright. In such sort, that if a man saw them all together, he would take them not to be one kind of creature, so diuers & different are they in their motions.

CHAP. XXXIX.

¶ Of Martinets.

Martinets, which the Greeks call *Apodes* (because they haue little or none of their feet) and others, *Cypseli*, are very good of wing and flie most of all others without rest. And in very truth, a kind of Swallows they be. They build in rocks & stony cliffes. And these be they and no other, that are seen euermore in the sea: for be the ships neuer so remote from the land, saile they neuer so fast and far off, ye shall haue these Martinets alwaies flying about them. All kinds els of Swallows and other birds, do sometime light, fettle, and perch: these neuer rest, but when they be in their nest. For either they seem to hang, or els lie along: and a number of shifts and deuises by themselves they haue besides, and namely when they feed.

CHAP. XL.

¶ Of the bird *Caprimulgus*, and the *Shoualar*.

The *Caprimulgi* (so called of milking goats) are like the bigger kind of Owls. They be night-theues; for all the day long they see not. Their manner is to come into the sheeps-heads coats and goat-pens, and to the goats vdders presently they go, and suck the milke at their teats. And looke what vdder is so milked, it giueth no more milke, but misliketh and fallesth away afterwards, and the goats become blind withall.

There be other birds named *Plateri*, *i. Shoualars*. Their manner is to flie at those foule thar vse to diue vnder the water for fish: and so long will they peck and bite them by the heads, vntil they leg go their hold of the fish they haue gotten, and so they wring it perforce from them. This bird when his belly is full of shell fishes that he hath greedily deuour red, and hath by the naturall heat of his craw and gorge in some sort concocted them, casteth vp all vp again: and at leasure picketh out the meat, and eateth it again, leauing the shells behind.

CHAP. XLI.

¶ The naturall wit of some birds.

The Hens of country houses haue a certaine ceremonious religion. When they haue laied an egge, they fall a trembling & quaking, and all to shake themselves. They turne about also

A also, as in procession, to be purified, & with some festiue or such like thing, they keep a ceremonie of hallowing, as well themselves as their eggs.

CHAP. XLII.

¶ Of the *Linnet*, *Poppinjay* or *Parrat*, and other birds that can speake.

The Linnetts be in manner the least birds of all others: howbeit they be very docible. Doe they will whatsoeuer they are taught & bidden, not only in their voice, but also with their feet and bills, as if they were hands. In the territorie about *Arelate*, there is a bird called *Taurus* (because it loweth like a bull or cow, for otherwise a small bird it is.) There is another also named *Anthus*, which likewise resembleth the neighing of horses: and if haply by the approach of horses they be driuen from their graffe wherof they feed, they will seem to neigh; and flying vnto them, chase them away, and so be reuenged of them again. But aboute all other birds of the aire, the *Parrats* passe, for counterfeiting a mans voice: in somuch, as they will seeme to parle and prate our very speech. This foule cometh out of the Indies, where they call it *Sittace*. It is all the body ouer Greene, onely it hath a collar about the necke of vermilion red, different from the rest of her feathers. The *Parrat* can skill to salute Emperors, and bid good morrow: yea, and to pronounce what words she heareth. She loueth wine well, and when she hath drunk freely, is very pleasant, plaifull, and wanton. She hath an head as hard as is her beak: when she learns to speake, she must be beaten about the head with a rod of yron: for otherwise she careth for no blowes. When she taketh her flight down from any place, she lighteth vpon her bill, and resteth thereupon, and by that means fauoreth her feet, which by nature are but weake and feeble, and so carrieth her owne weight more lightly.

There is a certain *Pie*, of nothing so great reckoning and account as the *Parrat*, because shee is not far fer, but here-by neere at hand: howbeit, she pronounces that which is taught her more plainly and distinctly than the other. These take a loue to the words that they speak: for they not only learn them as a lesson, but they learn them with a delight and pleasure. In somuch that a man shall find them studying thereupon, and conning the said lesson: and by their careful thinking vpon that which they learn, they heare plainly how mindfull and intenciuie they be thereto. It is for certain knowne that they haue died for very anger and griefe that they could not learn to pronounce some hard words: as also, vnlesse they heare the same words repeated often vnto them, their memory is so shittie, they will soone forget the same againe. If they misse a word, and haue lost it, they will seeke to call it againe to remembrance; and if they fortune to heare the same word in the mean time, they will wonderfully ioy thereat. As for their beaurtie, it is not ordinary, although it be not very louely. But surely amiable enough they are in this, that they can so well resemble mans speech. It is said, that none of their kinde are good to bee made scholars, but such only as feed vpon mast: and among them, those that haue five toes to their feet. But euen these also are not fit for that purpose, after the first two yeares of their age. And their tongue is broader than ordinarie: like as they be all that counterfeits mans voice, each one in their kind; although it be in manner general to all birds whatsoeuer to be broad tongued. *Agrippina* the Emperesse, wife to *Claudius Cesar*, had a Black-bird or a Throstle, at what time as I compiled this booke, which could counterfeits mans speech: a thing neuer seen nor knowne before. The two *Cesars* also, the yong princes (to wit, *Germanicus* & *Drusus*) had one *Stare*, & sundry Nightingales, taught to parle Greeke and Latine. Moreover, they would studie vpon their lessons, and meditate all day long: and from day to day come out with new words still, yea, and were able to continue a long speech & discourse. Now for to teach them the better, these birds must be in a secret place apart by themselves, where they can heare no other voice: and one is to fit ouer them, who must repeat often that which he would haue them to learn; yea, and please them also with giuing them such meat as they best loue.

CHAP. XLIII.

¶ The vnderstanding and wit that Ravens haue.

Let vs not defraud the Ravens also of their due praise in this behalfe, considering, that the whole people of Rome hath testified the same not only by taking knowledge, but also by a publick reuenge & exemplarie punishment. And thus stood the case. In the daies of *Tiberius*

berius the emperor, there was a yong Rauē hatched in a nest vpon the church of *Castor & Pollux*, which, to make a triall how he could flie, took his first flight into a shoemakers shop just ouer-against the said church. The master of the shop was well enough content to receive this bird, as commended to him from so sacred a place, and in that regard set great store by it. This Rauē in short time being acquainted to mans speech, began to speak, & euery morning would fly vp to the top of the Rostra or publick pulpit for Orations, where, turning to the open Forum & market place, he would salute and bid good morrow to *Tiberius Caesar*, and after him, to *Germanicus* and *Drusus* the yong princes, both *Caesars*, euery one by their names: and anon the people of Rome alfo that passed by. And when he had so don, afterwards would flie again to the shoemakers shop afore said. This duty practised, yea and continued for many yeres together, to the great wonder and admiration of all men. Now it fell out so, that another shoemaker who had taken the next conuiners shop vnto him, either vpon a malicious enuie that he occupied so neer him, or some sudden spleene and passion of scholer (as he would seeme to plead for his excuse) for that the Rauē chanced to meut a little, and set some spot vpon a paire of his shooes, killed the said Rauē. Whereat the people tooke such indignation, that they rising in an vpror, first droue him out of that street, and made that quarter of the city too hot for him: and not long after murdered him for it. But contrariwise the carcasse of the dead Rauē was solemnly entered, and the funerals performed with all ceremoniall obsequies that could be deuised. For the corps of this bird was bestowed in a coffin, couch or bed, and the same bedecked with chaplets and garlands of fresh floures of all sorts, carried vpon the shoulers of two blacke-Mores, with minstrels before, founding the Haut-boies, and playing on the Fife, as far as to the Funeral fire, which was piled and made in the right hand of the caufey Appia, two miles without the city in a certain plain or open field called Rediculi. So highly reputed the people of Rome that ready wit and apt disposition in a bird, as they thought it a sufficient cause to ordaine a sumptuous buriall therefore, yea, and to reuenge the death thereof, by murdering a citizen of Rome in that city, wherein many a braue man and noble person died, and no man euer solemnized their funerals: in that city I say which afforded nor one man to reuenge the vnworthy death of that renowned *Scipio Amylianus*, after he had woon both Carthage and Numantia. This happened the fifth day before the Calends of Aprill, in the yere when *M. Seruilius*, and *C. Cestius* were Consuls of Rome. Moreouer, euen at this very present, when I wrote this historie, I saw my selfe a Crow belonging to a certain knight of Rome, who brought him out of the realm of Grenado in Spaine, which was a very strange and admirable bird, not only for the exceeding blacke colour of his feathers, but also for that he could pronounce and expresse so perfectly many words and sentences together, and learned still new lessons euery day more than other. It is not long since that there went a great bruit and fame of a notable hunter in Erizena a cuntry of Asia, whose name was *Craterus Monoceros*: that vsed to hunt by the meanes and helpe of Rauens. His manner was to carry with him these Rauchs into the Forrest, perching vpon his shoulers & his hunting homes: and these would seeke out and put vp other wilde ones, and bring them to him. Thus by custom & vse he brought his hunting to this good passe, that when he returned homeward out of the forest, the wild as well as the tame would accompany him. Some haue thought it worth the setting downe vpon record, how there was a Rauē scene in time of great drought when water was hard to come by, for to cast stones into the bucket belonging to a sepulchre, wherein there was some rain water remaining toward the bottome, but so deepe, that he could not reach vnto it: and being afraid to go downe into it, by heaping vp many stones, hee brought the water to rise so high, as he might drinke sufficient with ease.

CHAP. XLIV.

¶ Of *Diomedes* his birds.

Neither will I ouerpasse the birds called *Diomedes*, which *K. Iuba* nameth *Cataractæ*. Toothed they are, as he saith: and they haue eyes as red and bright as the fire: otherwise their feathers be all white. Who also affirms, that they euermore haue two captains, the one for to lead the vaward, and the other for the rereguard. With their bills they dig little trenches & gutters in the ground: ouer which from side to side they lay sticks, acrosse like hurdles, arti-

Artificially, and then couer the same ouer with the earth they cast forth before, vnder which they breed. Euery of these trenches hath two doores, the one regarding the East, at which they go forth to their meat: and the other looking toward the West, by which they come in againe after their returne. Whensoever these birds would meut, they flie euer full into the winde, because they would not file themselves. Found they be in one place of the world, and but in one; namely in a certaine Island, innobled, as we haue written before, for the tombe and Temple of *Diomedes*, and it lieth vpon the coast of Apulia. These birds are like vnto the white sea Mewes with a blacke cop. Their manner is to cry with open mouth vncessantly at any strangers that come a land, saue only Grecians, vpon whom they will seem to fawn and make signes of loue and amitie in all flattering wise. A wonderfull thing that they should discerne one from another, and giue such friendly welcome to them, as descended from the race of *Diomedes*. Their manner is euery day to charge their throat and wings full of water, and all to drench therewith the said temple of *Diomedes*, in token of purification. Whereupon arose the fable, That the companions of *Diomedes* were turned into these birds.

CHAP. XLV.

¶ What Birds are not apt to learne, and will not be taught.

And now that we are in this discourse of wit and capacitie, I must not omit to note, That of birds the Swallow; and of land beasts the Mouſe and the Rat, are very vntoward, and cannot be brought to learn. Whereas we see great Elephants ready to do whateuer they are commanded: the furious Lions brought to draw vnder the yoke: the Seals within the sea, and so many sorts of fishes grow to be tame and gentle.

CHAP. XLVI.

¶ The manner of Birds in their drinking.

Birds drinke sucking, and those that haue long necks make stayes betweene, and euery while hold vp their bil from the water, as if they would poure the water down their throat. The bird *Porphyrio* alone seems to bite the water as he drinketh. And this bird hath this pertie by himselfe, to dip and wet all his meat euer and anon in water, and then with his foot in lieu of an hand to reach it vnto his bil. The best of this kind are in Comagene. Their bills and long thanks that they haue be red.

CHAP. XLVII.

¶ Of the Foule *Himantipus*, the *Onocrotali*, and other strange fowles.

Like in that respect vnto the *Porphyrio*, is the *Himantipus*, a bird far lesse in body, but full as long legged, and talking as high. They are bred in Ægypt, and go vpon three toes to a foot. Their most feeding is vpon flies. In Italy they liue not many daies. All great & heauie birds liue on seeds and corn: they that fly on high prey vpon fesh. Among water fowls the *Cormorants* vse to deuoure that which other birds either disgorge or meute. The *Onocrotali* much resemble swans, and surely they might be thought the very same and no other, but that they haue within their throat another kind of gizzar besides their craw, in which, these fowles being vnſatiable, bestow all that euer they can get; whereby it is of a wonderfull great capacitie, and will receiue very much. Now when they haue done the rauening, and filled this poke, soon after they conuey it from thence by little and little into their mouth, and there chew the cud, vntill after it be well prepared, they swallow it downe into the very craw and belly indeed. These fowles are to be found in the parts of Picardie and Normandy in France, lying vpon the North Ocean. In *Hircinia*, a Forrest of Germanie, we haue heard that there be strange kinds of birds, with feathers shining like fire in the night season. In other respects I haue nothing to say of them worth the writing, saue only they are of some name for being far fetched.

CHAP.

CHAP. XLVIII.

¶ The names and natures of many Birds.

OF water fowls, the Phalcrides are thought in Seleucia of the Parthians, and also in Asia, to be the daintiest. Likewise the Fesant hens of Colchis, which have two ears as it were consisting of feathers, which they will set up and lay down as they list. The Ginnie or Turkey hens in a part of Africke called Numidia, be in great request, as also throughout all Italy now adaies. *Apicius*, the most riotous glutton and belly-god of his time, taught men first, that the tongue of Phœnicopteris was a most sweet and delicate piece of meat. The Moore-hen of Ionia is much commended and highly esteemed. This bird so soon as she is taken prisoner, loseth her voice and is mute; for otherwise she is vocal and loud enough, and in old time was reputed a rare and singular bird. But now there be caught of them in Fraunce and Spain, yea and among the Alps: where also the Plungcons or bald Rauens be, which heretofore were thought proper and peculiar to the Baleare Islands: like as the Pyrrhocorax [i.e. the red Rauen] with the yellow bill, was supposed to breed only among the Alps: and with it the *Lagopus*, a daintie bird, and most pleasant in the dish. And this name it took in Greek, because it is rough footed and haired like the haire foot: otherwise all over white, and as big as a pigeon. Haue her out of the ground, vnder which the breedeth, you shall hardly get her to feed, neither will shee be made tame, like the neuer so long: kill her once, the body presently will rot and putrifie. There is another besides of that name, and differeth from Quails only in bignesse, for it is greater than the Quail; and with a yellow fauce of saffron it is a most delicate piece of meat. *M. Egnatius Calpurnius* governor of the parts about the Alps, reporteth, that he hath seen there the *Ibis* a bird proper to the land of Egypt.

CHAP. XLIX.

¶ Of new Birds, and such as are holden for fabulous.

DVring the ciuil wars between *Otho* and *Vitellius*, and namely about the time of the journey or battell of *Bebricum* beyond the Po, there were these new birds (for so they be called still at this day) brought into Italy. Like they be to Thrushes or Mavisses, somewhat lesse than house doves, pleasant in the eating. The Baleare Isles send vs another *Porphyrus*, better than that before named, cap. 46. Where the Buzards also a kind of Hawk are held for excellent meat, and serued vp at the table. Likewise the *Vipio*, for so they call the lesser Crane. As for the fowles called *Pegasi*, headed like horses; and the *Griffons*, which are supposed to haue long eares and a hooked bill, I take them to be mere fables: and yet they say that the *Pegasi* should be in *Scythia*, and the *Griffons* in *Ethiopia*. Moreover, I thinke the same of the *Tragopanades*, which many men affirm to be greater than the Eagle, hauing crooked horns like a ram on either side of the head, of the colour of iron, and the head only red. As touching the Birds *Syrenes*, I will neuer beleue there be any such, let *Dino* the father of *Chirarchus* that renowned writer say what he wil: who auoucheth for a truth, that they be in *India*, and that with their singing they will bring folk asleep, and then fly vpon them and reare them in pieces. He that will giue credit to these fables, may euen as well beleue, that dragons forsooth taught *Melampus* by licking his eares, how to vnderstand the language of birds when they chaunt and sing vpon trees, or cry and chirp in the aire. Likewise the tales that *Democritus* telleth, who nameth certain birds, of whose blood mingled together and suffered to corrupt, there is ingendred a Serpent, which whosoever eateth shall know what birds say one to another in their speech: and namely the strange things he telleth of the Lark about the rest. For verily without these fabulous lies, mens heads be occupied enough, and too much to, about the Auguries only and pre-fages of birds, that they haue no need to busie & trouble their brains about those toies. *Homer* makes mention of certain birds called *Scopes*: but I cannot conceiue those satyricall gesticulations of theirs like *Antikes* when they are perched, which so many men talke of, neither do I think otherwise, but that these birds are out of knowledge now a daies. And therefore far better it is to write of those we know.

CHAP.

CHAP. L.

¶ Who first deuised to cram Hens, who inuented Mutes and Coupes to keepe foule in.

THEY of the Island *Delos* began the cramming of Hens and Pullen first. And from them arose that detestable gourmandise and gluttonie to eat Hens and Capons so fat & cater-larded with their owne grease. Among the old statutes ordained for to repress inordinate feasts, I find in one act made by *C. Fannius*, a Consul of Rome, eleuen yeres before the third *Panick* war, an expresse prohibition and restraint, That no man should haue his table serued with any foule, vnlesse it were one hen, and no more, and the same a runner only, and not fed vp and crammed fat. The branch of this one statute was afterwards taken forth and inserted in all other acts provided in that behalfe, & went current thorough all. Howbeit, for all the law (so well set down, there was a starting hole found to delude and escape the meaning thereof, namely, to feed Cocks & Capons also with a past foked in milk & mead together, for to make their flesh more tender, delicate, and of sweeter tast: for that the letter of the statute reached no farther than to Hens or Pullets. As for the Hens, they only be thought good and well enough cramm'd, which are fat about the neck, and haue their skin plump and soft there. Howbeit, afterwards our fine cookes began to looke to their hind-parts about the rumpe, and chuse them thereby. And that they should make a greater shew in the platter, they slit them along the chine and lay their legs out at large, that they might take vp the whole dresser board. The Parthians also haue taught our cooks their own fashions. And yet for all this fine dressing and setting out of meat, there is nothing that pleaseeth and contenteth the tooth of man in all respects, while one lous nothing but the leg, another likes and praises the white brawne alone, about the breast bone. The first that deuised a Barton & Mue to keepe foule in, was *M. Lenius Strabo*, a gentleman of Rome, who made such an one at *Brindis*, where he had enclosed birds of all kinds. And by his example we began to keepe foules within narrow coups and cages as prisoners, to which creatures Nature had allowed the wide aire for their scope and habitation.

CHAP. LI.

¶ Of *Aspises* proud platter.

BUT in the relation and report of this argument, notorious about all the rest in our memorie is that platter of *Clodius Aspises*, the plaier of Tragedies, which was esteemed worth * six hundred Sestertia. In this one charger he serued vp at the table all kind of birds that either could sing or say after a man; and they cost him six hundred Sesterties apeece. And surely it was no delight & pleasure that he sought herein to content the tooth, but only that he would haue the name to eat the resemblers of mans voice: without any consideration & regard that he had of all that great riches and reuenues of his owne, which himselfe had gotten by his tongue, and by counterfeiting the speech of others. A father verily worthish such a sonne, who as we said before, deuoured those precious pearles. And to speake a truth, it is hard to iudge whether of them twaine plaied the beast more, the father or the sonne. But that it seemeth lesse pride and prodigalitie to swallow down the throat the greatest riches of Nature, than to chew and eat at a supper mens tongues, that is to say, those birds that could pronounce our language.

CHAP. LII.

¶ The engendring of birds: and what foure-footed beasts lay egges as well as they.

THE generation of birds seemes alwaies to be after one & the same manner. And yet therein is to be found some strange & extraordinary worke. Like as there be four footed beasts known also to haue egges, namely, the *Chamaeleons*, *Lizards*, and such as we named among Serpents. Of foules, those that haue hooked claws and tallons, are but barren that way, and lay few egges. Only the *Kestrell* laith foure at a time. And verily Nature hath well provided in all the kind of foules, That the mightier should be lesse fruitfull than the weaker and those that flie from the other. The *Ostriches*, *Hens*, *Partridges*, and *Linnets*, are great laiers. As touching the

the manner of their engendering, is performed two waies: for either the female couche th
downe, as doe our hens; or else stand vpon their feet, as doe the cranes. Of eggs, some be whit e,
as those of Doves and Partridges; others, be pale and yellowish, as those of water-fowle: some
be spotted, as those of the Turkie-hens; others againe red; and such eggs Feasants lay, and Ke-
strils.

All birds eggs within the shell, are of two colours. In water-fowles, the yolke is more than
the white, and the same is more wan and dusky than in others. The eggs of fishes are of one
colour, and therein is no white at all. Birds eggs are brittle shelled, by reason of their heat. Ser-
pents eggs are more tough because of cold: but they of fishes are more soft and tender, for that
they be so liquid. Those of fishes and such creatures as live in water, haue round eggs ordinar-
ly: others be long and pointed at one end in the top. Birds lay their eggs with the rounder end
comming forward: their shell is soft whiles they be warm and a laying, but presently they hard-
en by piece-meale as they come forth. *Horatius Flaccus* is of opinion, that the longer the egge
is, the better tast it hath. The rounder egge prooues to be the hen commonly, the rest will be
cockes. There is found in the * top or sharper end of an egge within the shell, a certaine round
knott resembling a drop or a naui, rising above the rest, which they call a Kinning.

CHAP. LIII.

¶ The engendering of egges: the sitting of birds: and their manner
of generation.

Some birds there be, that tread all times of the yeare; and lay eggs but only two moneths in
mid winter: and of those, pullets lay more than old hens, but they be lesse, especially the first
and last of one laiter. So fruitfull they be, that some of them will lay three score eggs ere they
giue ouer: some euery day; others, twice in one day: and some will ouer-lay, vntill they be so
weary and feeble withall, that they will neuer lay more, but die withall. The little short legged
grig hens, called Hadriane (that came from Hadria) are counted best. Doves lay, & couney ten
times in the yeare, some of them eleuen; and in Egypt there are found that giue not ouer in the
twelue moneths, euen at mid-winter in December. Swallows, Oufels, Quails or Ringdoves and
Turtles, lay and sit twice in the yeare: other birds ordinarily but once. Thrushes and Blackbirds
build their nests of mud and clay, in trees and bushes one by another, so neere as if they were
linked together: and lightly they engender in some corner out of the way. After the hen is tro-
den, within ten daies the eggs commonly knit within her bellie, are come to perfection & readie
to be laid. Howbeit if hens haue some wrong done vnto them, or if a man chance to pluck a fea-
ther or quill from a pigeon at that time, or do them some such iniurie, it will be longer ere they
lay.

All eggs haue within them in the mids of the yolke, a certaine drop as it were of bloud, which
some thinke to be the heart of the chicken, imagining that, to be the first that in euery bodie
is formed, and made: and certainly a man shall see it within the verie egge to pant and leape. As
for the chick, it taketh the corporall substance, and the bodie of it is made of the white waterish
liquor in the egge, the yellow yolke serues for nourishment whiles the chick is vnatched and
within the egge, the head is bigger than all the bodie besides: and the eies that be compact and
thrust together, be more than the verie head. As the chick within grows bigger, the white tur-
neth into the middle, and is enclosed within the yolke. By the 20 day (if the eggs be stirred) ye
shall heare the chick to peepe within the verie shell: from that time forward, it beginneth to
plume and gather feathers: and in this manner lies it within the shell, the head resting on the
right foot, and the same head vnder the right wing, and so the yolke by little and little decreas-
eth and faileth. All birds are hatched with the feet forward, contrarie to other creatures. Some
hens there be, that lay all their eggs with two yolkes; and of them be hatched two chickens o-
ther whiles, as *Cornelius Celsus* writeth, but the one of them is bigger than the other. Howbeit o-
thers say, it is impossible that one egge should come to two chickens. Moreover, it is held for a
rule, that where should not be pue vnder a brood-hen about 25 eggs at one time to sit vpon. Af-
ter the mid-winter, hens begin to lay and sit. The best brood is before the spring. Equinoctiall.
Those that be hatched after mid-summer, neuer come to their full and kind bignesse: and euery-
more the later the lesser.

CHAP.

CHAP. LIV.

¶ The infirmities and impediments incident to brood hens,
and the remedies.

The best eggs that can be put vnder hens when they sit, are they that were laid ten daies be-
fore at the vtmost; for neither old eggs, nor yet very new laid are good for that purpose.

After that a hen hath sitten 4 daies, take an egg from vnder her, hold it in one hand by the
narrow end, and look between you and the light, with the other ouer it; if it be cleare through
and of one colour, it is supposed to be naught, and will neuer proue a chicke, and therefore put
another in place thereof. Another experiment there is by water: the adde egg will float above
as empty, the found and good will sink to the bottom: and such therefore being full are to be
set vnder the hen. We ye would try whether an egg be good or bad in this case, our countrey
wiues say, you must not shake them in any hand, for if the vital veins & parts be broken & blend-
ed together, they will neuer proue. Moreover, this is alwaies to be looked vnto, that ye begin
to set an hen after the change of the moon, for if you set her in the wain, the eggs will be adde,
and neuer come to be chickens. The warmer the weather is, the sooner will she hatch, & there-
fore it falleth out, that in summer ye shall haue her abroad with her brood vpon the nineteenth
day, in winter many times it will be 25 daies first. If it thunder while she is broody the eggs
will be adde; yea and if the hen chance but to heare an hawk cry they will be marred. The
remedie against thunder, is to put an iron nail vnder the faw of the hens nest, or els some earth
newly turned vp with the plow.ouer and besides, there be some eggs that will come to be birds
without sitting of the hen, euen by the worke of Nature only, as a man may see the experience
in the dunghills of Egypt. There goeth a pretty yeast of a notable drunkard of Syracusa, whose
manner was when he went into the Tauerne to drinke, to lay certaine egges in the earth, and
couer them with mould, and he would not rise nor giue ouer bibbing vntill they were hatched.
To conclude, a man or woman may hatch eggs with the very heate only of their body.

CHAP. LV.

¶ The Auguries and presages of Egges.

Livia Augusta the Emperesse, wife sometime of *Nero*, when she was conceived by him, & went
with that child [who afterwards proued to be *Tiberius Caesar*] being very delirous (like a
yong fine lady as she was) to haue a jolly boy, practised this girlish experiment to fore-
know what she should haue in the end: sheooke an egge, and euery carried it about her in her
warne bosome; and if at any time she had occasion to lay it away, she would couney it close-
ly out of her owne warme lap into her nurses, for feare it should chill. And verily this presage
proued true, the egge became a cocke chicken, and she was deliuered of a sonne. And hereof it
may well be come the deuice of late, to lay egges in some warme place, and to make a soft fire
vnderneath of small straw or light chaffe to giue a kinde of moderate heate: but euerymore the
eggs must be turned with a mans or womans hand, both night and day; and so at the set time
they looked for chickens and had them. It is reported besides of a certaine Poulter, who had a
secret by himselfe, whereby he could tell surely and neuer misse, which egge would be a cocke
chicke, which a hen: also of many hennes that he kept, which was euery hens egge, if hee did
but see it. We haue heard moreover, that when a brood hen chanced to die, the cocks that vsed
to tread her, were seen to go about with the chickens one after another by turnes, and to do euery
rie thing like to the very hen indeed that hatched them: and all that while to forbear once to
crow. But about all it is sport alone to see the maner of an hen that hath sitten vpon ducks eggs
and hatched them, how at the first she will wonder to haue a teem of ducklings about her, and
not acknowledge them for her owne; but soone after shee will clucke and call this doubtfull
brood to her very carefully and diligently: but at the last, when she perceives them, according
to their kind, to take the water and swim, how she will mourne and lament about the fish-pool,
that it would pity ones heart to see them what moane they will make.

CHAP.

CHAP. LVI.

¶ Which be the best hens.

A Man shall know a good and kindly hen by her comb, when it is strait and vpright: otherwhiles also double crested: also by the pinion feathers blacke, the vpper plume reddish. Such a hen will be red also about her head and bill, and haue an odde toe to her feet, yea and sometime that od one to lie crosse ouerthwart the other foure. In case of sacrifices and religious vse they are not thought good nor allowable that haue becke and feet yellow. For diuine seruice and secret mysteries celebrated in couert to the goddesse Ops, the black are allowed for good. There is also a dwarfish kind of hens, [i. grig hens] that are extraordinarie little, and yet fruitful, a thing not seen in any other kind of fowle: they lay and misse not, but seldom sit they on any eggs, and if they do it is hurtfull for them.

CHAP. LVII.

¶ The maladies that hens be subiect vnto, and the remedies.

That which troubleth all the kind of them is a certain distillation of a phlegmaticke humor, which causeth the pip, the most of all between harvest time and vintage. The cure is, to keep them hungry & long fasting: also to let them lie or perch in a smoky place, especially where the fume is made of Bay leaues and the herb Sauin. It is good moreouer, to draw a little quill or feather through their nostrills acroffe, and to remoue or thrust it euery day. As for their meat, let it be some cloues of garlicke shred among their corne, or else let their meat bewell infused or steeped in water, wherein an owle hath washed and bathed her selfe, or else foddren with the seed of Bryonic or the wilde white Vine: besides such other medicines as are daily in vse.

CHAP. LVIII.

¶ The manner how fowles do conceiue, and what number of yong ones commonly they hatch.

Doues haue this propertie by themselves, to bill one another and kisse before they tread. They lay for the most part two eggs. Thus Nature hath disposed, that some should breed often and few: others should hatch many together at once. The Ringdoves or Quoisits, and Turtles, ordinarily lay three eggs; and lightly they sit and hatch but twice a yere: and that is, if their first brood come not to perfection, but miscarried and was not reared up. And albeit they lay three eggs, yet they neuer hatch but twain: the third that is addle, they call in Latine *Vrimum*. The female Ringdove sits euer from noon vntil the next morning; the male makes up the rest of the day. Houfe-doues breed euermore one cock pigeon, and another hen. The male is hatched to day, and the female tomorrow. In that kind they sit both, the cock all day, and the hen by night: and vsually vpon the 20 day they hatch. They lay within fise daies after they be troden, and in summer time verily you shall haue them in the space of two months bring three paire of pigeons; for then they vse to hatch by the 18 day: and presently they conceiue again. So that a man shall oftentimes find new laid eggs euen amongst the young pigeons: and otherwhiles it is seen, that whiles some are ready to fly, others peep newly out of their shell: and these yong birds within fise months will lay themselves. Now the nature of these hen doves is (if they want a cock) to tread one another, and hereof they come to lay barren eggs, whereof nothing will be ingendred: and such the Greeks call *Hypenemia*, i. wind-eggs.

CHAP. LIX.

¶ Of the Peacocke and Geefe.

The Pea-hen falls to lay and breed after she is 3 yeres old. In the first yere she begins with one or two eggs: the yere following the sixth to foure or fise: in the rest she reacheth to twelue and no more. When she layeth, her manner is to rest two or three dayes betweene euery egge. And thrice a yere she keepeth this order, namely, if her egges be taken from

A from her, and put vnder hens to be sitten vpon: for why, the Peacocks will break them if they can meet with them, because they cannot misse and spare the Peahens company while they are broody and sitting: which is the cause they are wont to lay by night, or in some secret colde out of the way, and that from an high place where they perch: and then, vnlesse there be good heed taken that the eggs be latched in some soft bed vnderneath, they are soone broken. One Peacock is sufficient to go with fise wiues: for when there is but twain [the villaine is so lecherous] with ouermuch treading he hindereth their laying, and murther the knot of eggs ingendred within them. The Peahen hatcheth in 28 daies, or in thirty at the farthest.

Ganders and Geefe ingender together in the very water. Geefe lay ordinarily in the spring: or if they were troden about mid-winter, then ye shall haue them lay after the Winter Sunge. Geefe hatch some forty daies or very neere. They haue vsually two laiters in the yere, namely, if hens hatch their former eggs. The most that they hatch at one sitting is sixteene, and the fewest fise. If a man steale their eggs from them they lay still, and neuer giue ouer till they be readie to burst with laying. No birds eggs but their own will they hatch. The most profitable way, is to set them vpon nine or eleuen. The females only sit, and that for the space of 30 daies, vnlesse it be warme weather, and then they will haue done by 25. If one of their Gollings be stung neuer so little with a nettle, it will die of it. Their owne greedy feeding also is their bane, for one while they will eat vntill they burst again; another whiles kill themselves with straining their own felues: for if they chance to catch hold of a root with their bill, they will bite and pull it hard for to haue it, that many times they breake their owne neckes withall, before they leaue their hold. Against the stinging of nettles the remedie is, that so soone as they be hathed there be some nettle roots laid vnder their nest of straw.

CHAP. LX.

¶ Of Herons and Bittours, and the best way to keepe eggs long.

DOF Herons be three forts, * Leucou, * Asterias, * and Pellon: these last ingender with much paine and difficultie: as for the males verily they cry againe for anguish, and the bloud starts out of their eies in the act of treading. And with as much ado and trouble do the females lay, after they be knit with eg. The Eagle and the most part of the greater fowls sit 30 daies, whereas the lesse continue but 20, as the Kite and the Hawk. The Kite vsually hatcheth but one at a time, and neuer about three: but that kind called *Aegolios* sometimes foure. The Rauens also now and then fise: and those couue as many daies. While the female crow sits the male feeds her. The Pitor ordinarily brings forth nine Piannets, the fig-pecker Melancoryphus about 20, but euermore an od one: and there is not a bird that goeth therein about her. Lo how Nature is willing to multiply the race of little birds! The yong Swallows are at the first blind, and so are all such as are hatched many in number. Wind-eggs, which we call *Hypenemia*, come either by the mutual treading of hens one another, by an imaginarie conceit of the male, or else by dust. And such eggs not only Doues doe bring, but house Hens also, Partridges, Peahens, Geefe, and Brants, or the female Barganders. Now these eggs are barren as it were, and neuer proue birds, lesse than others, not so pleasant in taste, and besides more moist. Some are of opinion that the wind will ingender them, for which cause also they are called *Zephyria* [i. West-wind eggs.] And verily such eggs are seen only in the spring, when that wind blows, Adde eggs, which some called *Cynofura*, are they that chill vpon the rest, when the hen is gone and giueth ouer sitting. Eggs steeped in strong vineger will come to be so soft, that they will passe and be drawn through the ring of a mans finger. The best way to keepe egges is in beane meale or floure, and during winter in chaffe, but for summer time in bran. It is thought if they lie in salt their substance will waste and consume to nothing within the shell.

CHAP. LXI.

¶ What Bird alone bringeth forth a liuing creature, and feedeth it with milke.

The Rere-mouse or Bat alone of all creatures that fly, bringeth forth yong aliu, and none but she of that kind hath wings made of pannels or thin skins. She is the only bird that suckleth

* A Cruell, or
dwarfe Herod.
Bitor.
* A Carion
Heron

sucketh her little ones with her paps, and giues them milk: and those she wil carry about her two at once, embracing them as the Rieth. It is said also that she hath no more but one ioynt of the hanch, without any in the knee or feet: and that they take greatest delight to feed vpon gnats.

CHAP. XLII.

¶ Of Vipers: their manner of generation and bringing forth yong: and what land beasts do lay egges.

Moreouer, among creatures of the land, serpents lay eggs: whereof as yet we haue not written. As they ingender together they clip and embrace, and so intrange they be and inwrapped one about the other, that a man who saw them would think they were one serpent with two heads. In the very act of generation the male Viper thrusteth his head into the mouth of the female; which he (for the pleasure and delectation that the hath) gnaweth and biteth off. No land creature els but she hath eggs within her belly, of one colour and soft, like as fishes haue. Now after three daies they be quicke, and then come forth as they be hatched, but no more than one at once euery day: and 20 commonly she hath. When she is deliuered of the first, the rest (impatient of so long delay) eat through their dams sides, and kil her. As for other serpents they lay their eggs linked and chained together, and so fit vpon them on the land: but they hatch them not vntill the yeare following. Crocodiles sit by turnes, the male as well as the female. But I thinke it good to treat also of the generation of other land creatures.

CHAP. XLIII.

¶ The generation of lining creatures vpon the land.

Ofall lining creatures two footed, a woman onely bringeth forth her yong quicke. Men and women both, and none but they, repent at first the losse of their maidenhead. A very preface (no doubt) of a life to ensue full of trouble and miserie, that thus should begin with repentance. All other creatures haue their set times and certain seasons in the yeare when they ingender, as hath bin shewed before: but all is one with vs, and no houre of day or night comes amisse. Other creatures know when they haue enough, and rest satisfied: we only are insatiable that way, and cannot see to make an end. The Empreſse *Messalina*, wife of *Claudius Caesar*, thinking it the only victorie for a lady and queen to excell in this feat, chose the most gallant curtsian and commonest strumpet in all Rome, to try masteries and to contend with for the best game: and in very truth shewen the prize; for in the space of 24 houres she out-went her [a beastly thing to be written] no fewer than 25 times. As for men, they haue deuised in the practise of this filthy act, euen to abuse some parts against kind: and women (vnnatural as they be) haue the cast to destroy within them the vnripe and vntimely fruit of their own body. Certes in this behaile how much worse are we than the wild and sauage beasts of the field. *Hesiod* writeth, that men are more giuen to lust in winter than in summer, and women contrariwise. Elephants, Camels, Tigers, Onces, Rhinoceros, Lions, Hares, Connies, and generally all beasts which haue their genitall parts from ward, turn taile to taile to the female in the act of generation. As for Camels, they go into the desert, or at lewestie seeke some corner when they would ingender; and dangerous it is for one to take them in the manner. They continue in this action one whole day together, and so do none els that are whole hoofed. In foure footed beasts the males are set into the heat of lust by senting and smelling. Dogs and Bitches, Seales & wolues likewise turn away, and in the mids of the action be tied one to another euen against their wils, and cannot help it. The females of most of these before named begin to ride the males first, for to prouoke their lust: but of the rest, the males leape the females at the first. Beares (as we sayd before) lie along both as man and woman. Hedge-hogs stand both vpriight, and claspe one another when they ingender. The be Cat standeth on his feet, and the she lieth vnder him. Foxes ly vpon their sides, and so the Bitch embraceth the male Fox. Kine and Hindes cannot well endure the violence of the Bulls and the Stagges in this businesse, and therefore they are euer going when they doe engender. Stagges goe from one Hinde to another, and then come againe to the first; and this doe they in course. Lizards, as all other creeping creatures that haue no feet, wind one about another as they ingender. The greater that any beasts be, the lesse

fruitfull

A fruitfull they are of their bodie. Elephants, Camels, and Horses, get but one at once, neither do the females beare any more at a time; whereas the Goldfinch or Linner, a verie little bird, bringeth forth a dozen commonly at once. Such as bring most, are least while in breeding. The greater that any creature is, the longer time it requireth to be formed in the mothers wombe. And such as liue long, be longer also ere they haue their perfection and come abroad into the world. The growing age is not meet for generation. Beasts that are whole hoofed, neuer bring but one at a time: such as be clouen footed in twaine, may also haue twine. But as many as haue their feet parted and deuided into many toes, are fit to beare many at ones. And whereas all the former rehearsed, bring forth perfect creatures with all parts, some haue their yong ones imperfect and but halfe made: in which number Lionesses, the Beares, bitch Foxes, are to bee reckoned: but especially the she Beares, whose whelpes are more vnshapen than the rest: and a rare thing it is to see them a whelping. Howbeit such females when they be deliuered of them, with their licking do chafe and heat them, and so by little and little bring them to some forme and fashion by this means: Such for the most part beare foure whelpes. As for bitches, Wolues, Panthers, and Thoes, kindle their yong before they can see.

Of Dogges and Bitches there be many kinds. They of * *Laconia*, as well the male as the female, be apt to engender after they be eight months old. They be with whelp three (core) daies and three ordinarily. As for other Bitches, they goe proud at fixe moneths, and may be lined. They be all the sort of them, sped at the first lining. Bitches that go assaut and take the dog before the full time, namely when they be verie yong, such bring a litter that will be longer ere they see neither goe they but all the whelps will not be blind fo many daies. Dogs commonly when they be halfe yeare old, are thought to lift vp their leg when they piſſe, and that is a signe they are come to their full strength and perfection: but bitches all that time piſſe sitting vpon their buttocks. They haue twelue whelps when they bring most, but ye shall see them commonly with a litter of six or seue: and sometime they come with iust one, but that it is thought to be a prodigious signes as also if the whelpes be all Dogges or all Bitches. The first vially that they whelp, be Dogs; for the rest, they be one with another, a Dog and a Bitch: namely, if they were lined in the due season, and at the iust moneth. And commonly they goe proud six moneths after their former litter. The Bitches of *Laconia* ordinarily bring eight at a time. The Dogs of this race haue a proprietie with them, that the more they be trauailed, the more lustie and fresh they are, yea and the hotter after salt-bitches. They liue ten yeares, and the Bitches twelue. Of other kinds, ye shall haue them continue fifteen yeares, yea and otherwhiles twentie: but they engender not so long, but giue ouer commonly at twelue.

Cats and Rats of Inde, called *Ichneumones*, in all other respects follow the Nature of Dogs; saue that they liue but six yeares. Conies kindle euery moneth: and albeit they be bagged, yet will they take the bucke againe, and conceite vpon it, like as the Hares also will doe the same: for as soon as euer they haue kindled, they go to bucke and are presently sped: and say that the *Leuerets* or *Rabbits* lie sucking at them yet will they be with yong. When they be new kindled, they cannot fec.

Elephants (as we haue already said) neuer bring but one at once, and that commonly is as big as a Calfe a quarter old. Camels goe a whole yeare. After they be 3 yeares old, they are sufficient for to engender: and commonly they come in the spring: and it is a yeare after before they be couered againe. As for Mares, if there be three daies betwene, or but one, after they haue foled, it is thought they may very well be couered againe; yea and they are brought perforce to the stallion for this purpose. It is supposed also, that the shee Asse within seuen daies after, will soonest conceiue. It is a rule, to share and clip a Mares maine, before shee will abide the couering of an Asse, so vile and base a beast: for so long as the haire of her maine is well growne, she is so proud and glorious, that she will not abide the Asse to come neare her. So soone as they be couered and sped, they run full into the South or North-wind, according as they be conceiued either with male or female: thing that no other beasts besides, doth. And then, suddainly they change their colour; for their haire will be redder, or at leastwise fuller and deeper, what colour soeuer it be. By which signe it is knowne they are with foie, and then they will admit no stallions vnto them, would they neuer fo faime. And say, that some of them haue foies running by their sides, they will doe their deed at worke neuertheless: nay when they be with foie, they will labour as well as they did before: in so much, as many times they

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steale

* Resembling our English mastiues.

Reale a foling, before their master beware that they are with sole. We haue read in Chr onicles, that *Ezechiasides* the Thessalian had a Mare, which euen then when she was gone far with sole, woone the best game in the Olympian race. They that haue fought more narrowly into the secrets of Nature, say, That stone-Horses, Dogs, and Bores, desire the females in a morning: but Mares, Bitches, and Sows make meanes to the male after noone. Mares that are kept within house at rack and manger with hay and prouender, desire to be couered threecore daies before those that goe abroad in the heard. Swine alone of all creatures when they be brimming, froth and some at the mouth. And as for the Bore, if he heare the grunting of a Sow that seeks to be brimmed, vnlesse he may come to her, will forsake his meat, vntill he be leane and poore: and she againe will be so far enraged, that shee will be readie to run vpon a man and all to teare him, especially if his cloths be white. But this rage and woodnesse of hers is asswaged and allayed, only with bathing her share behind with vineger. Some thinke there be certaine meats will prouoke beasts to fleshly lust, namely, Opions giuen in meat to a beast, like as Rocket to a man or woman. Moreouer, it is supposed, that whatsoeuer is made tame, which by kind was wild, the same will not breed, as Geese and Ganders. In like manner, wild Swine & red Deere, if they be tamed; or if they doe, it is very long first: and such only as were brought to hand euen from the time that they were very yong. Finally, this one thing is strange and wonderfull, that all four-footed beasts, save only the Mare and the Sow, if they find themselves to be with yong, driue the male from them. But the Connie and the Hare alone will conceiue again when they be gone with yong.

CHAP. LXIII.

¶ *The varietie in liuing creatures, as touching their coming into the world.*

W Hosoer haue quicke creatures within them, bring the same forth with the head forward. For when the time is come, the yong thing turns about a little before, which otherwise lay freight out at length in the bellie. Four-footed beasts, whiles their dams go with them, lie with their legs stretched along, close vnto their own bellies. An infant whiles it is in the mothers wombe, gathereth round into a ball, and hath his nose lying just between his two knees. As for false conceptions or Moone-calues (whereof we spake before) some thinke they are engendered of the womans seed only: namely, when she is not conceived by a man, but by her selfe: and hereupon it is, that the said conception hath no vitall nor animall life, because it proceeds not of the conjunction of male and female both. True it is, that it is endued with a certain vegetatiue power, to be nourished and to grow, like as we see intrees and many other plants.

CHAP. LXV.

¶ *The breed of Mice and Rats.*

O F all creatures that bring forth their yong perfect, Swine only farrow one Pig and two Pigs at a time, yea, and sometimes a number of them. Also they alone contrarie to the nature of all those that either be whole-hoofed, or clouen-footed in twaine, bring a number of yong ones at one farrow. But about all, Mice and Rats for fruitfulness doe passe. And therefore I cannot put off the discourse of them any longer: and yet therein I must follow *Aristotle* for mine Author, and the report withall of the souldiers that serued vnder *Alexander the great*. It is said that they engender by licking, without any other kind of copulation: and that one of them hath brought six-score at a time: also that in Persia there haue been young Mice found with yong, euen in the bellie of the old dam. And some are of opinion, that they will be bagged, if they tast but of a little salt. Why should wee then wonder any more how such multitudes of field-Mice and Rats should come to deuour whole fields of corne? Howbeit, the reason is not yet known, how such numbers of them should al of a sudden consume away & come to nothing. For neither bee they found lying dead about ground, neither can any man come forth and say, that he hath turned vp any one with his spade as he digged in the Winter. The country of Troas is mightily giuen to breed great store of them, in so much, as they haue forced alreadie the inhabitants to abandon the place and depart. Men say, that the season proper

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A and agreeable for their breeding in such abundance, is a great drought: also, that when they are toward their end, there be little wormes breeding in their heads that kill them. The Mice and Rats of Egypt haue hard haire and prickly like to hedge-hogs. They go likewise vpright on their hinder feet, and walk as if they were two footed, after the manner of those in the Alps. Moreouer, if beasts of diuers kinds ingender together, they may wel breed yong between them, in case they do agree and jump in the time that the females of both should go with yong. It is commonly thought and beleued, that among foure footed beasts the Lizard hath eggs within her, and deliuereth them at her mouth: but *Aristotle* flatly denieth it. Howbeit they sit not vpon them when they haue so done, as being forgetful where they laid them, so little or no memorie at all haue they. And therefore the yong Lizards of themselves breake forth out of the shell.

CHAP. LXVI.

¶ *Of a Serpent ingendred of the marrow of a mans back bone.*

I Haue heard many a man say, that the marrow of a mans backe bone will breed to a Snake: And well it may so be, for surely there be many secrets in Nature to vs vnknown, and much may come of hidden causes, as we may see euen among foure footed beasts.

CHAP. LXVII.

¶ *Of the Salamander.*

C. AS for example, the Salamander made in fashion of a Lizard, marked with spots like stars; neuer comes abroad and sheweth it selfe but in great shewes: for in faire weather he is not seen. He is of so cold a complexion, that if he do touch the fire, he wil quench it as presently as if ice were put vnto it. The Salamander casteth vp at the mouth a certaine venomous matter like milke, let it but once touch any bare part of a man or womans body, all the haire will fall off, and the part so touched will change the colour of the skinne to the white morphew.

CHAP. LXVIII.

¶ *Of those that breed of others which neuer were ingendred. Also of those that being ingendred, yet breed not.*

D S Ome creatures there be that breed of those that neuer were ingendred themselves; and yet not according to those naturall means as others which wee haue shewed before; and such also as either the Summer or Spring, or some certain season of the yeare do breed. Among which some ingender not at all, as the Salamander: * for there is no more distinction of sex in them, than in Yeoles, and in all those which neither lay eggs, ne yet bring forth any liuing creature. Others likewise and all such creatures as cleaue fast either to rocks or to the shelles, are neither male nor female. As for such as come of themselves, if there be seene in them any distinction of male and female, something verily they ingender betweene them; but an imperfect creature verily it is, and not resembling them: neither doth that generation breed ought any more, as we see the flies that ingender certain little wormes. The experience hereof is better to be obserued in those creatures called Insects: whose nature is hard to be exprest, and yet I haue appointed a severall treatise for them apart. Wherefore I will go forward in the discourse begun already, and namely as touching the sence and vnderstanding of the forenamed Creatures, and then proceed to the rest.

CHAP. LXIX.

¶ *The outward senses of liuing Creatures.*

F M An excelleth all other Creatures, first in the sence of feeling, and then of tasting: In the rest many beasts go beyond him. For the Eagles haue a clearer eie-sight, the Geires a finer smell; and the Moldwarps, notwithstanding they be couered ouer with earth (so heauie,

heauie, so thick and deafe an element as it is) yet their eare is far better than ours. Moreover, albeit the voice of all them that speake aboue ground doth ascend vppward still from them, yet heare the / when they talke, yea and if a man chance to speake of them, some hold that they vnderstand their speech, and thereupon do fly from them. A man, who at first lacketh his hearing, wanteth also the vse of his tongue: neither are there any deafe borne, but the same likewise be dumbe. A man would not think, neither is it likely, that the Oisters in the sea do heare, and yet vpon any noise and found their manner is to sink down to the bottome. And therefore when as men do fish for them in the sea they are as silent as they may be.

CHAP. LXX.

¶ *A discourse, That fishes both heare and also smell.*

Fishes verily haue no eares, ne yet any holes to serue for hearing, and yet plain it is that they doe heare, as we may daily see in certaine fish ponds and stews where fishes be kept: for when those that haue the charge of them make a noise with clapping of their hands, as wild as they be otherwise, they shall haue them come in great flocks to take their meat that is thrown in to them: and this are they wont to do daily: and that which more is, in *Casars* Fish-poolles a man may see whole skuls of fishes to repaire at their call: yea, and some wil part from the rest of their company, and come alone to land when they be named. Hereupon it is, that the Mullet, sea-Pike, Stock-fish, and Chronius, are thought to heare best of all others, and therefore liue very ebbe among the shelues and shallowes. That fishes haue the fence of smelling it is manifest: for they are not all taken ne yet delighted with one kinde of bait: and this is obserued, that before they bite they will smell to it. Some also there be that lie in holes vnder rocks, and no sooner hath the fisher besmeared and anointed the mouth and sides of the said rocks in the very entrance to their holes, but he shall see them come forth, as it were to auoid the sent of their own carion. Let them lie in the very deep, yet wil they resort to certain odors and smells, namely, to the Cuttill burnt, and the Polype, which for that purpose they vse to put into their nests. And verily they cannot abide the smell of the smoke and pumpe of a ship, neither wil they come neere vnto it: but aboue all things they may not away with the bloud of fish. The Pourcuttle hardly or not at all can be pulled from the rocks, so fast cleaueth he: howbeit come neer him with the herb Marjerome or Savorie, he will presently leape from the rocke and away, to auoid the sent thereof. Purples also be caught by means of some stinking bait. And for other creatures, who doubteth but they haue a perfect smell? Serpents are chased away with the smell and perfume of the Harts horn; but aboue all, with the odor of Stryax. And Pismires are killed with the very fume of Origion, Quick-lime, or Brimstone. Gnats loue all four things, and willingly will thither: but to any sweet meats they come not neare.

CHAP. LXXI.

¶ *That the fence of feeling is common to all liuing creatures.*

There is not a liuing creature throughout the world but hath the fence of feeling, though it haue none els: for euen oisters and earth-wormes, if a man touch them doe evidently feeble. I would think also that there is none but tasteth as wel as feelles. For what should the reason else be, that some desire to tast this, others that? And verily herein is seene aboue all the singular workmanship of Nature, in the frame of their bodies and the members thereof. Some ye shall haue to scife vpon their prey with their teeth, others snatch it with their talons and claws: some peck and pluck it with their hookt bills, others pudder into their food with their broad nebs. Some with the sharp point of their beaks worke holes into their meat; others lie sucking at it. Some lick, others sip in: to conclude, some chew, others swallow and deuoure whole as it is. As touching their feet, there is no lesse varietie in the vse thereof: in snatching and carrying away, in tearing and plucking a pieces, in holding fast, and in crushing their prey. Some ye shall haue to hang by their feet, and others neuer lin scraping and scratching the earth.

CHAP.

CHAP. LXXII.

¶ *What creatures liue of poison, and what of earth.*

Roe Bucks and Does, yea, and Quails (as we haue said before) will feed fat with poisons, and yet they are the most meeke and gentle creatures liuing. Serpents haue a great desire and loue to eggs; wherein the subtilty of Dragons is worthy to be considered. For either they swallow them down whole (if their throat will receiue them) and after they be within their body, breake and squeeze them in pieces with rolling and winding themselves round together, and then cast vp the shels againe: or if they be but young ones yet, and not so strong as to gobble vp whole eggs, then they will winde about an egge with their taile by little and little, & bind it so hard, that the will cut off the crowne of it, as it were with a knife, and then sip off the rest which they clasp and hold fast between. In like manner deale they with birds. For swallow they will them whole downe the gullet, and afterwards straine and struggle fowth themselves untill they disgorge again the feathers and bones that were in their bellies.

Scorpions feed vpon earth. And Serpents againe, if they may come hand somly to wine, will make means to drink their fill of it, how fouler otherwise they haue but little need of any drink. They eat no meate at all, or very little, when they be kept close within any thing: like as the spiders also, which otherwise naturally liue by sucking. And therefore you shall not lightly see any venomous creature die either of hunger or thirst. For neither haue they store of heat, nor plenty of bloud, ne yet of sweat: all which naturally prouoke a stomach, & giue an edge to appetite. And among these venomous creatures, those be euer more dangerous which haue eaten some of their own kind, before they bite or sting. Apes, Monkeys, and Marmosets bestow and treasure vp the meate that is giuen them, or that they can come by, within their cheeks, as in a store-house. And when they be hungry, they get the same forth by little and little with their hands, & so far to chew it. Thus practise they in making their provision, for to serue them from day to day, and from one houre to another, which Pismires vsually do from yeare to yeare.

CHAP. LXXIII.

¶ *The meate and drinke of some creatures.*

Of all liuing creatures that haue many toes in their feet, the Hare alone feeds vpon grasse and greene come in the blade. As for those that be whole hoofed, they liue both of the blade, and also of the fruit thereof. All of such as be clouen footed, Swine will eat all kinde of food, yea, and liue of very roots. It is the property of whole hoofed beasts alone, to wallow and turn ouer and ouer. All that haue teeth indented in like saws, be naturally deuourers of flesh. Bears will feed of corn, brouse trees, eat grapes, liue of apples and other fruits, feed vpon bees, creifishes, and pismires. Wolves (as we said before) if they be very hungry, eat earth: sheep feed the better & grow fat, if they may drinke; and therefore salt is very good for them, because it makes them thirsty. Draught beasts, and such as are vfed for carriage, albeit they liue of corne and grasse, yet according to their drinking they do feed. Besides those mentioned hertofore, of wild beasts the red and fallow Deere both, doe chew cud when they be made tame and fed by hand; but all chuse rather in so doing, to lie than to stand, & in winter more than in summer, for seven months ordinarily. The rats and mice in the country of Pontus, namely, Hermis, & such like, after the same manner do chew cud and go ouer their meat again. What beasts fouler are toothed like saw teeth, lap as they drinke. So do also our common mice and rats, although they be of another kind, and are not so toothed. They that haue broad teeth, plaine, and uniforme, as horses and kine, drinke supping and taking their full draught. Bears in their drinking do neither the one nor the other, but bite at the water and so let it down. In Affrick the more part of wild beasts drinke not all summer long, for want of raine water: which is the cause that the Rats and Mice of Ginnee which be taken if they drinke afterwards vpon so long disuse, die therewith. In the deserts of Affrick, where there is no water euer to be had, there is ingendred a certain wilde goat named Oryx, which as by the nature of the place it wanteth drink, so it hath in her bodie a fountain and singular remedy against drought and thirst. Which the common theecus & robbers by the highway side in Getulia, knowing well enough, endure a long time with the helpe thereof.

thereof without drinke; for they vse to flanch and quench their own thirst, with a certain moist hole some liquor found in the bladders of the said beast. In the same Affricke the Leopards lie in await among the thicketts of trees, hidden within the branches; and so seize vpon them that passe by, and make spoile euen from the place where fouls vse to perch. As for Cats, marke I pray you how silent they be, how soft they tread when they steale vpon the slyly birds: how secret lie they in espiall for the poore little mice to leap vpon them. Their owne dounge and excrements they will rake vp and hide in the earth, knowing full well, that the smell thereof will bewray where they are.

CHAP. LXXIII.

¶ What beasts accord together, and which they be that disagree one from another.

Besides these outward fences abouenamed, euident it is also, that brute beasts haue other instincts of nature. For they entertain friendship and enmity one with another (which cannot be without affection and passion) ouer and besides those other wars and amities which wee haue obserued in their feuerall places. Swans and Egles jar and war one with another: so doth the Rauens and the Witwall or Lorient, which seeke after one anothers eggs in the night. Likewise the Rauens and Kite: for the Rauens is euermore ready to catch the Kites meat from him. Crowses and Owles are at mortall feaud one with another. The roiall Egles hateth the Wren, and why? because (if we may beleue it) he is named Regulus (i. the pettie king.) Howlers also cannot agree with other little birds. Again, fowles make warre with foure-footed beasts. The Weasell and the Crow be at deadly debate. The Turtle with the Creekit (Pyrallis) that lieth about the fire. The Ichneumons with Waspes: the Phalangia with other Spiders. And among water fowles, Ducks and Drakes with the sea-gulls. The Seamewes with the Buzzard. Triorchis, As for the field Rats or Mice, and the dwarf Herons, they seeke to prey one vpon the others little ones. The bird Egithus (the least in manner of all others) waiteth the Asse a shrewd turn; for when he rubbeth himself against the bushes to scratch where it itcheth, he therewith breaketh and ouerthroweth her nest; and therefore this slyly bird is so much afraid of the Asse, that if he heare him but bray, he is ready to throw the eggs out of her nest, and those that be already hatched, will for very feare fall downe: then in reuenge of this wrong, she will flie vpon him, and with her bill peck where the skin is off and raw with rubbing, yea, and make holes euen to the very bone. Moreover, Foxes and the Yceles of Nilus cannot abide one another, but are in continuall war. So be Wezils and Swine. There is an vnhappy bird called Aelalon, and but little withall; yet will she squash and breake the Rauens eggs. And when she hath yong ones, they bee much troubled and annoied with Foxes: she again to be quit with them, will all to pinch & nip both the Fox and her cubs. The Rauens seeing that, come to aid (as it were) against a common enemy. The Gold-finch lieth among bushes and thorns, and therefore she also hates the Asse, because he eateth vp the floures that grow therupon. The bird Egithus, so far hateth another called Anthus, that men are verily perswaded the bloud of them both will not mingle together: and hereupon it is, that the forcerers and witches haue brought it into an ill name. The Thores and the Lions do fouly jarre and disagree. In summe, the least creatures as well as the biggest quarrell and fight one with another. Rats and field Mice cannot abide to comencere a tree that is full of Ant-nests. The Spider espying a Serpent lying along vnder the shade of a tree where she spineth, slideth down vpon a fine thred to the head of the Serpent, and stingeth him so deep into the braine, that he falleth a hissing and grinding his teeth: he keepeth a winding and turning about, but hath not the power to breake the thred that hangeth aboue, ne yet to fly from the Spider: in somuch, as the Serpent lieth there dead in the place. Contrariwise, Peacocks and House-doues be as friendly one to another: so be the Turtles and Popinjaies, the Merles and Turtles likewise. The Crow and the lesse Bittrours also: for they ioine and band together against the common enemy the Fox. Likewise, the bird Harpe and the Kite against the Buzzard. What will ye say? be there not tokens of affection euen in Serpents, the cruelllest and most fellest creatures of all others in the world? I haue written already of the report or tale that goeth in Arcadia of a man, whose life was saued by a Dragon (that was brought vp by him) so soon as euer he knew him by his voice. As for the Aspis, *Philarchus* telleth a strange history of it.

A it. For he writeth, that in Ægypt there was an Aspis vsed ordinarily to come to the table of a certain Egyptian, and there tooke meat at his hand: which Serpent afterwards had yong ones, whereof one chanced to sting a son of the master of the house, that he died of it. Now when the dam (the old Aspis) came accordingly at the accustomed houre of repast for viuals, and perceived the deed committed by her little one, not onely killed it in satisfaction of the former fact, but also forbore the house, and was neuer knowne to repaire thither againe.

CHAP. LXXV.

¶ The sleepe of liuing creatures.

THE question, Whether liuing creatures sleepe or no? is not very difficult, but soon decided: For plain it is, that of land creatures, all that winke and close their eyes doe sleepe. As for those in the water, that they also sleepe (though but a little) euen they are of opinion, who otherwise make doubt of the rest. And this they do not collect & gather by their eyes (for lids they haue none to shut) but because they are seene to lie so still and quiet, as fast and sound asleep, stirring no part, but a little wagging their tailles, and seeming to start and bee affright at any sudden noise made in the water. As for the Tunnies, we may auouch more confidently of their repose: for they come of purpose to sleepe vnder the banks or rocks. And flat broad fishes lie so still sleeping among the shelles, that oftentimes a man may take them vp with his hand. The Dolphins and Whales be heard to rout and snort again, they sleepe so soundly. Moreover, as touching Insects, no man need to doubt that they sleepe, so quietly do they lie and make no noise: nay, if you bring a candle or other light, and set it euen before their eyes; you shall not haue them to awake nor moue. An infant after it is borne, sleepeeth for certaine moneths at the first, and in manner doth nothing els. But the elder hee waxeth, wakefull is he euery day more than other. Babes at the very beginning do dreame. For they will waken and start suddenly in a fright, and as they lie asleep, keep a sucking of their lips, as if it were at the breast heads. Some neuer dreame at all. And if such chance contrary to this custome, for to dreame once, it hath bin counted for a signe of death, as we haue seene and proued by many examples and experiments. And here in this place there offereth it selfe a great question, and very disputable *pro & contra*, grounded vpon many experiments of both sides: namely, whether the soule of man while the body is at rest, foreseeeth things to come: and how it should so do; or whether this be a thing of meer chance and altogether coniectural, as many others be? And surely if we go by histories, we may find as many of the one side as the other. Howbeit all men in manner agree in this, That dreames either immediatly vpon drinking wine and full stomacke, or els after the first sleepe, are vaine and of no effect. As for sleepe it is nothing els but a retreat and withdrawing of the soule into the mids of it selfe. Euident it is, that Horses, Dogs, Kine, Oxen, sheep, and goats do dreame. Whereupon it is credibly also thought, that all creatures which bring forth their yong quick and liuing, do the same. As for those that lay eggs, it is not so certaine that they dreame: but resolu'd it is, that they all do sleepe. Now let vs passe and proceed to the treatise of Insects.



THE ELEVENTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

The Proeme.

It remaineth now to write of those living creatures, which are the most subtil of all others that Nature hath brought forth: for as much as some are of opinion, That they breath not, yet have any blood at all.

CHAP. I.

¶ Of Insects in general.

Many and sundry sorts there be of Insects, as well among land creatures as those that fly in the aire. Some are winged, as bees: some have partly wings and partly feet, as Pill-mires: others want both, and neither fly nor go on their feet. And wel may they all be called *Insecta*: by reason of those cuts and diuisions, which some haue about the necke; others in the breast and belly; the which do go round and part the members of the body, hanging together onely by a little pipe and fitulous conueiance. There be of them, that haue not the body diuided entire, one part from the other by these inclosures, cuts, and wrinkles; but they appeare only either vnder the belly, or vpon the backe aboue, and go no deeper, neither yet round the whole compasse of the body. But a man shall perceiue in them certaine rings or circles, apt to bend and wind to and fro, and those so plated and plaited one ouer another, that in nothing elsewhere is more seen the workmanship of Nature, than in the artificiall composition of these little bodies.

CHAP. II.

¶ The industrie and subtiltie of Nature in framing these Insects.

In bodies of any bignes, or at least-wise in those of the greater sort, Nature had no hard piece of work to procreate, forme, and bring all parts to perfection; by reason that the matter whereof they be wrought, is pliable and will follow as she would haue it. But in these so little bodies (nay pricks and specks rather than bodies indeed) how can one comprehend the reason, the power, and the inexplicable perfection that Nature hath therein shewed? How hath she bestowed all the five senses in a Gnat? and yet some there be, lesse creatures than they. But (I say) where hath she made the fear of her eyes to see before it; where hath she set & disposed the tast; where hath she placed and inserted the instrument and organ of smelling? and aboue all, where hath she disposed that dreadful and terrible noise that it maketh, that wonderfull great sound (I say) in proportion of so little a body? can there be deuised a thing more finely & cunningly wrought than the wings set to her body? Marke what long-shanked legs aboue ordinary she hath giuen vnto them. See how she hath set that hungry hollow concauitie in stead of a belly: & hath made the same so thirstie and greedy after blood, and mans especially. Come to the weapon that it hath to prick, pierce, and enter through the skinne; how artificially hath shee pointed and sharpened it: and being so little as it is (as hardly the fineness thereof cannot be seen) yet as if it were of bignesse & capacity answerable, framed it the hath most cunningly for a twofold vse: to wit, most sharpe pointed, to prick and enter; and withall, hollow like a pipe for to sucke in

A and conuey the blood through it. Come to the Wood-worme, what mannet of teeth hath Nature giuen it, to bore holes and eat into the very heart of hard Oke? who heareth nor the sound that she makes whiles she is at her work? For in wood and timber is in manner all her feeding: We make a wonder at the monitrous and mighty shoulders of Elephants, able to carry turrets vpon them. We maruell at the strong and stiffe necks of buls, and to see how terribly they will take vp things and tosse them aloft into the aire with their hornes. We keepe a wondering at the rauening of Tygres, and in the shag manes of Lions: and yet in comparison of these Insects there is nothing wherein Nature and her whole power is more seene, neither sheweth she her might more than in the least creatures of all. I would request therfore the Readers, that in perusing this treatise, they will not come with a preiudicate opinion, nor (because many of these silly flies and wormes be contemptible in their cies) disdain, loath, and contemne the reports that I shall make thereof; seeing there is nothing either in Natures workes that may seeme superfluous, or in her order vnworthy our speculation.

CHAP. III.

¶ Whether Insects do breath, and whether they haue blood or no?

Diuers haue denied that they breath at all; and vpon this reason they ground their position: Because they haue no arterie or wind-pipe annexed or reaching to any instrument within of respiration. And they be of opinion, that they liue indeed as plants, herbes, and trees: howbeit (say they) there is a great difference betweene hauing life, and drawing wind or vitall breath. And by the same rule they asseme, that they haue no blood, which is in none that bee without heart and liuer. Neither do any things breath which want lungs. And from hence arise a world of other questions thereupon depending. For the same men deny flatly, that these creatures haue any voice: notwithstanding so great humming of bees, & singing sound of grasshoppers, and such other, whereof we will consider in due time & place, accordinglv. Verily for mine owne part, the more I looke into Natures workes, the sooner am I induced to beleue of heruen those things that seem incredible. Neither do I see any inconvenience to thinke, that these Insects may as well draw wind and breath without lungs, as liue without such noble and principall parts as are requisite for life in other creatures: according as we haue already shewed in the discourse of fishes and such like, that liue in the sea; how soeuer the quantitie, depth, and heights of the water, may seeme to impeach and stop their breath. For who would easily beleue, that some creatures should live at libertie, and liuing as they do in the mids of wind and aire, yet want wind and breath themselves; that they should haue a sense and care to seek their liuing, to engender, to worke, and to forecast for the time to come: and howbeit they haue no distinct members, to carry (as it were in a ship) their feuerall senses, yet that they should heare, smell, and taste; yea and be indued with other singular gifts besides of Nature, to wit, wisdom, courage, skill, and industrie. Indeed, confesse I must, that blood they haue none: no more haue all creatures that liue vpon the land: howbeit a moist humor they haue, somewhat like vnto blood, which serues them in stead thereof. Like as in Cuttells of the sea, there is found a certain blacke liquor in stead of blood: and in all the sort of Purples and such shel fishes, that excellent iuice which staineth & dieth so as it doth. Semblably in these Insects, whatsoeuer humor it is, whereby they liue, the same may well enough go for blood and so be called: all the while that euery man hath liberty to giue it what name he thinketh fittest. As for me, my purpose is not to judge and determine of these doubtful quillens, and their causes; but to set down and shew the nature of such things as be cleare and apparent.

CHAP. IIII.

¶ The substance of the body in these Insects.

These Insects, so far as a man may perceiue, seeme not to haue either sinewes or bones, no chine nor gristle, no fat, no flesh, ne yet so much as a tender and brittle shell, as some Sea-fishes haue, nor that which may be truly called a skin; but a certain corporal substance of a middle nature between all these: for their body without, is like a dry thing, and yet more tender and soft than a sinew: whereas in all other parts the matter is to be accounted rather drie than

than hard. This is the very substance whereof they consist, and nothing haue they besides. For within there is nought, vnlesse it be in some very few, who haue a certaine pipe or conduit in stead of a gut, & the same wrapped and infolded together. Which is the cause, that if they be cut in two and pulled in pieces, yet they haue a speciall property to liue long, and each part a sunder wil pant & stir by it selfe. The reason is, because the vitall vertue in them (whatsoeuer it is) is not seated in any one member, this or that, but spread and diffused throughout the whole body, and least apparent in the head, of all other parts: for, that alone, vnlesse it be plucked away together with the breast, moueth not one jot. No kind of creatures haue more feet than these: and the more they haue, the longer liue they when they be diuided a sunder, as we see by experience in the Scolopendres. Eies they haue, that is certain, & besides sight, they are not without the fences of feeling & tasting: some there be that smell, & a few that haue their hearing also. G

CHAP. V.

¶ Of Bees.

BETWEEN them all, Bees are principall, and by good right deserue especiall admiration, as being the only Insects ordained by Nature for mans vse. They gather hony, a most sweet, pleasant, fine, and wholesome liquor. They frame the hony combs, and work the wax, which serue for a thousand turns in this life. They endure pains continually, and dispatch their worke and businesse. They haue a policie and Commonwealth among themselves. They hold their severall counsels: and there is not a swarme or cast that they haue, without a king and captain of their owne: and that which is most admirable of all, there be ciuill fashions and customes among them. Moreover, being as they are, neither tame and gentle, nor yet to be counted wilde and savage, yet (see the wondrous worke of Nature) by the means of so little a creature, nay, a shadow rather (to say a truth) of the least creature, the hath effected a thing incomparable: what strength of sinewes, what force and puissance is able to countervail this so great industry and effectual power of theirs? What wit and policy of man is answerable to their discret and orderly course? Beleue me, they passe them all, and in this one point surpasse. That all things are common among them, and nothing know they priuat and seuerall. What should we debate and make question any more as touching their breath? Why should wee dispute of their blood, which cannot chuse but be very little, in such smal bodies? Let vs rather consider henceforth their wit, and the gifts of their mind. I

CHAP. VI.

¶ The naturall order and regiment that is in Bees.

BEES all winter time keep close within their hives: and good reason, for how possibly should they endure hard frost and chilling snow: how should they abide the piercing blasts of the North winds? And verily it is the manner of all these Insects so to doe, but yet they keepe not in so long. For why? being nestled warm as they are within our houses, they sooner doe recover their vigor, & come abroad betimes. But as concerning Bees, either the times haue changed, & places altered their course, or els the writers beforetime of this argument haue greatly erred: They begin to retire themselves and take vp their wintering harbor, presently vpon the setting and occultation of the star Vergiliæ: and come not forth into the field againe, vntill after the rising and apparition thereof. So that Bees go not abroad at the very beginning of the Spring, as Writers haue set downe (for who seeth not the contrary throughout all Italie) but remaine still close and secret, vntill that Beanes begin to bloom, before which time they settle not themselves to any worke or labour. But from thence forward, they lose not a day, they slack not their painful trauel, neither play they one jot, if the weather be faire & wil permit: the first thing they do, is to make their combs & wax, that is to say, their own habitations & store-houses. When they are provided of lodging, they thinke vpon the multiplying of their owne kind: and finally, they gather and make both hony and wax: the substance whereof they sucke from the floures of trees and hearbes, from the gums also of trees which breed such gluite matters; and besides, out of the iuice, gum, and rosin of the willow, elme, and cane. With these and such like, they plaister all the hie within throughout, as it were with a coat or parget, intermingling K

Agling withall other iuices that are more vnfauor, gathered from the bitterest hearbs they can get: to the end that they might keepe out other little vermines that are greedy of their hony: as knowing full well, that they are about a piece of worke which is worthwhile to be desired and sought after. Of this gummy and glutinous substance they frame also their dores and carries which are wide and large.

CHAP. VII.

¶ The proper termes belonging to their worke.

THE first foundation of their worke, skilfull hony-masters doe call Commofis: the second Pissoceros: the third Propolis, which lieth between those former coats and the wax of the hony combe, whereof there is so great vse in Physicke. Commofis is the first coat or crust of a bitter tast. Pissoceros commeth next after it, as it were a thinner course of pitch or varnish and a weaker kinde of wax, made of the more liquid and mild gum of vines and poplars. But Propolis consisteth of a more solid matter, as hauing the strength of some floures withall: howbeit, as yet it is no sul and perfect wax, but the foundation and strengthening of the combs: and serueth as a good defence against cold, and to stop the passage of waspes and such hurtful creatures as would do iniurie to the bees, for still a strong sent it carrieth, as which, many men do vse in stead of Galbanum. After this munition done, then followeth the prouision of that which is called Erithace, some terme it Sandaracha, and others, Cerinthus. This must serue for the bees meat, whereof they are to liue whiles they worke: and found it is oftentimes, laid apart within the concavities of their combs, it being also of a bitter tast. Now this Erithace commeth of the * Spring-dew, and the moisture issuing out of trees in manner of gum: in lesse abundance euer, when the South-west wind blows: but when it is full South, more blacke: and in the Northerly constitution, far better and more red withall. Great store hereof, Bees meet with vpon Almond trees. Menecrates saith, That it is a floure forehewing what haruest shall insue: * but no man saith so besides him.

* Rare straw
or Sea-dew,
Rore marini;

* Being decol-
ored with the
Homonymie
of the word
Cerinthus,
which hath a
double signifi-
cation.

CHAP. VIII.

¶ What flowers they be which Bees serue themselves most withall for their worke.

AS for wax, Bees gather and make it of the floures of all trees, herbs, and plants, sauing the docke and * Goose-foot, which are two kinds of herbs. Some except also a kind of Broom called Spart, but vntruly: for in Spaine (where there be many places full of that shrub) the hony carrieth the strength thereof in the taste. I am besides of opinion, that they be deceived who thinke that bees gather not of Oliue trees. For we see it ordinary, that there be more castles and swarms of Bees where Oliues grow in greater abundance. These pretty creatures hurt no fruit whatsoeuer. They will not settle vpon a floure that is faded, and much lesse of any dead carkeale. They vse not to go from their hie about their busines about 60 paces: & if it chance, that within the precinct of these limits they finde not floures sufficient: out goe their spies, whom they send forth to discouer forage farther off. If in this expedition, before they come home againe, they be ouertaken by the night, they couch vpon their backs for feare lest their wings should be ouercharged with the euening dew, and so they watch all night vntill the morning.

* Cheaopedi

CHAP. IX.

¶ Those that haue taken a speciall pleasure in Bees.

SUCH is the industrie of this creature, that no man need to wonder at those two persons who delighted so much in them, that the one (namely Aristomachus of Soli) for threecore years lacking but twaine, did nothing else but keep bees. and Philiscus the Thasian employed the whole time of his life in Forrests and Desarts, to follow these little animals: whereupon hee was furnamed *Agricus*. And both these vpon their knowledge and experience, wrote of Bees.

¶ *The order that they keepe in their worke.*

THe manner of their businesse is this. All the day time they haue a standing watch & ward at their gates, much like to the *corps de guard* in a campe. In the night they rest vntill the morning: by which time, one of them awaketh and raiseth all the rest with two or three big hums or buzzes that it giues, to warn them as it were with sound of trumpet. At which signall giuen, the whole troupe prepares to flie forth, if it be a faire and calme day toward, for they doe both foresee, and also foresaw when it will be either windie or rainie, and then will they keepe within their strength and fort. Now when the weather is temperate (which they foreknow well enough) and that the whole armie is on foot and marched abroad, some galler together the vertue of the floures within their feet and legges: others fill their gorge with water, and charge the downe of their whole body with drops of such liquor. The younger sort of them go forth to worke, and carry such stuffe as is beforenamed, whiles the elder labor & build within the hieue. Such as carry the floures aboutesaid, tuffe the inner parts of their legs behind (and those Nature for that purpose hath made rough) with the help of their forefeet: & those again are charged full by the means of their muffle. Thus being full laden with their prouision, they return home to the hieue, drawne euen together round as it were in a heape, with their burden: by which time, there be three or foure ready to receiue them, and those ease and discharge them of their lode. For this you must thinke, that they haue their severall offices within. Some are busie in building, others in plaistering and ouercasting, to make all smooch and fine: some be at hand to serue the workemen with stuffe that they need: others are occupied in getting ready meat and victuals out of that prouision which is brought in: for they feed not by themselves, but take their repast together, because they should both labour and eat alike, and at the same houre. As touching the manner of their building, they begin first about to make arch-work embowed, in their combs, and draw the frame of their work downward, where they make two little allies for every arch or vault, the one to enter in by, the other to go forth at. The combs that are fastened together in the vpper part, yea and on the sides, are vnitied a little, and hang all together. They touch not the hieue at all, nor ioine to it. Sometime they are built round, otherwhiles winding bias, according to the proportion of the hieue. A man shall find in one hieue hony combs sometime of two sorts: namely, when two swarms of bees accord together: and yet each one haue their rites and fashions by themselves. For scarce lest their combs of wax should be ready to fall, they vphold them with partition wals, arched hollow from the bottom vppward, to the end that they might haue passage every way to repaire them. The foremost ranks of their combs in the forefront, commonly are built void and with nothing in them, because they should giue no occasion for a theefe to enter vpon their labours. Those in the backe part of the hieue, are euer full of hony: and therefore when men would take out any combs, they turne vp the hieues behind. Bees that are employed in carrying of hony, chuse alwaies to haue the wind with them, if they can. If haply there do arise a tempest or a storm whiles they be abroad, they catch vp some little stony greet to ballance and poise themselves against the wind. Some say, that they take it and lay it vpon their shoulders. And withall, they flie slow by the ground vnder the wind when it is against them, and keep along the bushes, to breake the force thereof. A wonder it is to see and obserue the manner of their worke. They mark and note the slow-backs, they chastise them anon, yea, and afterwards punish them with death. No lesse wonderful alfo it is to consider how neat and cleane they be. All filth and trumperie they remoue out of the way: no foule thing, no ordure lieth in the hieue to hinder their businesse. As for the dung and excrements of such as are working within, they be laid all on a heap in some by corner, because they should not goe far from their worke: and in foule weather (when otherwise they haue nought to do) they turn it forth. Toward euening, their noise beginneth to slacke and grow lesse and lesse: vntill such time as one of them flieth about with the same loud humming, wherewith she waked them in the morning, and thereby giueth a signal (as it were) and commandement for to go to rest: much after the order in a campe. And then of a sudden they are all hush and silent.

CHAP.

¶ *Of the drone Bees.*

THe houses and habitations that Bees build first, are for the Commons: which being finished, they set in hand with a pallace for their king. If they foresee that it will be a good season, and that they are like to gather store of prouision, they make pailiuns also for the Drones. And albeit they be of themselves bigger than the very bees, yet take they vp the least lodgings. Now these drones be without any sting at all, as one would say vnperfect bees, & the last fruit of such odd ones are weary and able to do no more good, the very later brood & increase, and to say a truth, no better than slaues to the right bees indeed. And therefore the others as master Bees ouer them, haue them at their commandment: if any drudgery or such like businesse is to be don, out are they sent first: make they but slow haist in that they are set about, sure they are to pay for it, and to be punished without mercy. And not only in their ordinarie worke they serue them in good stead, but also they help them to multiply: for the hotter that the place is, the more hope there is of a greater increase. Certes, this is found by experience, That the better the hieue is peopled with a number of bees, the Calf when time comes will bee the greater, and the oftner will they swarme. But after the hony is growing once to maturity and perfection, then begin they to drie these drones out of doores: nay, ye shall haue many bees set vpon one poore drone, and kill him out-right. So that a man shall not lightly see any of that kind but in the Spring time.

If one pluck off the wings from a drone, and put him again within the hieue, he will neuer lin vntill he haue done the like by all the rest of the same kind. As touching the roiall pallaces for the kings and capitaines that shall be, built they are all most stately, great of reeite, in few magnificent, seated by themselves apart, and like citadels raised vpon some high knap or tuft of a mountaine. If one of these castles chance to be preled or crushed, there will no more come of that princely race. All the lodgings and roomes where the bees abode is, are fix cornered, according to the number of feet employed in that worke. None of all this is done at any set time or day appointed: but they take the opportunity when they can espie faire weather to fit their businesse, and so do these things by snatches. And surely within a day or two at the most, they fill their store-houses with hony.

¶ *The Nature of Hony.*

THis pleasant and sweet liquor which we call hony, is ingendered naturally in the aire, and especially by the influence and rising of some starres: but principally during the seruent heat of the canicular daies, euen when the Dog-star is in his full power and force: neuer before the appearing of the star Virgilix, but alwaies before day. For so about the day breake betimes in the morning, the leaues of trees are found bedewed with hony: and looke who soeuer they are, that haue occasion to be abroad in the aire about the dawning of the morrow, they may euidently perceiue their cloths wet with a clammy humor of hony, yea, & their hairs glewed therewith together, if they go bare headed. Be it what it will, either a certaine sweat of the skie, or some vnctuous gelly proceeding from the stars, or rather a liquor purged from the aire when it purifieth it selfe: would God we had it so pure, so cleare, and so naturall, and in the own kind refined, as when it descendeth first, whether it be from skie, from star, or from the aire; For euen now such as it is, passing as it were through so many hands: namely, falling from a region so high and remote from vs, and in the way as it cometh catching much filth and stamely, infected with the grosse vapour of the earth which it meeteth in the fall: moreover, sucked & drunke (as it is) by the Bees from the leaues of trees and grasse, and so gathered and laid vp in their little bellies or bladders (for at their mouth they spew and cast it vp again:) corrupted also and sophisticated with other humors drawn out of floures: finally, so long soking within the hieues, and suffering so many alterations: yet for all the sorrow, a great resemblance it carrieth still with it of a most pleasant, sweet, and celestiall liquor.

E c 2

CHAP.

CHAP. XIII.

¶ The best kinde of Honie.

THe best hony is euer there, where the best floures are, within the receptacles whereof, it lieth. As we may see in the country about Athens, which carrieth the name for honey: also in Sicilie within those territories about Hymettus and Hybla: and lastly, in the Isle Calydna. Now this hony, whereof we treat, is at the first cleare and thin as water; and for certaine daies in the beginning, it workes and boiles like to new wine, and so purgeth it selfe. By the 20 day it getteth a certaine consistence and thicke substance, and soon after gathers a thin cream or skin ouer it: which in the very heat of working, is raised of a scum, and so thickneth. The best simply that bees can sucke, and least infected with the corruption of 3 branches, is that which they get out of the leaues of Oke, Tilia [i. Linden tree] and Canes.

CHAP. XIII.

¶ The sundry sorts of hony, according to diuers regions.

Honie (as we said before) is better or worse, according to the region where it is gathered; and that in many respects. For in some place ye shall haue goodly combs: howbeit, more commendable for wax than the hony in them: as in the Pelignians country, and Sicily. In others, and namely in Candie, Cyprus, and Africk, the combs yeeld more hony than wax. Some countries there be, especially in the North parts, where the combs passe for bignes: in so much as in Germany there hath bin a hony-combe scene eight foot long, and blacke all within. But in what region fouer it be that hony is found, three kinds there be of it. First, the Spring hony made of floures only, like as the comballo: and thereupon the Greeks call it Anthion, which is as much to say as the Floure-hony. Some would not haue this to be once touched, but to serue for nourishment of the young bees, that the swarmes or casts may be more strong and lustie. Others againe leaue for the bees of none lesse than of it: by reason of the great plenty like to follow, at the rising of those notable stars in the Summer ensuing. Moreover, the combs are in their principall beauty about the Sun-stead in summer, when daies be longest, at what time as the Vine and Time do begin to floure. Also in taking forth of the hony combs, needfull it is to be well aduised in ordering the matter for the prouision of food for bees. If they be cut short and destitute of their meat, they either despaire and die for want, or els depart and flie away. Contrariwise, if you leaue them too much, plenty breeds idleness, that they will not labour: neither deigne they to feed of Erithace, their ordinarie food, but fall to the good hony. They therefore that be well experienced in these matters, thinke it good to leaue them the twelfth part of this store and vintage, if I may so say, which is gathered in the combs. And verily, it seemeth that Nature hath ordained a certaine fey day for to begin this vintage, if men would take knowledge thereof, and make it well; namely, the 30 day, after the bees swarmed and went forth: and vually it falleth out, that this gathering cometh within the month of May. A second kind of hony there is, which we call Summer hony, and is named also Horaeum, of that principall season wherein it is made, namely, in the very midst of dog-daies, when the star Sirius is in his full strength: and that commonly is 30 daies after the Sun-stead. And I assure you, Nature hath shewed her admirable and excellent power to men ward in this behalfe: in case their fraud and deceit would suffer her works in their entire and proper nature without corruption and sophistication, which marreth all, and maketh nothing but confusion. For vpon the rising and apparition of any star, and especially of those that be more excellent than the rest, or after that a rainbow is seen above the earth, and no showers of rain presently follow, but a drizzling dew warmed with the raies and beams of the Sun: ye shall haue that which falleth, nor to be bare hony, but a very medicinable thing, euen a celestiall gift, singular good for cures and vlters, yea, and comfortable to the principall noble parts within the body. And if this happen to be at the rising of the dog-star, and it chance withall, that vpon the same day (as oftentimes it falleth out) Venus, Iupiter, or Mercury bee Oriental, then shall yee haue so heauenly a sweet liquor, that no one thing in the World may bee comparable to it for the curing of all our maladies, and euen to reduce and recouer vs backe from death vnto life, like vnto that celestiall and

A and diuine Nectar, which immortalizeth the gods aboue.

CHAP. XV.

¶ The markes of good hony.

More plenty of hony is gathered in the full of the Moone, than at any other time: and if therewith the weather be faire, the same wil be more vntuous and fattie. In all kinds, the best hony is that, which runneth of it selfe as new Wine and Oile, and called it is. Accodon, as a man would say, gotten without care & trauell. All Summer hony is red, as being made in the driest season of the yere. The hony which cometh of Time, is held to be the best and most profitable; in colour like gold, in tast right pleasant; euident to be knowne by the litte leaues therein: and the same is likewise fattie. That which is made of Rosemary, or within the aire and vapour of the sea, is thick: and such verily as is thus candied, and will not run like life-hony, is nothing commendable. As for Time hony it will not thicken: and if a man touch it, rope it wil and draw small slimie threds after it: which is a principall signe of the weight and heauiness thereof. If hony be short in the handling, and soon breake, and that the drops part one from the other, it is thought to be a token of the worst and courtlest of all. Another triall there is besides of good hony, namely, if it be fragrant and odoriferous to smell vnto, sweet in taste, & biting withall, or quick at the tongues end, glutinous and cleare. As touching the drining of hies for summer hony, *Thasius Dionysius* is of opinion, that the tenth part thereof should be left for the bees, namely, if they were full: if not, then according to the proportion: but if they were but light and very thin, he would not haue them to be touched at all. The Athenians goe by this rule, and do obserue duly the Capricifical day, which is kept wholly vnto *Vulcan*: for then they euer begin to driue their hies for this kind of honie.

CHAP. XVI.

¶ Of a third kinde of Honie: and how a man should know good Bees.

THere is a third sort of wild hony, which the Greeks call *Ericaeum* [i. Heath or Ling hony] and is of least reckoning. It is gathered after the first rain in Autumne, when the heath and lings only bloom in the woods, whereupon it seems as if it were sandy. This kind of hony is ingendered for the most part after the rising of *Arcturus*, much about the Ides of September. Some there be that continue in gathering Summer hony to the rising of *Arcturus*: betwene which and the Autumne *Equinoctial* are 14 daies, & from thence vnto the setting of *Virgilie* (namely for the space of 48 daies) the said heath is most in his blooming time. This shrub the Athenians call *Tetralix*; the Eubrians name it *Sifara*: & they repute it to be a floure most pleasant to bees, haply, because at that time there is no plenty of other floures. This gathering of hony is about the end of vintage, & the occulation of the *Virgilie*: & commonly ends by the Ides of Nouember. In drining of the hies for this hony, by good reason, twofold parts thereof would be referred for the bees: & especially those corners of the combs, which haue in them the prouision called *Erithace*. From the midst of winter to the rising of *Arcturus*, for 60 daies bees are nourished only with sleep, without any other food. But from that time vnto the spring equinoctial, and namely, where the weather is more warm, they are awake. Howbeit, they lie still in their hies, & then fall to their victuals which they had laid vp in store against that time: but in Italy they do the like indeed after the rising of the star *Virgilie*: howbeit, till then they do nothing but sleep. And there verily, men vse when they take the hony forth of the hies, to weigh the combs, and so by weight dispense & set out how much they will leaue them for their food: hauing this opinion, that they are bound to deale in iustice & equity euen with the very bees: in so much, as it is commonly said, if they be defrauded of their due in this society & part-taking, and find faulthood in fellowship, they wil die for griefe: & so both the old stock will be lost, and the hony also of a new increase. In the first place therefore, this is a rule, that such folk only be set about this businesse: to driue the hies, who are neat & clean. A theefe & a woman whiles she is in her month's sickness, they abhor. In the taking out of hony, the best means to driue away the bees, is to smoke them out of the hie: lest that you anger them, or that they deuoure the honie themselves with more greedines. Moreover, when they grow to be idle, persuming & smoking of

of them thus now and then, maketh them more fresh to go about their worke. For when they lie still and doe nothing, they make their combs looke dead and blackish. Again, if they be overmuch smoked, they will be the worse for it; and surely, the very hony soon catcheth the hurt hereof, for tender and weake will it be, that with the least dew that is, you shall haue it to turn and wax soure. And therefore in all kinds of hony they obserue and keepe that which is called Acapnon [without smoke.] The hony gathered of both sorts of Thyme, called thereupon Bithymum, is not white; howbeit, very good it is for eyes and to cleanse veyers.

Now as touching the generation of Bees, and how they multiply and increase, much dispute there hath bin among the learned, and a nice question this is. For first and foremost, bees were neuer seen to ingender one with another; and therefore most men haue bin of opinion, that yong bees must needs be made of floures fitly and hand somely laid together and composed, according to Natures lore. Others say, that one master Bee which is the king in euery swarme, doth beget them all; and that he forsooth is the only male; bigger also than the rest, and more strong, because he should not faint and faile in the action: for without such an one, we see there is no breed; and him all the other bees attend vpon, not as their leader and captain, but as the female follow the male. Certes this were a good coniectural opinion and sounding to a truth, but that the breed of these Drone-bees aforesaid, doth checke and ouerthrow it cleare: for what reason is there that one and the same manner of procreation, should bring forth some perfect & others vnperfect? The former opinion yet might seeme more probable, but for another difficulty and inconuenience that crosseth it too; for wherevilles in the vtmost edges and sides of the combs, there are seen to breed the bigger kind of bees, which chase and driue the others away; and this vermin is called Oestrus [the gad-bee or horse flye.] Now if those little wormes or grubs from whence the bees come, were made of floures, which they themselves formed and brought into fashion, how cometh this gad-bee, and whereof is he made? This is certaine, that bees couey and sit as hens do: and that which is (after a sort) by them hatched, seemeth at the first to be a little white grub or magot, lying crosse ouerthwart the hony, and so fast sticking thereto, as if it seemed to feed thereupon. The king that shall beare the very first is yellow, and of the colour of hony; as if he were made of the most choise and excellent floure of all the rest: nothing like to a grub as the other, but presently hath wings. The rest of the multitude, when they begin to take some shape, are called Nymphs: like as the Drones at the beginning, be termed Sirenes or Cephenes. If a man take their heads from either sort, before they be winged, it is a most pleasant and excellent meat for the old dams. In proceesse of time as they grow bigger, the old bees distill and drop meat into their mouths, as they sit vpon them: then they keep most humming (as some thinke) for to set combs into an heat, which is requisite and necessarie for the hatching of them; and thus they continue, till the little pellicles or membranes be broken: within which, euery one lieth by it selfe, as eggs; and then they break forth all together and shew themselves accomplished bees. The manner and experiment hereof, was seene vpon a time in a ferme neere vnto Rome, belonging to a nobleman of Rome who sometime had bin Consul: for he caused his hives to be made of lanterne horns that a man might see through into them. These yong worms be 45 daies before they come to their perfection.

There is found in some combs, a certain bitter thing and hard like to wax, which the Latines call *Clerus*. This is as it were the abortive and vntimely fruit of the bees, to wit, when either by maladie or idleness, or rather vpon some barrennesse and vnfruitfull disposition by nature, bees are not able to bring the same to perfection.

As for the yong bees, they are not so soon abroad, but they begin to labor with their mothers; and are trained by them to learn how to gather hony. This yong people haue a yong king also: vnto whom they make court, and whom they follow. And many such kings are bred at first, for feare lest they should want; but when the bees are grown big, they all agree with one accord and voice, to kill those that be most vnwoward among them, for feare they should make diuisions, factions, and siding to parts. These kings be of two sorts: those that are red all ouer, be better than the blacke or partly coloured. All the race of them be very faire and goodly to see to: and twice as big as the rest: their wings shorter, their legs straighter in their port and manner of march, more stately: carry in, in their front a white star, like a diadem or coronet: far brighter also and more neat they be, than the common sort.

CHAP.

CHAP. XVII.

¶ The regiment of Bees, and their government.

What shall a man now dispute about *Hercules*, whether there was but one of that name or many? Likewise as touching the Sepulchre of Prince *Bacchus*, where and which it is? As also trouble his head in many other such like antiquities, buried by long continuance of time. For behold, in one small matter that is daily seene in our country houses, in a thing annexed to our fermes, and whereof there is such store, all Authors who haue written of Agriculture are not yet resolved: namely, Whether the king of Bees alone hath no sting, and is armed only with maiestie; or whether Nature hath bestowed a sting vpon him, and denied him only the vse thereof? For certaine it is, that this great commander ouer the rest, doth nothing with his sting; & yet a wonder it is to see, how they all are readie to obey him. When he marches abroad, the whole armie goes forth likewise: then they assemble together, and enuiron him round about, they are of his guard, & so close they keep vnted together, that they will not suffer him once to be seene. At other times, when all his people are busie in labor, himselfe (as a right good captain) ouerseeth their workes, goes about from one to another, encouraging them in wel doing, and exhorting them to plic their businesse: himselfe only exempt from all other trauell & pains taking. About his person he hath a certaine guard euer attendant: he hath his Lieutors & officers alwaies in readinesse, in token of maiestie and princely port. He neuer fers forward, but when the whole swarme is prest likewise to goe forth: and in truth, long time before a man may perceiue that they be about a voyage and expedition; for, many daies together there is an extraordinarie humming and noise within, whiles they prepare to dilodge, trusting vp as it were their bag and baggage, and expecting only a faile day of remoue. And suppose that the king haue in some battaile lost one of his wings, yet will not his hoast forsake him and flie. When they be in march, each one desires and strives to be next the prince, as taking a joy and pride to be seene of him, how lustily they performe their deuoir. If he begin to be wearie, they support him with their shoulders: if he be tired indeed and faint outright, they carry him full and whole. If any one of their owne companie chance to faile for very wearinesse, and doe drag behind, or stray aside and wander out of the way, it will yet endeavour to follow the armie only by the smell and sent. Where the king once settles and takes vp his resting place, there they all pitch downe their tents and encampe. And I assure you, herein lieth a matter of great weight and importance; as touching the Auguries and presages gathered by the manner of their settling, prognosticating both to publicke states and also to priuat persons, something to ensue of much moment, either for good or otherwise; according as they haue been obserued to hang together in clusters like bunches of grapes, either at mens houses, or on the temples of the gods. By occasion whereof, folke had recourse to their deuotions and sacrifice, for to appeale the heavenly powers; and yet oftentimes such foretokens haue not bene expiat without some strange cuents in the end. There was a swarme of Bees rested vpon the very lips and mouth of *Plato*, when he was but a very babe & infant; forsoewing (no doubt) that singular eloquence of his, and sweet vtterance that afterwards he had. Another cast of Bees settled within the very camp of General *Darius*, the very same day, when he obtained that notable victorie at *Arbalo*. By which examples we may see, that this coniectural skill and learning of these Soothsayers holds not alwaies, nor proues euer true: for they forsooth suppose this to be euermore a portentous signe of some fearful cuent and misfortune. To returne again to our captain Bee: if he chance to be entrapped and surprized by the enimie, the whole armie is sure withall to bee taken with him. If he be defeated & slain, the field is lost: all the rest be scattered, and seek their fortune to serue some other prince: for without one king or other, liue they cannot. Sometime they are driuen to kill those of the kings race, and namely when there be many kings together: but this they doe perforce and full against their wills: and before they will do so, they chuse rather to minare and pul down the houses wherein they were bred; especially when there is some feare of scarcitie; by reason of the vnkind season: and at such a time also, they chase and driue away the drone bees. And yet I see some doubt made of them: for diuers be of opinion, that they be a kind of Bees by themselves, and that the rest do set against them as veru reueses. The biggest they are of all others, but blacke and broad bellied: good reason therefore that they should be

be called Theeues, because they come stealing and cat vp their honey. Certaine it is, that these drones be killed by the other Bees: and surely, king of their owne they haue none. But how they should be naturally without a sting, there is some question, & the same as yet not determined. This is well known, that in a moist and rainie spring, Bees multiply better: but if it be drier weather, there will be more increase of hony. Now if it happen, that the meat in one hieue be spent, the Bees belonging thereto will assaile their next neighbors, with intent to rob & spoile them of their prouision. But they on the contrarie side, put themselves in battel array, with full intent to take them againe. And if there chance to be a keeper by, to see the combat, that part which perceiues him to fauor their side, will not once make at him for to sting him. Other causes there are besides, which make them often to go together by the ears, & then shall ye haue seuerall captaines to arange their battalions one against another. But most of all they brawle and jar vpon occasion of gathering and carrying floures, whiles they call each one to his owne companie, for to come forth and take part. But all this great ray is soon parted and dispatched, either by casting vp some dust among them, or by making a little smoak & perfume vnder them. And reconciled soone they be againe, with setting before them a messe of milke, or honied-water.

CHAP. XVIII.

¶ Of the sundrie sorts of Bees in generall: and what things be contrarie and hurtfull vnto them.

There is a kind of rustical and wild Bee: and such are more rough and hideous to see to: much angrier also and curst than the rest: howbeit, more laborious and painfull by farre. Of domestical and tame house-Bees, there are two sorts. The best be those that are short, well trust vp and round, and withall, painted with sundrie colours. The long ones be the worse, and such as resemble waspes: and yet the worst of all others, be those that are hairie all ouer. Within the kingdom of Pontus there be white Bees, and those make honey twice in euerie moneth. Moreover, along the riuer Thermoodon, there be two sorts more. The one, gathers honey in trees: others, within the ground, and bring great increase thereof: for they frame their combs with a threefold course and ranke. The sting that Nature hath giuen vnto Bees sticketh within their bellies. Some are of opinion, that with the first prick they giue with it, they die presently. Others hold, that they die not withall, vnlesse they thrust it forth so far, that some of the gut follows after: many howeuer it be, they become afterwards no better than drones: neither gather they any more honey, as if they were guelued of their vigor and strength, so as they cease to doe good and harme both at once. We find it written in Chronicles, that horses haue been stung to death by them. Filthie stinking fauors they cannot abide, and namely, such as be contagious: and from them will they flie farre enough. Nay more than that, sure they will be to haunt & sting them that smell as they go of sweet pomanders and odoriferous ointments, notwithstanding they be otherwise themselves subject to the injuries of most liuing creatures. For first and foremost, they are molested and assailed by those of their owne nature, but yet degenerate and of bastard breed, to wit, Waspes and Hornets: also by a kind of Gnats called Muli-ones, Swallows, Martins, and some other birds, make foule worke among them, and are their mortall enemies. The Frogs lie in wait for them as they come to drink: which is the principall worke they haue to doe, when they be about to multiply and breed yong. And not those Frogs only which keep in standing pooles and running riuers, but those land-Frogs of a Toades kind will come of their owne accord from out of the brambles and briars where they keep, and leap vp to the very dore and entrance of the hieue: were they will blow and breath in vnto them: and when the Bees come flying forth thither, to see what the matter is, soone are they snap vp and deuoured. And as for Frogs, all the sort of them are supposd not to feele the prick of their sting. Sheep also are no friends of theirs: for if they be once intangled within their wool, hardly can they get out againe. Seeth but Crab-fish neer to their hieues, the very aie & smel thereof will kill them. Ouer and besides, Bees naturally are many times sick: and that do they shew most evidently: a man shall fee it in them by their heauie looks, & by their faintnesse in their busines: ye shall mark how some will bring forth others that be sicke and diseased, into the warme sun, and be readie to minister vnto them & giue them meat. Nay, ye shall haue them to carie forth their dead, and to accompanie the corps full decently, as in a solemne funeral. If it chanceth that

A the king be dead of some pestilent malady, the commons & subiects mourne, they take thought and griue with heauy chere and sad countenance: idle they be, and take no ioy to doe any thing: they gather in no prouision, they march not forth, onely with a certaine dolefull humming they gather round about his corps, and will not away. Then requisite it is and necessarie to seuer & part the multitude, and so to take away the body from them, otherwise they would keep a looking at the breathlesse carcase, and neuer go from it, but still moan and mourne without end. And euen then also they had need be cherished and comforted with good victuals: otherwise they would pine away & die with hunger. To conclude, a man may soon know when Bees be well in health, by their cheerfulness and fresh hue that they carry.

CHAP. XIX.

Diseases of Bees.

There be diseases also and imperfections in their worke: and namely when they fill not their combs, or bring not to perfection their yong Bees. The first is called Cleros, like as the other Blapsgonia. Moreover, the found made by reuerberation of the aie, which men call Eccho, is hurtfull vnto them, for they feare mightily that resounding noife comming with a double stroke. Mists & fogs also trouble them much: as for spiders, they be their greatest enemies of all others, in case they can preuaile so much as to enter into the hieue & weaue a copweb within it: for they kill all the Bees, and there is no remedie against it. Again, that Moth or Butterfly which vseth to fly about the fluffe of a candle burning, (a poore silly flie of their selfe, and of base account) here doth much hurt, and that in diuers sorts, for not only it self eateth and gnaweth the wax of their combs, but also doth blow and leaue behind them such excrements as afterwards proue other moths. Also, wherefoeuer he goes and flies within the hieue, he leaues behind him a certaine substance, comming most from the dusty downe of his wings, with which he thickeneth the threds as it were of copwebs. There breed likewise euen in very wood certain worms, which about all things make means to eat the combs. What should I speake of their owne greedy feeding and glutting themselves with too much liquour of the floures, in the Spring time especially: whereupon ensueth a dangerous flux and loosenesse of their belly. As for oile, it is not bane to Bees only, but also to all other Insects: especially if a man dip their heads in it, and then let them be in the Sun, for presently they will die of it. Many times Bees are causes of their owne death, with getting a surfeit by excessive deuouring of hony, namely when they see it ready to be taken out of the hieue: for otherwise they are very thrifty ouer-great sparsers, and such as at other times will driue out those that wast prodigally, and be gluttonous, no lesse than such as be idle larks, and slow at worke. Nay, euen their own hony doth them hurt; for if they be anointed therewith in their hinder parts, they will die vpon it. Lo how many enemies this creature, so liberal and bountifull, hath! see how many casualties it is subiect vnto: and yet what be these I haue already rehearsed, in proportion and comparison of those which are omitted. Their remedies will we speake of in convenient time and place: for this present content I will my selfe to treat only of their natures.

CHAP. XX.

¶ How to keepe Bees to the hieue: and the manner of repairing them.

Bees ioy in the clapping of hands, and ringing of brasen basons: at the found thereof they will assemble and come together: whereby it is plain, that they haue the sense of hearing. When they haue done their task of worke, when they haue brought forth their yong ones, and fully accomplished all their deuoir, then they perform a solemne exercise: wherein after they haue flown abroad in the open aie at libertie, fetched their compass about on high, gathered into rings and rounds in manner of tournament for their pleasure: then at last when it is time of repast they return home again. The longest time that they can liue (say that they passe through all dangers, and no misfortune light vpon them, but euery thing that is aduerser fall out well and happily) is not about seuen yeares. And neuer was it knowne or heard of, that an hieue continued about ten yeares. Some Writers be of opinion, that dead Bees if they be kept within a house all a Winter, and when the Spring is come be laid forth in the hot Sunne

Sun to fry, and one whole day be kept covered all ouer with fig tree ashes, they will reuiue and be quick again. But suppose they be not only dead, but their bodies also lost and gon, some say they may be repaired, and a new swarm ingendred, by laying the fresh panches of oxen or kine newly killed, with the dung, garbage and all, within a dunghill there to putrifie. *Virgil* affirms, that the carcasses of any young steers will do the same: like as dead horses will bred waspes and hornets: and Asses carrion turne to be Beetle flies, by a certain metamorphosis which Nature maketh, from one creature to another. And yet there be none of all these but are seen to engender: howbeit the manner of their breed is much after the nature of Bees.

CHAP. XXI.

¶ Of Wasps and Hornets.

WAsps vse to build them nests on high of earth and clay, and therein make their roomes and cels of wax. Hornets, in caues and holes vnder the ground. All these verily haue their chambers made with six corners, and yet their nests consist of some barke and substance like cobwebs. And as they be a barbarous and sauage kind of creatures, so their yong is not vniforme: one is ready to fly abroad, while another is but yong & not fledge, and a third a meere worrne and grub still. All these breed in Autumne, and neuer in the spring. When the Moone is in the full they increase maruellously. As for the little waspes, called *Ichneumon*es (and lesse they be than others) they vse to kill one kind of spiders, called *Phalangia*, and carry them into their nests: they besmeare them all ouer with a liniment, sit ouer them, and so procreate their own kind. Moreouer, all the sort of these liue vpon flesh, contrary to the manner of Bees, which will not touch a dead carcasse. But waspes hunt after the greater flies, and when they haue whipt off their heads, carry away the rest of their bodies for their prouision. The wild Hornets vse to keep in hollow trees: all winter time, like other Insects, they lie hid, and liue not about two yerres. If a man be stung with them, hardly he escapes without an ague: and some haue writen, that 27 pricks of theirs will kill a man. The other Hornets which seeme to be the gentler be of two sorts: the lesse of body do worke and trauell for their liuing, and they die when winter is come; but the greater sort of them continue two yerres: and those also are nothing dangerous, but mild and tractable. These make their nests in the spring, and the same for the most part hauing foure dories or entries vnto them, wherein the lesser labouring hornets aboue said are ingendred. When those are quick, brought to perfection, & gotten abroad, they build longer nests; in which they bring forth those that shall be mothers and breeders; by which time those yong hornets that worke be ready to do their businesse and feed these other. Now these mothers appeare broader than the rest, and doubtfull it is, whether they haue any sting or no, because they are neuer seen to thrust them forth. These likewise haue their drones among them as well as Bees. Some think, that toward winter these all do lose their stings. Neither Hornets nor Waspes haue kings or swarms, after the maner of Bees, but yet they repaire their kind, and maintaine their race by a new breed and generation.

CHAP. XXII.

¶ Of Silke-wormes: the *Bombylins*, and *Necydalus*. And who first inuented silke cloth.

A Fourth kind of flie there is breeding in Assyria, & greater than those aboue named, called *Bombyx* [i.e. the Silke-worme.] They build their nests of earth or clay, close sticking to some stone or rock, in manner of salt; and withall so hard, that scarcely a man may enter them with the point of a spear. In which they make also wax, but in more plenty than bees: and after that, bring forth a greater worrne than all the rest before rehearsed. These flies ingender also after another sort; namely, of a greater worrne or grub, putting forth two hornes after that kind: and these be certain canker-wormes. Then these grow afterwards to be *Bombylij*; and so forward to *Necydali*: of which in six moneths after come the silke-wormes *Bombyces*. Silke-wormes spin & weave webs like to those of the spiders, and all to please our dainty dames, who thereof make their fine silks and veluets, forme their costly garments and superfluous apparell, which are called *Bombycina*. The first that deuised to vneawe these webs of the silke-worme,

A worrne, and to weave the same againe, was a woman in Coos named *Pamphila*, daughter of *Latomus*: and surely she is not to be defrauded of her due honor and praise, for the inuention of that fine silke, *Tiffanie*, *Sarcenet*, and *Cypres*, which in stead of apparell to couer and hide, these women naked thorough them.

CHAP. XXIII.

¶ Of the Silkworme in Cos.

IT is commonly said, that in the Isle Cos there be certaine Silkwormes engendred of floures, which by the meanes of rain-showers, are beaten downe and fall from the Cypres tree, *Terebinth*, *Oke*, and *Ash*: and they soone after doe quicken and take life by the vapor arising out of the earth. And men say, that in the beginning, they are like vnto little Butterflies naked, but after a while (being impatient of the cold) are ouergrown with haire; and against the winter, arme themselves with good thick-clothes: for being rough-footed, as they are, they gather all the cotton and downe of the leaues which they can come by, for to make their fleece. After this they fall to beat, to felt & thicken it close with their feet, then to card it with their nailes: which done, they draw it out at length, and hang it between branches of trees, and so kembe it in the end to make it thin and subtile. When all is brought to this passe, they enwrap & enfold themselves (as it were) in a round bal and clew of thread, and so nestle within it. Then are they taken vp by men, put in earthen pots, kept there warme, and nourished with bran, vntill such time as they haue wings according to their kind: and being thus well clad and appoired, they be let go to do other businesse. Now as touching the wool or fleece which they haue begun, men suffer it to relent in some moisture, and so anon it is spun into a small thread, with a spindle made of some light Kex or Reed. This is the making of that fine Say, wherof silke cloth is made; which men also are not abashed to put on and vse, because in summer they would go light and thin. And so far do men draw back now a daies from carying a good corlett & armor on their backs, that they think their ordinarie apparell doth ouer-lode them. Howbeit, hitherto haue they not medled with the Assyrian Silkworme, but left it for the fine wines and dames of the city.

CHAP. XXIV.

¶ Of Spiders, and their generation.

IT were not amisse to ioine hereunto a discourse of Spiders, for their admirable nature, which deserues a speciall consideration. Wherein, this is first to be noted, that of them there be many kinds, and those so well known vnto euery man, that needles is to be particularize & stand much vpon this point. As for those which be called *Phalangia*, their stinging and biting is venomous, their bodie small, of diuers colors, and sharpe pointed forward; and as they go, they seeme to hop and skip. A second sort be black, and their feet are exceeding long. All of them haue in their legs, three joints, The least of this kind, called *Lupi*, spin not at all nor make any webs. The greater, stretch forth their webs before the small entries into their holes within the ground. But the third kind of Spiders, be they which are so wonderful for their fine spinning and skillful workmanship: these weave the great and large cobwebs that we see; & yet their very womb yeeldes all the matter and stuffe wherof they be made. Whether it be, that at some certain season naturally their belly is so corrupt (as *Democritus* saith); or that within it there is a certain bed (as it were) which engenders the substance of silke. But surely whatsoever it is, so sure and steadie nailes the Spider hath; so fine, so round, and euen a thread the spinnes, hanging thereunto her selfe, and vsing the weight of her owne bodie in stead of a where; that a wonder it is to see the manner thereof. She begins to weave at the very mids of the web, and when she hath laid the warpe, brings ouer the woofe in compasse round. The mathes and marks she dispenses equally: by euen spaces; yet so, as euery course grows wider than other: and albeit they do increase still from narrow to be broader, yet are they held and tied fast by knots that cannot be vndone. Mark, I pray you, how artificially she hides the snares in that net of hers, made into squares, to catch the poore flies. A man would not thinke (who sees the long yarne in her web wrought fierce-wile, smoothed and polished so cunningly, and the verie manner of the woofe so glewlike and clammy as it is, of it selfe) that all were to any purpose, and so framed for that which she

she intends. See withall, how slacke and hollow the net is made to abide the wind, for feare of breaking; and thereby so much the better also to fold and enwrap whatsoeuer comes within her reach! What a craft is this of hers to leane the vpper part thereof in the front vndone, as if she were wearie (for so a man may guesse, when he can hardly see the reason) and (as it is in hunters net and toile) that so soone as those nets be stumbled vpon, they should cast the flies headlong into the lap and concauitie of the net? To come now vnto her nest and hole: Is there any Architecture comparable to the vault and arched frame? And for to keep out the cold, how is it wrought with a longer and deeper nap than the rest! What subtiltie is this of hers, to retire into a corner so far from the mids, making semblance as though she meant nothing lesse than that she doth, and as if she went about some other businesse! Nay, how close lies she, that it is impossible for one to see, whether any bodie be within or no! What should I speake of the strength that this web hath to resist the pusses and blasts of winds; of the roughnesse to hold and not break, notwithstanding a deale of dust doth weigh and beare it downe? Many a time ye shall see a broad web reaching from one tree to another: and this is when she learns to weaue & begins to practise and trie her skill. Shee stretches a thread, and warps in length from the top of the tree downe to the very ground; and vp againe (she whirls most nimbly by the same thread; so as at one time, the spins and winds vp her yarne. Now if it chance that any thing light into her net, how watchfull, how quick sighted, how readie is she to run? Be it neuer so little snared euen in the very skirt and vtmost edge thereof, she alwaies skuds into the mids; for so by shaking the whole net, she intangles the flie or whatsoever it be, so much the more. Looke what is slit or rent therein, she presently doth mend and re-paire, and that so euen and small, that a man cannot see where the hole was derved and drawne vp againe. These Spiders hunt also after the yong Lizards: first they enfold and wrap the head within their web: then, they catch hold and twaek both their lips together, and so bite and pinch them. A worthy fight and spectacle to behold, fit for a king, euen from the stately Amphitheatres, when such a combat chanceth.

Moreover, there be many prefaces and prognostications depend vpon these Spiders: for against any inundations and ouerflowings of riuers, they weaue and make their cobwebs higher than they were wont. In faire and cleare weather, they neither spin nor weaue, vpon thicke and cloudie daies, they be hard at worke: and therefore many cobwebs be a signe of raine. Some thinke, it is the female that spins and weaues; and the male, which hunts and gets in the prouision for the familie: thus ordering the matter equally in earning their liuing, as man and wife together in one house. Spiders engender together with their buttocks; & little worms they do lay like eggs. For, considering that the generation of all Insects besides, in a manner can be declared and shewed no otherwise, I must not deferre the relation thereof, it being so admirable as it is. Well then, these eggs they lay in their webs, but scattering here and there, because they vse to skip and leap when they thrust them forth. The Phalangius only sits vpon the eggs within the very hole, and those in great number: which begin not so soon to peep, but they eat the mother, yea and oftentimes the father likewise, for he helps her also to coue. And these kind of Spiders bring commonly 300 at a time: whereas all the rest haue fewer. They sit ordinarily thirte daies. As for yong Spiders, they come to their full growth and perfection in foure weekes.

CHAP. XXV.

¶ Of Scorpions.

SEmblably, the land Scorpions do lay certaine little worms or grubs in maner of eggs: and when they haue so done, perish likewise for their labour, as the Spiders. Their stings be as venomous and dangerous, as those of serpents: and albeit there ensue not thereupon present death, yet they put folke to more paine a great deale; in so much as they languish and lie drawing on three daies before they die. If a maiden be stung with one of them, she is sure to die of it: other women also for the most part catch their death thereby, and hardly escape. Yea and men also find their poison to be mortall & deadly, if they be stung in a morning by them when they creep newly out of their holes, fasting, & before they haue discharged their poison by pricking one thing or other first. Their sting lies in their tails, and readie they are with it alwaies to strike. There is not a minute of an houre but they practise and trie how they can thrust it forth, (so malicious they be) because they would not lose and misse the first opportunity presented vnto

A vnto them. They strike both sidelong or byas, and also crooked and bending vward, with their taile. The poison that comes from them, is white, as *Apollodorus* saith, who also hath set downe 9 sorts of them, and distinguished them by their colours, which me thinks, was but superfluous, and more than needed, considering that a man cannot know by his discourse, which of them he would haue to be least hurtfull and noisome. He affirmeth, that some haue double stings, and that the males are more curst and cruell than the females: for he auouches, that they do engender together, and that the males may be knowne by this, That they are long and slender. Moreover, that they be al of them venomous about mid-day, when they be enchaufed and set into an heat, by the scalding and scorching sun also when they be drie and thirstie, they cannot drinke their full and quench their drought. This is well known, that those which haue seuen joints in their tails, be more fell than the rest: for it is ordinarie in them to haue but six. In Affrick, this pestilent creature vses to flie also, namely, when the Southerne winds blow, which carrie them aloft in the aire and beare them vp as they stretch forth their armes like oares. The same *Apollodorus* before named, auouches plainly, that some of them haue very wings indeed. The people called *Plylli* (who making a gainfull trade and merchandise of it, to bring in hither vnto vs the poisons of other countries, and by that meanes haue filled Italie with forrein venomous beasts) haue many times assaied to bring them hither; but neuer would they abide so much as the aire of Sicillie, nor liue in that tract. Howbeit we see of them now and then in Italie, but harmlesse they be all, like as in many other places besides, and namely about *Pharus* in *Aegypt*.

C In * *Scythia* they be so dangerous, that they kill their hogs; which otherwise be creatures that can eat such poisons, and yet liue and do full well. And if it be true that is said, the black swine die more speedily, especially if after they be stung, they goe into the water and drench themselves. If a man be stung with a Scorpion and drinke the powder of them in wine, it is thought to be present remedie. Men hold, that nothing is more contrarie vnto them than oile, if they be dipped therein: as also to the Stellions, which are made like Lizards, and do no hurt to them only, because they are without blood. Like as the Scorpions also are said to be harmlesse to any thing that is bloodlesse. Some are of opinion, that they likewise deuoure their yong, saue only one who is more flie and craftie than the rest, who gets vpon the rumpe behind of the mother, and there sits, being assured that hee is safe enough in that place, both from stinging of taile and tooth in mouth. This Scorpion reuenges the death of his other brethren and sisters: for in the end he skips vpon the backe of father and mother both, where he gnaweth and eateth them to death. To conclude, Scorpions vially do breed eleuen yong ones at a time.

CHAP. XXVI.

¶ Of Stellions and Grasshoppers.

THE Stellions after a sort be of the nature of *Chamaeleons*, liuing only vpon dew and Spiders. Grasshoppers liue also much after the same manner. And they be of two sort; namely, the lesser, which come first, and die last; but those be mute. The latter breed, seldom or neuer flie; and those likewise are of two kinds. Such as sing aloud be named *Echetae*; and the lesser sort of them *Tettigoniae*; but those others are more shrill, and chant full merrily. The male Grasshoppers in both kinds, do sing: the females are silent. The people of the East countries make their food of them: euen the very *Parthians*, who otherwise abound in wealth. The hee Grasshoppers are the sweeter meat before the time of engendering; and the flee Grasshoppers afterward, by reason of eggs knotted within them, and those be white. They engender with their bellies vward. They haue a certain roughnesse vpon their backs, which is very sharp, and therewith they worke a hollow gutter in the ground, as a nest to lay their eggs and breed in. At the first, appeareth a little worrne or maggot; whereof comes afterward that which they call *Tettigometra*, as one would say, the mother of Grasshoppers, or the great Grasshopper. For about the Sunne lead in Summer, the vtmost crust or case thereof breaketh, and then out they flie, and alwaies in the night. At the first, blacke they be and hard withall. Of all creatures that are known to liue, the Grasshoppers alone haue no mouth; in stead whereof, they haue a certaine sharp pointed thing in their breast (like vnto their tongues that carrie stings in their mouths) and with it they sucke and lick in the dew. Their breast is full of little pipes, from whence cometh that ringing noise of the *Echetae*, which we do heare, as I haue aboue said. Moreover, their bellie is

emptie and hath nothing in it. When a man raiseth them, so as they be thereby forced to flie, they yeeld forth a certaine humor : which is the onely argument that they be nourished of the dew. They haue moreover this one marke from all other liuing creatures, namely, no concoction of their bodie to be seene wherby to void out any excrements. Sodimme, sighted they be, that if a man chance to come neare vnto them, plucking in and stretching out his finger before them, they will presently leape vpon it, supposing that it is some leafe that waggeth. Writers there be, that make two more kinds of them, namely, the greater, which appeare at the first spring and budding of trees ; wherupon it is called *Surcularia* : and a lesser, which some name *Frummentaria*, others *Auenaria*. For this sheweth it selfe when the corne is ripe and begins to die in the straw.

CHAP. XXVII.

¶ Places wherein there be no Grasshoppers : also where they are mute.

IN countries bare and naked of trees and wood, there breed no Grasshoppers : and therefore ye shall haue them at Cyrene, about the towne, but not in the plaines and fields thereof. Neither shall a man meet with them in woods that be cold and full of shade. It seemes also, that they take a liking to some one quarter more than another : for in the region of the Milesians, few places there be that haue them : but in Cephalenia, there is a riuer that doth limit and bound them : for of the one side there be plenty of them, and on the other, few or none. In the territorie of Rhegium they be all mute. Passe the riuer once and come into the Loerians countrey ye shall heare them chaunt lustily. Wings they haue like to those of Bees, but larger, to the proportion of their bodies.

CHAP. XXVIII.

¶ The wings of Insects, and sundrie kinds of Beetles.

OF Insects, some carie two wings about them, as the flies : others foure, as Bees. As for Grasshoppers, they flie with wings made like pellicles or fine skins. In summe, all Insects which be armed with a sting in their bodie or taile, haue foure appece : and none againe haue about twaine that carrie their offensive weapon in their mouth. To the former, Nature hath giuen it for to reuenge ; to the other, only to feed themselves, and content their appetite. Moreover, plucke from any of them their wings, there will neuer come new in the place. None that haue a sting in their taile, be double winged. Some Insects there be, which haue growing a certaine husk or cod ouer their wings, for the safegard and defence thereof, as the Beetles : and the wings of such be thinner and more brittle than others. Sting they haue none, but a certaine kind of the great ones be armed with two long hornes boking out before them, and two-forked they be and toothed like Pinsons, in the top, which (when they list) they can bring together and make them meet, and so nip and bite withall. These Beetles, folke vse to hang about the necke of young babes, as present remedies against many maladies. Such Beetles, *Nigidius* calleth *Lucanæ*.ouer and besides, there is another sort, which tumbling vpon their back in dung, do roll it into great round balls with their feet, & therein do make nests for to bestow their little grubs (which are their young) against the cold of winter. Some there be that vse to flie vp and down, and where euer they go, make a great buzzing noise as if they lowed. Ye shall haue others again that keepe in meadows, yea and Creeticks that haunt the earth and stocke of chimnies, where they make many holes, and lie cricking aloud in the night.

The Glo-wormes, are named by the Greeks *Lampyrides*, because they shine in the night like a sparke of fire : and it is no more but the brightnes of their sides and taile : for one while as they hold open their wings, they glitter ; another while when they keep them close together, they be shadowed and make no shew. These Glowworms neuer appeare before hay is ripe vpon the ground, ne yet after it is cut downe. Contrariwise, the flies called *Blattæ*, liue and are nourished in darknesse : light is an enemy vnto them, and from it they flie. They breed commonly in M baines and stoues, of the moist vapors that be there. Of the same kind there be other great Beetles red in color, which work themselves holes in the drie earth, where they frame certaine receptacles like vnto Bees combs, little and small, full of pipes resembling hollow sponges, and

A all for a kind of bastard honey, whereof yet there is some vse in Physicke. In Thrace neare to Olynthus, there is a little territorie or plot of ground ; where this one creature (among all others) cannot liue ; wherupon the place is called *Cantharolethus*. The wings generally of all Insects, be whole, without any slit ; and none of them hath a taile but the Scorpion. Hee alone hath not only armes but also a sting in the taile. As for the rest, some of them haue a sharp pricked weapon in their muzzle, as namely, the Breese or great Horle-flie, called in Latine *Asilus* or *Tabanus*, whether you will. Likewise Gnats also, and some kind of flies. And these prickes some them in good steale both for mouth and tongue. Some of these are all but blunt, & not good for to prick, but only handfome to sucke withall, as flies, which haue all of them a tongue, being evidently fitulous and like a pipe. And none of all these haue any teeth. There bee Insects B with little homes proaking out before their eyes, but weake and tender they bee, and good for nothing, as the Butterflies. And there be againe, that are not winged, and such be the Scorpions. All Insects that haue legges and feet, goe not directly, but bias and crooked. Of which, some haue the hinder legges longer than the former, and such bend hooked outward, as the Locusts.

CHAP. XXIX.

¶ Of Locusts.

THE Locusts lay egges in Autumne, by thrusting downe into the ground the fistule or end of their chine, and those come forth in great abundance. These egges lie all winter long in the earth, and at the end of the spring the yere following, they put out little Locusts, black of color, without legges, and creeping vpon their wings. Hereupon it cometh, that if it be a wet spring and rainie, those egges perish and come to no good ; but in a drie season, there will be greater increase and store of Locusts the Summer ensuing. Some writers hold opinion, that they lay and breed twice a yere : likewise that they perish and die as often. For they say, that when the star *Vergilicæ* doth arise, they breed ; and those afterwards about the beginning of the Dogdaies, die ; and others come in their place. Others say, that they engender and breed againe their second litter at the full or setting of *Arcturus*. True it is indeed, that the mothers die so soone as they haue brought forth their little ones, by reason of a small worke that presently breeds about their throat, which chokes them. And at the same time, the males likewise miscarry. See what a little matter (to speake of) brings them to their death ! and yet a wonder it is to consider, how one of them when it list will kill a serpent : for it will take him fast by the chawes, and neuer lin biting till he hath dispatched him. These little beasts breed no where but in plain and champion countries, namely, such as be full of chinks and creuises in the ground. It is reported, that there be of them in India, three foot long : where the people of the countrey vse their legges and thighes for sawes, when they be thoroughly dried. These Locusts come by their death another way, besides that aboue-named : for when the wind takes them vp by whole troupes together, they fall down either into the sea, or some great standing pooles. And this many a time happens by meer chance and fortune, and not (as many haue supposed in old time) because their wings are wet with the night dew. For euen the same Authors haue written, that they flie not in the night for cold. But little know they, that it is ordinarie with them to passe ouer wide and broad seas, and to continue their flight many daies together without rest. And the greater wonder is this, that they know also when a famine is toward : in regard wherof, they seek for food into far countries : in such sort, as their coming is euer held for a plague of the gods, proceeding from their heauie wrath and displeasure. For then commonly they are bigger to be seen, than at other times ; and in their flight they keepe such a noise with their wings, that men take them for some strange fowles. They shade and darken the very Sunne as they flie, like vnto a great cloud : in so much, as the people of euery countrey behold them with much feare, least they should light in their territorie, and ouer-spread the whole countrey. And verily their strength is such, that they hold out still in their flight : and as if they had not enough of it to haue flowne ouer seas, they giue not ouer to trauesse mightie great countries in the continent. And looke in what place soeuer they settle, they couer whole fields of corne with a fearefull and terrible cloud : much they burne with their very blast, and no part is free but they eat and gnaw euen the very doores of mens dwelling houses. Many a time they haue been known to take their

their flight out of Affrick, and with whole armies to infect Italie: many a time haue the people of Rome, fearing a great famine and scarcitie toward, been forced to haue recourse vnto Sybils books for remedie, and to avert the ire of the gods. In the Cyrenaicke region within Barbarie, ordained it by law, euery three yeares to wage war against them, and so to conquer them: that is to say, first to seeke out their neasts, and to squash their eggs; secondly, to kill all their yong; and last of all, to proceed euen to the greater ones, and vtterly to destroy them: yea, and a grieuous punishment lieth vpon him that is negligent in this behalfe, as if he were a traitor to his prince and country. Moreouer, within the Island Lemnos there is a certaine proportion and measure set down, how many and what quantitie euery man shall kill; and they are to exhibit vnto the magistrate a iust and true account thereof; and namely to shew that measure full of dead Locusts. And for this purpose they make much of Laies, Dawes, and Choughes, whom they doe honour highly, because they fly opposite against the Locusts, and so destroy them. Moreouer, in Syria they are forced to leuie a warlike power of men against them, and make ridance by that meanes. See in how many parts of the world this hurtfull and noisome vermine is dispersed and spread: and yet in Parthia they are taken for very good meat. The voice that they haue (such as it) seemes to come from the hinder part of their head: for about that place where the jointure is of the shoulders to the nape of the neck, they are thought to haue certain teeth, which by grating and grinding one against the other, doe yeeld a kind of crashing noyse; and namely, about the time of both the *Aequinoctials*: like as the Grasshoppers at midsummer Sunstead, Locusts engender after the manner of all other Insects which do engender: to wit, the female carries the male; and the lying vnderneath, bends vp the very end of her taile against the other: and thus they continue a good while ere they part asunder. To conclude, the males of all this kind be lesse than the females.

CHAP. XXX.

¶ *Of the ordinarie Pismires of our country in Italie.*

Most part of Insects do breed a grub or little worme. For euen the very Ant in the Spring time doth bring forth such wormes like egges. These silic creatures labor and trauell in common, as the Bees do: this only is the difference, that Bees do make their owne meat, whereas these store vp only their food and prouision. As touching their strength, if a man would compare the burdens that they carie, with their own bodies, he wil find and confesse, that there is not a creature againe in the world, for that proportion, stronger. And how doe they carrie them? euen with their very mouthes. Howbeit, if they meet with any greater load than they can bite betwene their chawes, then they for their shoulders to it, and with their hinder legs also make meanes to drue it forward. They haue among them a certaine forme of Commonwealth: they remember: they are not without care and sorow-cast. Look what feedes or graines they do lay vp for prouision, sure they will be to gnaw it first, for feare they should sprout and take root againe, and so grow out of the earth. If a corne or seed be too big for their carriage, they diuide it into peeces, that they may go with it more easily into their house. If their feedes within, chance to take wet, they lay them abroad, and so drie them. They giue not ouer worke by night, when the Moone is at the full: but when she is in the change, they rest and play them. When they are at worke, how painfull are they? how busie, how industrious? And for as much as they make their puruicance in diuers places, and bring from al parts, without knowledge one of the other: they keepe among them certaine market daies, for a mutual enteruiew and conference together. And verily, it is a world to see, how then they will assemble, what running, what greeting, what entercourse and communication there is between them, whiles they are inquisitive, as they meet one with another. What newes abroad: euen like merchants at a Burse. Their waifare is so ordinarie and continual, that we may see the very hard flint and pebble stones worn with their passage too and frome may see (I say) a very path-way made where they vse to goe about their worke: whereby, let no man doubt of what force and power continuall vse is, of any thing whatsoeuer, be it neuer so little. Of all liuing creatures, they only and men, doe enterre and burie their dead among them. To conclude, thoroughout all Sicilie a man shall not see a flying Ant.

CHAP.

CHAP. XXXI.

¶ *Of Indian Pismires.*

In the temple of *Hercules* at Erythrae, there were to be seen the horns of a certain Indian Ant, which were there set vp and fastned for a wonder to posteritie. In the country of the Northern Indians, named *Dardæ*, the Ants do cast vp gold about ground from out of the holes and mines within the earth: these are in colour like to cats, and as big as the ** wolues* of Egypt. This gold before said, which they worke vp in the winter time, the Indians do steale from them in the extreme heate of Summer, waiting their opportunitie when the Pismires lie close within their caues vnder the ground, from the parching Sun. Yet not without great danger: for if they happen to wind them and catch their sent, out they go, and follow after them in great haist, and with such fury they fly vpon them, that oftentimes they teare them in peeces; let them make way as fast as they can vpon their most swift camels, yet they are not able to saue them. So fleet of pace, so fierce of courage are they, to recouer gold that they loue so well.

CHAP. XXXII.

¶ *The diuers generation of some Insects.*

Many Insects there be that breed after another sort than the former aboue specified: and principally of dew which settles vpon the radish leafe in the beginning of the Spring. For being made thicke, and hardened with the heate of the Sun it growes to the bignes of the grain of Millet. From it ariseth a little grub, and three daies after it becomes a kind of canker-worme: and so in proceesse and tract of time it groweth bigger without mouing at all, and gathereth an hard husk or case about her: only if a man touch the webby panicles wherein the said worme lieth inwrapped, it will seem to stir. This is called *Chrysalis*: and after some time, when the kex or husk is broken, he proueth a faire flying butter-fly.

CHAP. XXXIII.

¶ *Of Insects that breed in wood, and of wood.*

Emblably there be some Insects ingendred of raine drops standing vpon the earth, and others also of wood: for not only the ordinarie wood-wormes breed in timber, but also certain Brees and horse-flies come of it, yea, and other such like creatures, whensoever the wood happen to be dotted with ouer-much moisture. Like as within one of our bodies there haue bin found broad wormes of 30 foot in length, yea and sometimes longer. Also there haue bin seen in dead carions many worms: and the very flesh of liuing men is apt to breed such vermin: and so is the haire of the head to harbor lice, of which filthy & loathsome creatures both *Sylla* the Dictator, and also *Alcman* (one of the most renowned Greeke Poets) perished. Moreouer, birds are much infested and troubled therewith. And as for Feasants, they will dy there, of vnlesse they bestrew themselves with dust. Of such beasts as carry haire, it is verily thought that the Aste alone and sheepe are free from this kind of vermin. Some kind of cloath likewise is apt to ingender lice, and especially those which are made of wooll that sheepe bare which were worried of wolues. Ouer and besides, I find in some writers, That there is some water will ingender this vermin if we do but wash therein. For euen in wax there will breed mites, which are thought to be of all creatures that haue life, the very least. Also ye shall haue others againe ingender of filthy dry dust, namely fleas, which vse to skip and hop with their hinder feet lustily like these tumblers and vaultors. Last of all, there be that come of a certaine moist powder in crannies of the ground, and those be our ordinarie little flies.

CHAP. XXXIV.

¶ *Of one kind of creature that hath no passage to void excrements.*

There is a creature as foule and ill-fauoured as the rest, which hath euermore the head fast sticking within the skin of a beast, and so by sucking of blood liueth, and swells withall: the only liuing creature of all other that hath no way at all to rid excrements out of the

body.

body: by reason whereof when it is too full, the skin doth crack and burst, and so his very food is cause of his death. In Horses, Asies, and Mules these do neuer breed: in Kine and oxen they be common, and otherwhiles in dogs, who are pestered not only with these ticks, but also with all other vermine aboue named. And in Sheepe and Goats a man shall finde none other but ticks. It is as strange a thing also to see, how the horse-leeches which be nourished in standing waters of fens, are thirsty after bloud: for these will thrust their whole head into the flesh, for to draw and suck out bloud. Finally, there is a kind of flies that plagueth dogs and none else: they are blusie commonly about their eares, where they will bite and sting them threwdly; for there they cannot come by them with their teeth to snap and kill them.

CHAP. XXXV.

¶ Of Moths and Gnats.

Wool and cloth when they be dusty breed moths, especially if a spider also be gotten within them. For the Spider is very thirsty; and by reason that he drinketh vp all the moisture of the cloth or wool, he increaseth the driness much more. In paper also they will ingender. A kind of them there is which carry their coats and cales with them, as cockles and snails do; but they haue feet to be seen. If they be turned out of their coats or husks, they presently die. If they grow still they will proue to be Chrysalides. The wild fig tree breeds certaine Gnats called Ficarij. As for the Cantharides or French Greene Flies, they be bred of little wormes in Fig trees, Pearre trees, wilde Pines, or Pitch trees, the Eglantine Brier, and Roses. A venomous vermin this is, howbeit medicinal in some sort. The wings be they that are good in physick: cast them away, & the rest is deadly. Moreover, there be other gnats that souse things will ingender. And no maruell, seeing there be some wormes found in snow, which are white, if the snow be but thin and new fallen. But in case it haue lien long, and bee deep, a man shall find in the mids within those which are red (for snow also if it be old waxeth red) rough and hairy, greater also than the rest, and dull of motion.

CHAP. XXXVI.

¶ Of the fire-fly called Pyralis, or Pyrausta.

The fire also, a contrary element to generation, is not without some liuing creatures ingendered therein. For in Cypres, among the forges and furnaces of copper, there is to be seen a kind of four-footed creature, and yet winged (as big as the greater kind of flies) to flie out of the very midst of the fire, and called it is of some Pyralis, of others Pyrausta. The nature of it is this, so long as it remains in the fire it liues; but if it chance to leap forth of the Furnace, and fly any thing farre into the aire, it dieth. There is a riuier in the kingdome of Pontus called Hypanis, which about the summer Sunstead vseth to bring down the streame thin pellicles or bladders like to grape kernels: out of which there breaks forth and issueth a foure footed flie, like vnto those aboue named; and it liueth not aboue one day, whereupon it is called Hemerobion [i. a day-fly.] All other Insects of like sort may continue and liue a seven-night. The Gnat and the little wormes three weeks: but such as bring forth their yong aliuie, may endure a full moneth. As for the metamorphosis of these creatures from one forme to another, it is most commonly performed in three daies, or foure at the most. All the rest of the winged kind lightly die in Autumne: among which, the breees and horse-flies are ordinarily blind first. To be short, those flies which haue bin drowned, and so come to their death, if they be laid and kept in hot cinders or ashes, will come again to themselves and reuiue.

CHAP. XXXVII.

¶ A discourse Anatomically, of the nature of liuing creatures part by part, according to their particular members.

It remains now to treat of the seuerall parts of the body, and ouer and aboue the former description, to particularize and set down the story of one member after another. First therefore this is generally, that all liuing creatures whatsoeuer hauing bloud, haue also heads: and few

A few of them haue cops or crested tufts vpon their heads, vnlesse it be birds, and those be of diuers forms and fashions. The Phoenix is adorned with a round plume of feathers, out of the midst of which grows another little pennace. Peacocks carry vpon their heads a tuft (as it were) of little hairy trees: and the Stymphalides a lock of crisped and curled haire. Peasants haue feathers standing vp like homes. The pretty Titmouse or Nonett is filleted or coifed vpon the head: and in lieu thereof, the Lark hath a little peruke of feathers, whereupon at first it was called Galerita, but afterwards after the French word Alanda, and of it one of the Roman legions tooke the name, because of their pointed Morions. We haue written already of the Ginny or Turkey cocks and hens, vpon whom Nature hath bestowed a folding crest, lying from the very bill, ouer the midst of the head, vnto the nape of the necke. She hath giuen also vnto all the sort of Seamewes, Pen ducks, and Moore-hens, certain cops and crisped tufts to the Woodpeck also and Balcare crane. But aboue all others, the houle dunghill cocks carry vpon their heads the goodliest ornament of their combe, and the same consisting of a masse and fleshy substance, indented besides like a saw. And yet we may not properly say it is either fleshy, gristle, or callositie, but composed of some particular matter by it selfe, which cannot well be named. As for the crests of dragons, I could meet with no man hitherto that euer saw them.

To come now to Horns, there be many fishes, as well of the sea as fresh waters, and also Serpents, that haue horns in diuers and sundry sorts. But to speak a truth and properly, they be no horns indeed, for those pertain only to four-footed beasts. As for *Aideon* and *Cippus*, of whom we read in our Latine story that they had horns, I take them to be meer fables and no better. Certes in nothing more hath Nature taken her pleasure than in this, as if she had meant to delight and sport her selfe in these armes and weapons of beasts. For in some she hath made them knagged and branched, as in Deere, both red and fallow: in others plain and vniforme without tines, as in the Spitters, a kind of Stag, which thereupon be called Subulones in Latin, for that their horns be like a shoemakers * Nall blade. There be againe which haue broad horns, and plaited like a mans hand, with fingers standing out of them: whereupon the beasts that beare them be called Platycerotes, [i. broad horned.] Roe bucks haue by nature branched heads, but they are small: and these do not mew and cast them yearly, as the stag and bucke. All the sort of rams be armed with crooked horns, turning and winding with certain revolutions as if they were gantlets or whorle bats, giuen them by nature to thumpe and iurre withall. Bulls horns be straight and vpright, ready alwaies to do a mischief. The females of this kind, to wit, Cowes, are horned as well as Bulls: whereas in many others, the males only be in that wise armed. The wild Goats, called Roch-goats, haue their horns turning backward, whereas in fallow Deere they bend rather forward. There is a kind of Roe-buck called in Africke Addace, which the Greeks haue named Strepsicerus, and they haue vpright horns: but they are furrowed and wreathed round about as if they were ribbed like the backe of a lute, or rather clammered like the ridge of a land, and alwaies sharp pointed with a tip. Ye shall haue droues and herds of beasts, namely Kine and Oxen in Phrygia, which wil stir and wag their horns like eares: and those in the kingdome of the Troglodites, carry their horns pendant directly to the ground, which is the cause, that as they eat they are forced to beare their necks awry, and looke aroone side. Some haue but one horn apiece, and that either in the midst of the forehead, as the Oryx: or else in the nose and nussle, as the Rhinoceros, whereof we haue written before. In sum, there be that haue strong and hard horns to butt with: others to strike and gore withall: some crooking forward, others bending backward. In some, they are good only to tosse and sting, and that in diuers manners. For there be of them that giue back, others turn one against another, and some euen ioyne and meet together: but all run vp sharp pointed in the end. A kind of beasts there is that vse their horns in stead of hands to scratch their body when it itches: and others serue the turn to found the way before them, as certain shel- Snails and Winkles. And these horns giuen for this purpose are some of them of a fleshy substance, as those of the serpents called Cerastra: and otherwhiles one alone without a fellow. As for the Periwinkles and Snailles aforesaid they are neuer without twain apiece: and at this passe they haue them, to put out and draw in as they list. In Buffles horns the barbarous people of the North parts vse to drinke: and ye shall haue the homes of one Buffle head to hold full two measures called Vna, which is about 8 gallons. In some countries men head their speares and iaculins with home. With vs in Italy they be cut into thin plates, and serue for lanterns: and surely they are so transparent and cleare, that they make

make the candle within inclosed to cast the greater light, and farther off. Nay, they are good for many other toies of delight and pleasure: in somuch as some paint and die them with sundry colours, others vernish and annile them: and yet shall haue men to make thereof their fine inlaid works in Marquetrie of diuers colours, called thereupon Cerotrata. All horns in manner be hollow, save that as they grow toward the pointed tip, they be solid and massive: onely Deers both red and fallow are found and entire throughout: and every erey they fall off. Hufbandmen in the countrey, when they see their Oxen hooves furbatted and worne too neere the quick with ouermuch trauell, anoint their hornes with sweet greafe, & that is the way to make them grow again. And in very truth the hornes of these beasts are of so pliable a substance, and easie to be wrought, that as they grow vpon their heads, even whiles the beasts are liuing, they may with boiling wax be bended and turned euery way as a man will: yea, and if they be cut when they break new forth out of the skin, they may be easily writhed to grow fureally in sundry parts, so as euery head may seem to haue foure hornes. For the most part, the hornes of Cowes are more tender and thinner than the other, like as we see it is in the females of smaller beasts: * Ewes haue none at all: ne yet Hinds and Does: no more than the beasts that haue feet clouen & diuided into many toes: or those that be whole hoofed, except the Indian assie, who is armed with one horne and no more. Beasts clouen footed in twaine haue likewise two hornes: but none at all haue they which are toothed in the vpper mandible. They that make this reason, because the matter of their teeth runs al into the horn, and so contrariwise, are deceived, and soon conuincid by this, That Hinds & Does are toothed, no more than Stags and Bucks, and yet are not horned. In other beasts the hornes grow to the very bone of the head, in Deere onely they come out of the skin, and are grafted no deeper. Fishes of all liuing creatures haue the biggest heads for the proportion of their bodies, haply because they might the better diue vnder water and sink to the bottom. No kind of Oysters haue any head at all, no more than Spunges, or any other in manner, which want al their senses but onely feeling. Some haue heads indeed, but within their body, and not diuided apart from it, as Crabs and Creafishes.

Mankind of all liuing creatures hath most haire on the head, even men as much as women, as we may see in those countries where they neuer cut their haire, but let it grow. And namely in Sauoy, Dauphine, and Languedoc about the Alps, where men and women both weare long haire; and thereupon that part of France is called Comata. And yet this is not so general, but that the nature of some land and soile may make some alteration and varietie. For the Myceni-ans naturally haue no haire at all: like as the Cannians be all subiect to the disease of hard and swelling spleens, even from their mothers womb. Some reasonlesse creatures likewise are by nature bald, as Ostriches, and certain * water Rauens, which of the Greeks are named thereupon Phalacro-coraces. Seldom do women shed their haire clean, and become bald: but neuer was any queeld man knowne to be bald: nor any others that be pure virgins, and haue not sacrificed vnto Venus. The haire growing beneath the ventricles of the brain, & vnder the crown of the head, like as also about the temples and eares, falls not off quite. Man alone of all creatures groweth to be bald, I speake not of those that are so by nature. Men, women, and horses wax gray haired. Men and women both begin at the forepart of their heads to be grislie, and afterwards behind. Men and women alone be double crowned.

Some creatures haue the bones of their skull flat, plain, thin, and without marrow, and the same vnited or ioined together by certain sutures or seams indented & toothed on either side, which run one into another. The ruptures and cracks of the brain pan cannot be consolidated and faured perfectly again: but if the spels and pieces be gently taken out, and but small, there is no danger of death: for in their place there will grow a certaine callous cicatrice or fleshie substance that will supply in some sort that defect. Bears of all others haue the tenderest sulcs; and Parrats the hardest, as we haue said before in place conuenient.

Moreover, all liuing creatures that haue blood haue likewise brains: yea, & those in the sea which we call Soft-fishes, although they haue no blood at all, as namely the Pour-cuttles or Polypes. But man for his bignes and proportion hath most braine of all other, and the same is the moiftest & coldest part he hath within his body. Infolde it is within two tunicles or kels, both above and beneath: whereof if the one be pierced and wounded [to wit, Piamater] there is noway but present death. Also, men commonly haue more braines than women. And both of them haue neither blood nor veines therein: as for that which is in other creatures, it wanteth

A wanteth all kind of fat. The learned Anatomists, who haue searched diligently into the nature of things, do teach vs a difference between the brain & marrow of bones: for, brains in the boyling and seething, wax hard. In the midst of the braine of all creatures there be certaine little * bones. Man alone in his infancie hath his brain to pant and beat, and fully ferted it is not, nor confirmed, before that he begins to speak. Of all parts necessary for life, it is placed highest, and next vnto the cope of head and heauen both: without flesh, without blood, without fish & ordure. And in truth, it is the fort and castle of all the senses: vnto it all the veines from the heart do tend: in it they all do likewise end. It is the very highest keep, watch-tower, and sentinell of the mind: it is the helme and radder of intelligence and vnderstanding. Moreover, in all creatures it lieth forward in the front of the head: and good reason, because all our senses bend that way just before our faces. From our braine comes sleepe, from thence proceedeth our nappes, our nods, our reeling, and staggering. And looke what creature fouer wanteth braine, the same sleepeeth not. Stags (by report) haue within their heads twentie little wormes, to wit, in the concauity vnder their tongue, and about that jointure where the head is grafted to the chin bone.

Man alone hath not the power to shake his eares. Of flaggie, long, and hanging eares, came the synnames first of the *Flacci* (families & houses in Rome.) There is no one part of the bodie costlier our dames more than this, by reason of their precious stones and pendant pearls thereat. In the East countries, men also as well as women, think it a great grace and brauery to weare carings of gold. As touching their proportion, some creatures naturally haue bigger or lesser than others. Deere onely, the fallow as well as the red, haue them flit and as it were diuided. In Rats and mice they be hairy. To conclude, no creature hath ears but those that bring forth their young alive: and none of them are without, save onely Seales, Dolphins, Vipers, and such fishes as were called Cartilaginous and griftly. And these all in stead of ears, haue certaine holes, or conduits, except the foresaid griftly fishes, & the Dolphins: and yet manifest it is, that they do heare wel enough. For delighted they be with musick: and vpon some great noise and sudden crack they are astonished, and then easily taken. But maruel it is how they should heare as they do: neither can I comprehend the reason and means thereof, no more than I am able to shew how they do smell: for no Organs and Instrumens haue they thereof to be scene, & yet there is not an bound vpon the land sents better, nor hath a finer nose than they. Of all fouls, the Likewowle and the Otus alone, haue feathers like eares: the rest haue only holes to heare by. And after the same manner scaled fishes and serpents. In Horses, Mules, and Asses, and all such as serue either pack or saddle, the ears are tokens of their courage more or lesse, and will shew what stomack is within them. If they be tired and weary, they hang down flaggie: be they afraid, you shall perceiue them to wag too and fro: in heat of fury they stand pricking vpr: in sickness they lie downe.

Man only of all creatures hath a Face and Visage: the rest haue either muzzles and snouts, or else bills and beakes.

Other creatures haue Foreheads also as well as men: but in mans alone we may see & reade sorrow & heauinesse, mirth and joy, clemencie and mildnesse, cruelty, and severity; and in one word, gueffe by it, whether one be of a good nature or no?

In the ascent or rising of the forehead, man hath Eie-brows set, like to the eaves of an house; which he can moue as he list, either both at once, or one after another: and in them is shewed part of the mind within. By them we denie, by them wee grant. These shew most of all others, pride and arrogancie. We may it be that pride doth appeare and settle in some other part, yet here is the seat & place of residence. True it is, that in the heart it begetnes, but hither it mounteth and ascendeth, here it resteth and remaineth. No part can it find in the whole body more eminent and haughty, and withall more sleepe than the browes, wherein it might rule and raigne alone without controulment.

Next vnder the browes is the Eie, the most precious member of the whole body; which by the use of light makes difference between life and death. Yet hath not Nature giuen eyes to all creatures: Oysters haue none; and for some other shel-fishes, it is hard to say whether they haue any or none. As for Scallops, if a man stir his fingers against them as they lie gaping open, they wil shut, as if they saw. And the shel-fishes called Solenes, giue backe if any edge-toole come neere vnto them. Of foure-footed creatures, Moldwarps see not at all: a certaine shew and forme

* Ostriches, some reade of Ostrich holes.

Eardis

Face or Visage.

Foreheads.

Eie-browes.

The Eie

forme they haue of eies to be seen, if a man take off the skin that lieth ouer the place. Moreover, among fouls of the aire, those of the Herons kind, which are called Leuci, for that they be white, want (by report) one eie. And for certaine, in case of Augurie, if these birds flie either into the South or North, it is holden for an excellent good preface, for they assure men that perill is past and promise securitie. *Nigidius* alhirmeth, That neither Locusts nor yet Grasshoppers haue eies. As for snails and such like, the two little horns that they put forth, serue them in stead of eies, as they found or trie the way before them. The earth-mads and all the sort of worms & grubs, are without eies. Men alone of all liuing creatures haue eies of diuers colours, some of one, and some of another. For all other creatures of one and the same kind, are eied alike. Howbeit, some horses there be that extraordinarily haue *red eies. But in men it is hard to set down the infinit variety and difference in them: for some haue great glaring eies: others againe as little & as pin-king. Others also there be that haue them of a moderate and reasonable bignes. Some be goggle eied, as if they would start out of their heads, and those are supported to be dim-sighted: others be hollow eied, and they are thought to haue the best and clearest sight: like as they who for colour haue goats eien. Moreover, ye shall haue some men, who can discern a far off: others againe that see not but neere at hand. Many there are, whose eiesight dependeth of the Sunnes light: for let the day be ouercast and cloudy, or the Sun gone downe, they see just nothing: and others contrariwise there be, that all the day time haue but a bad sight; yet in the night season they see better than any others. As concerning 2 balls or apples in one eie, as alfo who they bee that can bewitch and hurt folk with their very eie, sufficient hath bin said already. *Gray eies commonly in the dark see more cleare than others. It is reported of *Tiberius Caesar* the Emperor to haue had this property by himself, that if he were awakened in the night, for a while he could fee euery thing as well as in the cleare day light; but soon after, by little and little, the darknesse would ouercast and shadow all againe: a gift that no man in the world was euer known to haue but himselfe. *Augustus Caesar* of famous memory, had *red eies like to some horses: and indeed wall-eied he was, for the white thereof was much bigger than in other men: which alio was the cause, that if a man looked earnestly vpon him, and beheld him wistly (and a man could not anger him worse) he would be displeased, & highly offended. *Claudius Caesar* had a fleshy substance about the corners of his eies, that tooke vp a good part of the white, and many times they were very red and blood shotten. *C. Caligula* the Emperor, his eies were euer set in his head, and stiffe againe. *Nero* had a very short sight; for vnlesse he winked (as it were) and looked narrow with his eies, he could not well see ought, were it neerer so neerer. Twentie couple of professed masters of fence and sword-plaiers there were in the fence-schoole, that *C. Caligula* the Emperor maintained: & among the rest two there were & no more, whom a man could not make to winke, or once to twinkle with their eies: present before them what weapon he would, or make offer to strike, so steady & firm were they: and therefore they euermore carried the prize, & were inuincible. So hard a matter is it for a man to keep his eies from twirling; and many men naturally cannot chuse but be euermore winking and twinkling with their eies: but such are holden for fearful and timorous persons. None haue their eyes all of one color: for the bal or apple in the midle is ordinarily of another color than the white about it. Neither in any one part of the body are more signes and tokens to be gathered of the affection and disposition of the heart, than in the eie, of man especially about all other creatures. By it we may know whether one be modest, staied, sober, gentle, mild, pittifull or no. It sheweth malice, hatred, loue, haueinesse, sorrow, and joy. In the call also of the eie there is as much variety, for some haue a furious, cruell, terrible, fierce, sterne, and fierie look: others shew grauitie and constancie in their eie. Some haue an ouerthwart regard with them, others looke askew and awry. One while a man looks atone-side, and bath a wanton sheeps eie: another while he casteth his eie downe, and looks heauily: and when he list againe, hee can giue one a pleasant and merry look. In briefe, the Eies are the very feat and habitation of the minde and affection. For one while they be ardent and fierie: other whiles they be bent and fixed vpon a thing: one while they twinkle, another time they winke close and say nothing. From them proceed the teares of compassion: When wee kisse the eie, we thinke that we touch the verie heart and soule. From hence cometh our weeping: from hence gush out those streames of water that drench and run downe the cheeks. But what might this water and humour be, that in the hearts griefe issueth in such plentie, and is so ready to flow? Where may it lie at other times, when we are in joy, in mirth, and repose? it cannot

A cannot be denied, That with the Soule we imagine, with the minde we see, and the Eies as vessels & instruments receiving from it that visuale power and faculty, send it soon after abroad. Hereupon it cometh, that a deep and intenuie cogitation blinds a mans sight, that he seeth not; namely, when the sight is retired far inward. Thus it is, that in the Epilepsie or Falling-sickness the eies are open and yet see nothing: for why? the mind within is darkened. Moreover, Hares haue this qualitie, to sleep open eied: and so do many men besides them: and this the Greeks do expresse by the terme *apocortis*. Nature hath framed and compounded the eie of many thin membranes or skins. As for those tunicles without forth, they are rough and hard * like horn, to withstand the iniuries of heat and cold: and those the hath ordained estoones to be clenfed and purified with the moisture of teares; to the end that they should be slipperie and moueable, for to turne quickly and to shift from all that may offend. As for the middle part & membrane of the eie, the hath set in a ball, like a window made of transparent horn: for rather of a grape:] the little compasse whereof containeth all the sight of the Eie, and sufficeth it not to wander and roll here and there, but directeth it as it were within a certaine pipe or small conduit: by which means also (to note by the way) the apple being gathered into so narrow a circle, doth easily auoid all inconueniences that are incident vnto it, for to annoy the same. This ball and point of the sight is compassed also round about with other circles of sundry colors, black, blewish, tawny, rufier, and red: to the end that by this medley and temperate mixture of colors enuironed with the white besides, the light might be let in & represented to the Optick-sinew: and also by a temperat reuerberation and bearing backe from those other colours: it should not daze or offend the apple with the exceeding brightnesse thereof. In sum, this mirror or glasse-window, is so perfect and so artificially contriued, that as little as the ball of the sight is, a man may see himselfe full and whole in it. And this is the cause that many fouls, from a mans fist are ready to peck at the eies about all other parts, for that they would gladly sort and draw vnto their owne representation and image, which they see in the eies, as vnto that which they naturally affect. Certain sumpter-horses and mules, & such like beasts of carriage only are troubled with fore eies, and diseased that way at euery change and increase of the Moon. But man alone, in the catarra & suffusion of the eie, by voiding from it a certain humor which troubled the sight, doth recouer and see againe. There haue bin many known blind 30 yeares and more, & yet afterwards inioied the benefit of their eies. Some haue bin borne blinde, without any fault or defect of their eies. Diuers men likewise haue suddenly lost their sight by some secret accident and no outward offence knowne to giue occasion thereof. Many right skillfull masters in Chirurgerie, and the best learned Anatomists are of opinion, That the veins of the eies reach to the braine. For mine owne part, I would rather thinke that they passe into the stomacke. This is certain, I neuer knew a mans eie pluckt out of his head, but he fell to vomiting vpon it, & the stomack cast vp all within it. We that be citizens of Rome, haue a sacred and sollemne manner and vie among vs, To close vp their eies that lie a dying, and are giuing vp the Ghost; and when they be brought to the Funerall fire, to open them againe. The reason of this ceremonious custom, is grounded hereupon, That as it is not meet for men aliuie to haue the last view of a mans Eie in his death, so it is as great an offence to hide them from heauen, vnto which this honor is due, & the body now presented. Man alone is subiect to the distortion & deprauid motion of his eies. Hereof are come the vrynaces of certain families in Rome, *Strabones* & *Patis*: for that the first of those houses were squint-eied, and had rolling eies. Those that were borne blink but with one eie, our countrymen called *Coclitus*: as also them that were pinke-eied and had very small eies, they termed *Ocellis*. As for such as came by those infirmities by some iniurie or mischance, they were furnished *Lucini*. Moreover, we see that those creatures which ordinarily do see by night (as Cats do) haue such ardent and fierie eies, that a man cannot indure to look full vpon them. The eies also of the Roe-bucke and the Wolfe are so bright, that they shine againe, and cast a light from them. The sea-calues or Seales, and the Hyenes, alter estoones their eies into a thousand colours.ouer and besides, the eies of many fishes do glitter in the night, when they be drie: like as the putrified and rotten wood of some old trunk of an oke or other wood. Wee haue said before, that those winke not nor shut their eie-lids, who cannot roll their eies atone-side, but are faine to turne their whole head withall when they would fee a thing that is not iust before them. The Cham-eleons (by report) rol their eies all whole euery way as they list, vp and downe, too and fro. Crabs looke awrie And yet such fishes as are inclosed within a brittle

brittle and tender shell, haue their eies inflexible & stiff. Lobsters and Shrimpes for the most part, haue their eies standing out very hard, albeit they be covered with the like shells. Those that haue hard eies, are not so well-fighted as those that haue moist. It is commonly said, that if a man pluck the eies out of the heads of yong serpents, or yong Swallows, they will haue new again in their place. All Insects and other creatures that lie within hard shells, stir their eies as four-footed beasts do their ears: but in those that haue tender shells, their eies be hard. And all such, as also fishes & Insects, haue no lids to their eies, and therefore couer them not. But there be none without a thin membrane or pellicle ouer them, which is cleare and transparent like glasse.

Men and women haue haire growing on the brims of both Eie-lids: but women do colour them every day with an ordinarie painting that they haue: so curious are our dames and would so faine be faire & beautiful, that forsooth they must die their eies also. Nature ywis gaue them these haire, eie-lids for another end, namely, for a palaisade as it were & rampier of defence for the sight, yea, and to stand out like a bulwark for to keep off and put by all little creatures that might come against the eies, or what things fouler els should chance to fall into them. Some write, That the haire of the eie-lids will shed and fall away, but not without some great injury, and namely, in such persons as be ouermuch giuen to lecherie. No other liuing creatures haue these haires, but such as otherwise be clad all ouer their bodies with haire or feathers. But, as four-footed beasts haue them in the vpper lid only, so Fouls haue none but in the nether: like as the serpents, which are tender skinned and four-footed, as Lizards. The Ostrich is the onely fowle which hath haire on the vpper eie-lidde. The Ape hath on them both as well as man. Moreover, all fouls haue not eie-lids, and therefore such do not winke, namely, those that bring forth liuing creatures. The greater and heavier foules, when they would close their eies doe it with drawing vp the nether lid. The same also twinkle by means of a pellicle or skin coming from the corners of their eies. Doves and such like birds wink with both eie-lids, but four-footed beasts that lay eggs, as Tortoises and Crocodiles, vse the nether lid only, without any twinkling at all, because their eies be very hard. The vmoost compass or edge of haire in the vpper lid the Latines called in old time *Cilium*, and thereof came the name of the brows, to be *Super-cilium* in Latine. This brim of the eie-lid, if it be diuided by any wound, cannot be drawne together againe: like as some few parts besides of mans body.

Vnder the eies, are the balls of the Cheeks, which men and women only haue; which in old time they called *Gena* in Latine. And by the law of the twelue Tables, women were expressly forbid not to teare, rent, or scratch them in any case with their nails. This is the feat of bashfulness and modesty: heare appeareth most of all the rednesse of blushing. Vnder them, are the hollow pits of the cheekes, wherein mirth and laughter do lodge and inhabit.

Man only hath his Nose standing forth also, which now adays they dedicate to flie scoffing and derision, in so much as they attribute that terme do dry mockers and flouters. And verily there is not a creature besides, that hath his nostrils so bearing out. [As for birds, serpents, and fishes they haue holes only to snell at, without any other nostrils to be seen:] &c. hereof come the surnames of *Simones* and *Silones*, whereof the former haue flat noses, the other are hooked and camose nosed vprward. Infants haue bin known man times when they are seuen moneths old, to want the holes and passages both of nose and eares.

Then follow the Lips: some men there be that put them far out, by reason that they are gag-rooted or rut-mouthed, and those are called *Braui*. Others againe who are blabber-lipped, are named in Latine *Labeones*.

As for the mouth all creatures haue it that bring forth their yong aliue: and either it is gentle and pliable, or else hard and vnruely, as we see horses; that either willingly receiue, or else refuse the bit. By which also we giue to men, the terme either of modest and good countenance, or else of shamelesse and vntoward. But in stead of mouth and lips both, Nature hath giuen to all foules sharpe Bills of an horny substance, and as many of them as liue vpon rauin and prey, haue them hooked inward, but such as gather and pecke onely, they haue straight beakes. As for those that either graze, root, or pudder in mud, like to swine, they are broad and flat billed. As for horses, mules, and such like, they vse their mouths in stead of hands, to gather in their food as they either feed in pasture, or be at racke and manger. And the wider mouths haue they that liue of killing and denouing other beasts.

No

The Chin
Law.
The Teeth.

A No creatures liuing, but man and woman, haue Chins and Laws. The riuier Crocodile alone moueth the vpper iaw: the land Crocodiles chew as other creatures do, but only bias.

Of Teeth, there be three sorts: for either they be framed like saws, or els set flat, euen, and leuell: or last of all, stand gabbing out of the mouth. The saw teeth run one betweene another, as if two combs grew together, because they should not wear if they met one with another, as we see in serpents, fishes, and dogs. Horses & men haue their teeth of one euen leuell. The bore, the water horse, and the Elephants, haue their tusks and fangs sticking forth. Of those teeth which are smooth and meet just one against another, such as diuide and cut the meat, be broad edged, as the fore-teeth: those that grind and chew, be double, and stand within the chaw: but such as scuer and part the meat in the mouth, be sharp pointed: and we call them our eie-teeth; the Latines *Canini*, or Dog-teeth. And these are they, that of saw teeth be the longest. Euen and leuel-ranged teeth, be either in both chaws alike, as in an horse; or els they be wanting before in the vpper chaw, as in Kine, Bulls, Oxen, Sheep, & all such as chew cud. Goats haue none about but the 2 foreteeth. None haue gabbed tusks standing forth of the mouth, whole teeth are fashioned like a saw. The females of them that haue those fangs & tusks, if haply they haue the like (for seldome they are seen with such) make no offensive vse of them at all: for whereas the Bores do strike with them, the Sows only do but bite. No horned beasts hath such tusks: But all those haue hollow teeth, whereas in all the rest, they be found & solid. All fishes be toothed like saws, saue only the guilt-head Scarus; for this only of all creatures liuing within the water, hath an euen course of teeth. Furthermore, many fishes be found to haue their mouth, yea and their tongue, couered and beset all ouer with teeth: to the end, that by the means of many wounds (as it were) they might make soft their meat, which otherwise they could not possibly chew and teare. In many the teeth stand in the pallet and roofof their mouth, yea and in their very taile. Moreover, some there be that haue them crooking inwardly to the mouth, that the meat might not fall out againe: as hauing no other means to hold it in. Also, the Apides, and Serpents are likewise toothed, but they haue above, both on the right side & the left, two teeth that be very long, and those are hollowed within after the maner of smal pipes, like to the stings of Scorpions, by which they discharge their phisom. The best writers who haue searched most curiously into the secrets of Nature, do hold, That the venome of Serpents is nought els but their gal; and that by certain veins vnder their ridge bone, the same passeth along to the mouth.

D Some say, that a Serpent hath but one venomous tooth, which because it is crooked, therefore he turneth and bendeth it vpright when he would sting or bite withall. Others affirme, that at such a time the same falls out, and a new cometh vp againe and groweth in the place: for easie it is to be driuen or shaken out: and we see some of them handled and carried in mens bosomes, without that tooth. It is said moreover, that the Scorpions haue the like tooth in their taile, and most of them three together. Vipers teeth are couered and lie hidden within their gums. This Serpent being full of poison, redoubleth her prick, and at every bit letteth in poison into the wound. No flying foule hath teeth, saue only the Bat or winged-mouse. Of all creatures which beare no horns, the Camell onely hath no fore-teeth in the vpper chaw. Such as be horned, haue no saw-teeth. Snalles likewise haue teeth: witnesse the leaues and tendrils of vines, which the very least of them all do gnaw and eat away. But for sea-fishes, that those which liue in shells or be grifflly, should haue their foreteeth; and namely, that the sea-Vrchins 5, apiece; I cannot but wonder how men could come by the knowledge. Insects in stead of teeth, haue a sharp prick to sting withal. Apes haue teeth euen as men. An Elephant hath four teeth within to chew with (besides those that stand out) which in the males turne and bend vprward, but in the female they are straight, & shut directly downward. The fish also called *Musculus Marinus*, which goeth before the Whale or Whirlpoole as his guide, hath no teeth at all, but in stead thereof, his mouth all within, his tongue also and pallet, is rough againe with certaine bristles. The lesse four-footed land-beasts, haue the two fore teeth of either side, longer than the rest. As for all other creatures, they bring their teeth with them into the world: man only is born without them, and at the 7 month they commonly breed. In all other creatures they continue still and stick fast; except Men, Lions, Horses, Mules, Asses, Dogs, and such as chew cud, for these change their teeth: but Lions and dogs cast only the eie-teeth, called *Canini* in Latine. The eie-teeth of a Wolfe (so it grow on the right side of the head) is thought to doe strange matters. The great grinders which stand beyond the Eye-teeth, in no creature whatfouler doe fall

G g

G g

The eleventh Booke of

338

out of themselves. As for the farthest cheek-teeth in a mans head, which be called *Gennini*; the Wit-teeth they come about the time that he is 20 years old, and in many at 80 years of age. Sure it is, that those teeth fall from women in their old age, and soone after come againe: such women I meane, as had no children in their youth. And *Mulsanus* hath reported, That hee saw one *Zamelus* a citizen of Samothrace, who had new teeth coming vp after he was an 104 years old. Moreouer, males ordinarily haue more teeth than the females: as we may see in mankind, Sheep, goats, and Swine. *Timarchus* the son of *Nicoles* the Paphian, had a double course of teeth in either jaw. He had a brother also who neuer cast his foreteeth, and therefore hee wore them before to the very stumps. We read in Chronicles of one man that had a tooth growing out of the very pallar of his mouth. As for the eye-teeth, if they be lost by any mischance, there neuer grow again any other for them. In horses only, of all other creatures, teeth wax whiter by age: for in the rest, they turne to be browne and reddish. The age of Horses, Asses, and Mules, is knowne by a marke in the teeth: a horse hath in all 40. At the end of 30 months, hee loseth his fore teeth of either chaw, as well aboue, as beneath: the yere following as many, euen those that be next, namely at what time as they put out those which be called the cheek teeth. At the beginning of the fifth yere, hee loseth other two, but there come vp new in the place in the sixth yere. By the seventh yere he hath all, as well those that should come in others place, as those which are firme and neuer change. A gelding neuer casts his teeth, no not his sucking teeth, in case he were gelded before. Asses in like manner begin to shed their teeth at the 30 month of their age, and so forward from 6 months to 6 months: and if they sole not before they haue shed their last teeth, they are for certaine to be holden barren. Kine and Oxen, when they be two yeres old, do change their teeth. Hogs or Swine neuer haue any teeth to fall. Now when as these marks are gon out, which shew the Age of Horses, Asses, and such like, yee must (to know their age) go by the ouergrowth & standing out of the teeth, the greynesse of the haire ouer their brows, and the hollow pits thereabout: for then are they supposed to be 16 yeres of age. As touching men, some are thought to haue venome and poison in their teeth: in somuch, as they be shewed bare and naked against a cleare mirror or looking glasse, they wil dimme the beauty thereof, yea, and kill yong pigeons whiles they be calow and vnplumed. But forasmuch as we haue spoken sufficiently of teeth, in our treatise as touching the generation of Man, wee will passe ouer the rest, and proceed vnto other parts; saue onely that this is to be obserued and noted, How children be sicke when they be about breeding of their teeth. And to conclude, of all other creatures, those are most dangerous with their Teeth, which haue them framed like sawes, and closing one betwene another.

The Tongue.

Now as concerning Tongues, we obserue much diuersitie in them: for all creatures are not tongued alike. First and formost, Serpents haue very thin tongues, and the same three-forked; blacke of colour, shining, and ready to pierce; and if a man take them forth, very long. Lizards haue tongues two-forked and full of haire: so haue the Seales or Sea calues a double tongue: but the tongues of these beforesaid, are as small as haire: as for the rest, their tongues serue them to lick their muzzles and lips all about. Fishes haue their tongues for the greater part thereof, cleaving fast to their pallar; and in Crocodiles they are so cleane throughout. But as well fishes as other creatures of the water, haue a fleshy palat, which ferueth them in stead of a tongue to tast withall. Lions, Libards, and all of that sort, yea and Cats, haue their tongues rough and vneuen, made like a file with many small edges lapping one ouer another: in such sort, as that with licking it wil wear the skin of a mans foot thin, that their spittle and moisture when it cometh neare vnto the bloud and the quick, will driue oftentimes into rage and madnesse, those whom they so lick, yea although otherwise they be made tame and gentle to come to hand. As touching the Tongues of Purple fishes we haue written already. Frogs haue their tongues in the forepart fast to the mouth: the hinder part within toward their throat, is free and at liberty, whereby they keep that croaking which we heare at one season of the yere; namely, when the males cal to the females for to ingender; & then they be called *Olaygones*: for at that time they let down their nether lip somewhat vnder the water, that they gargle with their tongue leuell to the water, which they receiued into their throat: and so while their tongue quauereth withall they make that croaking noise aboue said: he that would looke then aduisedly vpon them, should see their specks so swoln and stretched out full, that they wil shine againe: he should perceiue, their eies ardent and fierie with paines that they take thus with the water. Those creatures that haue

A haue pricks and stings in their hin-parts, are furnished also with tongue and teeth. As for Bees, their tongue is very long, and the Grasshoppers put it forth a good way. They that haue a fistulous sting or pricke in their mouth, are provided neither of teeth nor tongue. In some Insects, (as namely Pismires) the tongue lieth close within. Elephants, aboue all other beasts, haue a large and broad tongue. All creatures haue their tongue loose and at liberty: at all times, each one in their kind: man only is oftentimes so tongue-tied, that needfull it is to cut certain strings; and veines for to caue it. *Metellus* the high priest and chiefe sacrificer at Rome, had such a swelling and flaming tongue (by report) that against he should dedicate the temple of the goddess *Opifera*, he labored for with his tongue for vtrance, for certayne months together, & took such pains, as if he had bin vpon the racke. All children, by that time that they be leuys, are so old at the farthest, speake readily, so as they be not by some vnatural cause impeached. But some men there be, which haue their tongues so at commandment, and so artificially they can handle it and their throat together, that they are able to counterfeite the singing of all birds, and the voice of any other creature, that one cannot know and discern them alunde. As touching Taste, which is the iudgement of meats and drinks, to wit, What is sweet and tallage they haue: all other liuing creatures find it at the tip of their tongue only: but man tasteth as well with the pallar or rooffe of his mouth. The spongyous kernels, which in men be called *Tonsillae*, of the Almonds, are in swine named the Glandules. That which between them hangeth down from the inmoor part and rooffe of the mouth, by the name of the *Yvula*, is to be found in man only.

Vnder it, there is a little tongue (which the Greekes call *Epiglottis*) at the root of the oesophagus. The flap *Epiglottis* and the same is not to be found in any creature that layeth eggs. A twofold ite it hath, lying as it were doth between the two pipes. Whereof, that which beareth more outward, and is called The rough Arterie, or the Windpipe, reacheth vnto the lungs and heare. And as a man doth eat and The Windpipe swallow downe his meat, this foresaid little flap doth couer it, for feare lest as the spirit breake, the pipe, and the voice passeth that way, the meat or drink (if it should go wrong to the other conduit or pipe) might indanger a man and put him to great trouble. The other is more inward, called properly the Gullet, or the W ezand, by which we swallow down both meat and drink, and it getteth to the stomacke first, and so to the belly. This also the said flap doth couer by turns, to wit, as a man doth either speake or draw his breath, lest that which is already passed into the stomacke, should come vp againe, or be cast vp vnseasonably, and thereby impeach a man in his speech. The Windpipe consisteth of a griffly and fleshy tunicle: the W ezand of a membranous or sinewie substance and flesh together.

There is no creature hauing a necke indeed, but it hath also both these pipes. We may see they haue a gorge or throat, in whom there is found both the gullet only: but nape of neck behind they can haue none. As for those vpon whom Nature hath bestowed a neck, they may with ease turn their head about too and fro euery way, to looke about them, because it is composed of many spongyous, or turning round bones, tied and fastened one vnto another by ioints and knots: The Lion only, together with the Wolfe, and the Hyena, haue this necke bone of one entire and straight peece, and therefore stiffe that it cannot turne. Otherwise it is annexed to the chine, and the chine to the loines.

E This Chine likewise is a bony substance, but made round and long, and fistulous within, to The Chine: giue passage to the marrow of the backe, which descendeth from the brain. Learned men are of some opinion, That this marrow is of the same nature that the braine is: and they ground vpon this experience, That if the thin and tender skin that incloseth it be cut through, a man cannot possibly liue, but dieth immediately. All creatures that be long legged, haue likewise in proportion as long necks. So haue all water-fowls, although their legs be short. But contrariwise, yee shall not see any birds with long necks, that haue hooked tallons. Men only and Swine, are troubled with the swelling bunch in their throats: which many times is occasioned by corrupt water that they drinke. The vpper part or top of the W ezand, is called the Gorge, or the gullet: the nether part or the extreme thereof, is the Stomacke. There is another fleshy concavities of this name, vnder the windpipe, annexed to the chine-bone: long it is and wide, made in fashion of a bottle, flagon, or rather a gourd. Those that haue no gullet, are also without a stomack, a necke, and a w ezand, as fishes: for their mouths and bellies meet. The sea Tortoise hath neither tongue nor teeth: with the edge of his muffle (so sharpe it is) he is able well enough to chew all his victuals.

G g 2

Vnder

Stomack.

Heart.

Under the Arterie wind-pipe, is the mouth of the stomacke; of a callous or gristly substance, thicke toothed, with prickles in manner or a bramble, for the better dispatching of the meat, and the lesser or plaits grow smaller and smaller, as they approach neerer to the belly: so as the vtmost roughnesse thereof in the end is like vnto a Smiths hie.

Now are we come to the Heart, which in all other living creatures is situate in the very midst of the breast in man only it lies beneath the left pap, made in manner of a pear, & with the pointed and smaller end beareth out forward. Fishes alone haue it lying with the point upward, to the mouth. It is generally receiued and held, that it is the first principall part which is formed in the mothers wombe next vnto it the braine, and the cies last of all. And as these be the first that die to the Heart is last. In it (no doubt) is the most plenty of heat, which is the cause of life. Surely it neuer moueth and paneth, like as it were another living creature by it selfe: couered it is within forth with a very soft, yet a strong tunicke, that enwrappeth it: defended it is besides with a strong mure of ribs, and the breast bone together: as being it selfe the principall fortress and castle, which giues life to all the rest. It contains within it certaine ventricles and hollow receiues the chiefe lodgings of the life, and blood, which is the treasure of life. The greater beasts are 3 in number: & none there is without two. This is the very fear of the mind and soule. From this fountaine there do issue 2 great vessels, master-veins or arteries, which are diuided into branches: & being spred as well to the fore-part as the back parts of the body, into smaller veins, do minister vitall blood to all the members of the body. This is the only principall part of the body that cannot abide to be sick, or languish with any infirmity: this lingereth not in continual pain: no sooner is it offended, but death insueth presently. When all other parts are corrupt and dead, the Heart alone continueth alieue. All living creatures that haue an hard & stiff heart are supposed to be brutish: those that haue small Hearts, be taken for hardy and valiant: & of avaritious life: they are reputed for timorous and fearfull, which haue great Hearts.

And the bigger the Heart, in proportion of the body, haue Mice, Hares, Asies, Deere, Panthers, Wildfells, & Yares; & in one word, all creatures either by nature fearfull, or vpon feare hurtfull. In Raphalagones, Partridges haue two Hearts. In the Hearts of Horses, Kine, Bulls and Oxen, are other diligencies found. The Heart in a man groweth yerely two drams in weight, vntill it be 50 yeares of age: and from that time forward it decreaseth from yere to yere as much: whereupon he is notable to liue above 100 yeares, for want of Heart: as the Egyptians be of opinion; whose manner is so to preferue the dead bodies of men spiced and embalmed.

In three hundred
by battle.

Some men, such as *Aristomenes* the Messenian, who slew with his owne hands 300 Lacedaemonians. Himselfe being sore wounded and taken prisoner, saued his owne life once, and made an escape out of the caue of a stone quarrie, where he was kept as in a prison: for he got forth by narrow Fox-holes vnder the ground. Being caught a second time, whiles his keepers were fast asleep, he rolled himselfe to the fire, bound as he was, and so without regard of his owne bodie, burnt in funder the bonds where with he was tied. And at the third taking, the Lacedaemonians caused his brest to be cut and opened, because they would see what kind of Heart hee had: and there they found it all ouergrown with hair. Moreover, this is obserued in perusing the inward parts of beasts, That when they be well liking, and do preface good, the Heart hath a kind of fat in the vtmost part thereof: howbeit, this would be noted, That according to the Soothsaiers learning, their Heart is not alwaies taken for a part of the bowels or intrails: for after the 123 Olympias when *Pyrrhus* king of Epyrus was departed out of Italy, what time as *L. Posthumus Albinus* was king sacrificer at Rome, the Soothsaiers and Wifards began first to look into the heart, among other inward parts. That very day when as *Cesar* Dictator went first abroad in his roiall purple robe, and tooke his seat in the golden chaire of estate, he killed two beasts for sacrifice, & in both of them the intrails were found without any Heart: whereupon arose a great question and controuersie among the Augures and Soothsaiers, How it could be, that any beast ordained for sacrifice should liue without that principall part of life: or whether possibly it might lose it for that present only: Ouer and besides, it is held for certaine, that if any dye of the trembling and ache of the heart, or otherwise of poison, their heart will not burne in the fire. And verily, an Oration there is extant of *Vitellius*, wherein he challengeth *Piso*, and chargeth him directly with Poisoning of *Germanicus Caesar*, vpon this presumption; for he openly protested and prouoed, That the heart of *Germanicus* would not consume in the funerall fire, by reason of poyson. But contrariwise,

The Lights
or Lungs.

A riwile, *Piso* alledged in his own defence the foresaid disease of the Heart called Cardiac, whereof as he said *Germanicus* died.

Under the Heart lie the Lights, which is the very seat of breathing: whereby we draw and deliuer our wind. For which purpose, spongyous it is and full of hollow pipes within. Few fishes, as we said before, haue any Lungs: other creatures also that lay eggs, haue but final, and the same full of froth, and without blood: whereupon they be not thrifty at all: which is the cause likewise that Seales and Frogs can diue so long vnder the water. The Tortoise also, albeit he haue very large Lungs, and the same vnder his shell, yet there is no blood therein. And verily, the lesser that the lungs be, the swifter is the body that hath them. The Chameleons Lights be very big, for the proportion of his body, for little or nothing els hath he within it.

The Liver.

Next followeth the liver, which lies on the right side. In that which is called the head of the Liver, much varietie and difference there is. For a little before the death of *Marcellus* (who was slaine by *Annibal*) as he sacrificed, there was found a Liver in the beast, without that head or fibres aforesaid: and the next day after, when he killed another for sacrifice, it was seen with two. When *C. Marius* sacrificed at Vtica, the same was likewise wanting in the beast, being opened. Semblably, when prince *C. Caligula* the Emperor sacrificed vpon the first day of Ianuarie, at his entrance into the Consulship, the Liver head was missing: but see what followed! in that yere his hap was to be slaine. Moreover, his successor *Claudius* within a month before he died by poison, met with the like accident in his sacrifice. But *Augustus Caesar*, late Emperor of famous memory, as he killed beasts for sacrifice, the very first day that he entered vpon his imperiall dignity, found in 6 of them 6 livers, which were all redoubled & folded inward, from the nethermost lobe or skirt beneath: whereupon answer was made by the Soothsayers, That within one yere he should double his power and authority. The foresaid head of the Liver, if it chance to be slit or cut, prefigeth some euill hap, vnlesse it be in case of feare and penitence: for then it beroken good issue, and an end of care and sorrow. About the mountaine Britetum and Tharne; also in Cheronefus neere vnto Propontis, all the Hares ordinarily haue two Livers: and (a wonderous thing it is to tell) if they be brought into other countries, one of the said Livers they loofe.

The Gall.

Fast to the Liver hangeth the Gall, yet all creatures haue it not. And about Chalcis in Euboea, the sheep are quite without Gall. But in Naxos they all haue two Galls, and the same very big. The strangers that come into both those parts, think the one as prodigious & monstrous as the other. Horses, Mules, Asies, Deere both red and fallow, Roe-bucks, Swine, Cammels, and Dolphins haue no Gall. Some Mice and Rats there be which haue it. And few men there are without, howbeit, such are of a stronger constitution, more healthfull, & longer liued. Howbeit some are of opinion, That all horses haue Gall, not annexed to their liver, but within their bellie: and as for the Deere aforesaid, it lieth (as they think) either in their tail, or els their guts: which (by their saying) are soppiter, that bounds and dogs by their good wils would not touch them. Now this Gall is nothing els but an excrement purged from the worst blood: & therefore blood is taken to be the matter thereof. Certain this is, that no creatures haue Livers, but such as likewise haue blood. And in truth, the Liver receiueth blood from the heart, vnto which it is adioined, and so conueigheth and distributeth it into the veins. Black choler lying in the Liver causeth fury and madnesse in man: but if it be all cast vp by vomit, it is present death: hereupon it cometh, that we terme furious and raging persons by the name of cholericke, or full of Gall: so great is the venome of this one part, if it reach once to the seat of the mind, and possesse it. Nay more than that; if it be spred and dispersed ouer all parts of the body, it infecteth it with the yellow jaundice, yea, and coloureth the very cies, as it were with Saffron. Let it out of the bladder or bag wherein it is, yea that see it stain vessels of brasse, yea, they will become black againe, and lose their brightnesse if they be touched therewith. No small then if the venome and poison of serpents, proceed from the Gall. They that vse to feed of worme wood growing in Pontus, commonly haue no gall. Raucens, Quailles, and Feasants, haue their gall joining to their kidneys, or rather to their guts of one side and no more: and some to the guts only, as Pigeons, Haukes, and Lampreies. Few birds there be that haue gall in the Liver. As for Serpents and Fishes, they haue the greatest galls of all others, for the proportion of their bodies. Most of them haue their gall along their guts throughout, in manner of the Hauke and the Kite. Moreover, in all Vvhale fishes their gall is fastened to the liver: and so, we see it lieth in the Seales, whole

whose Gall is singular good for many purposes. Oxen Gall in limning giueth a golden colour: G
The Southsiders haue dedicated it to *Neptune*, & the mighty power of water. *Augustus* the Emperor found two Galls in a beaft that he killed for sacrifice, vpon that very day whereon he obtained that famous victorie at Actium. Some say, that the lobes or fibres in the small Liuers of certaine Mice and Rats, are commonly found to be as many as the Moone is daies old in euery moneth: and looke how many daies you reckon of her light, so many may you count the fibres aforesaid. Also, that their liuer groweth at mid-winter, when daies be at shortest. In the kingdoms of Grenada and Andalusia in Spaine, Conies are many times found with double Liuers. The land Frogs of Toads kind, haue one lop or lappet of the liuer, which Ants will not touch, because of the poison therein, as is supposed. Liuer of all things may be kept and preferred longest: and we read in chronicles, that there haue bin found in some cities long besieged, Liuers in salt or powder, which had continued a 100 yeres. Serpents and Lizards haue long Liuers. In that sacrifice which *Cassius Volaterranus* killed, Dragons were seene to issue from among the Entrails and the Liuer: and this turned to be a lucky presage. And verily, why should we think this report or any other in sacrifices, to be incredible: considering that vpon the very day that *K. Pyrrhus* was slain, the heads of the beasts being slain for sacrifice (notwithstanding they were cut off from the bodies) moued forward vpon the ground, and licked vp their owne blood.

The Midriffe

The vpmost inwards of a man, to wit, the Heart and Lungs, are diuided from the other entrails beneath, by certain pellicles or rims of the Midriffe, which the Latines call *Proecordia*, (because they are drawne and set before the Heart as a defence:) and the Greeks *Phrenes*: true it is, that Nature in great prouidence hath inclosed all the noble and principal parts within several skins and coats of their owne, which might serue in stead of sheathes and caues for their better defence: but in this partition of the Midriffe, shee had a more particular regard to the propinquitie of the Stomack and Belly, lest that the vitall parts being so neare, should be oppressed and suffocated with the streams and vapors of the meat therein boiling. To this part are we beholden for our quick wit, this membrane of the Midriffe we may thank for our ready conceit and vnderstanding: to which effect, charged it is with no flesh, but composed of fine & subtle sinews. The same likewise is the very especiall seat of mirth, as we may perceiue euidently by tickling vnder our armpoles, vnto which it reacheth: and as in no place of mans body the skin is more fine and tender, so it taketh as great pleasure to be tickled and lightly scratched there. And herupon it is, that in solemne combats of sword-fencers at utterance with the sharp, as also in field battels, we haue many a time seene men wounded and thrust through the Midriffe, to die laughing.

The Bellie or Paunch, with the Guts. A double faish source fold.

To proceed in our Anatomy, all creatures hauing a Stomack or Read, are not without a belly vnder it. As many as chew cud, haue the same * double or two fold, the rest one and no more: and looke who want blood, are without it also. For some there be that haue one entire gut, that beginneth at the mouth, and by a certaine way redoubleth and returneth backe againe thicker, and namely, the Cuttill and the Polype. In man it is annexed to the bottome of the Stomack, like as in a Dog. And in these twaine onely, narrower it is in the lower part: which is the cause that none but they do vomit; for when their bellies be full, the straight passage beneath keeps the meat from descending, and so it returneth upward: which cannot happen to them that haue it wide and large, whereby the meat is sooner sent downe into the guts beneath. Next to the bag of the Stomack, men and sheepe haue the small guts called *Lactes*, through which the meat passeth: in others it is named *Ile*. Next vnto which are the greater guts, that reach into the Paunch: and in man they are full of windings and turnings: which is the reason, that as many as haue a great space between the Stomack and the Paunch, are more hungry and greedy of meat than others. And those who haue the fattest and most greasie bellies, most commonly are the grossest of capacity and vnderstanding. Some fouls likewise haue a two-fold receptacle for their meat: the one is the gizzer, craw, or gorge, wherein they bestow at the first their meat when they take it new: the other is the true stomacke indeed; into which they send out of the former, the vituals already altered, prepared, and in good forwardnes of concoction. And such be Hens and Pullet, Coits or Stock-doues, House-doues, or Pigeons, and Partridges. All the rest in manner want the said gizzer, but in stead thereof haue a wider gorge, where-through the meat passeth into the stomack, as Choughes, Ravens, and Crowses. Some againe there be that haue

A haue neither one nor other, but be far different from the rest, and these haue their bellie hard to their gorge: and especially such as haue long neckes and narrow, as the bird *Porphyrio*. The paunch or bellie of those beasts which are whole housed, is hard and rough. And in land beastes, it is in some thicke toothed, and set full of sharp prickles: in others it is framed rugged likewise, plaited crosse in manner of lattice, readie to catch and bite what soeuer. Those which haue not teeth in both chawes, nor yet chew cud, do in this bellie concoct and digest their vituals, and out of it they send the meat into the paunch where the guts lie. This member, in the mids, is in all creatures fastened to the nauill: and in man it is like vnto that of a swine, hauing toward the neather part, a great gut named *Colon*: and this is it, which giues occasion to the intolerable paine of the colique. This Gut in dogs, is very streight and narrow, whereupon they haue much adoe to discharge it, and lightly they doe not skummer, but with great paine and difficultie. Those creatures of all others be counted most vnstable, whose meat passeth immediately out of their bellie into the straight gut *Longon*, or the *Tiwill*: as among foure-footed beastes, the Wolfe, engendered betweene the Hind and a hee-Wolfe: and in foules, the Cormorant, An Elephant hath foure bellies or paunches: all other parts within, be answerable to those in Swine. Their lungs be foure times as big as those in an Ox. The gorge or craw, and the stomacke or gizzer in birds, is the thicke and fleshy. In the maw or stomack of Swallows young birds, there be foure certaine little white stones, or else of a reddish colour, called therupon *Chelidonij*: and they be in great request in Art-Magicke, namely for charmes and enchantments. Likewise in the second bellie or paunch of yong Heifers, there is found a small, black, and grauely stone round as a bal, and light withall: a singular remedie (as it is thought) for women that haue hard labour and be deliuered with much paine & difficultie, so it be taken before that euer it touch the ground. The Stomacke and the Guts, are kept within a fat and thin cawle, in all creatures but those that lay eggs.

The Cawle or Kell.

Vnto this Cawle, is fastened the Spleene on the left side of the belly just against the liuer. And otherwhiles these two shift their places, and one lies where the other should; but that is euer held as a prodigious token. Some are of opinion, that those creatures which lay eggs haue a Spleene, but it is very small: as also the Serpents. And surely such an one appeares plainly in the Tortoise, Crocodile, Lizards, and Frogs. Certaine it is, that the bird *Agoccephalus* hath none at all, no more than others that want blood. This member hath a property by it self sometimes, To hinder a mans running: whereupon professed runners in the race that be troubled with the spleene, haue a deuise to burne and waite it with an hot yron. And no maruell: for why? they say that the Spleene may be taken out of the bodie by way of incision, and yet the creature liue neuertheless: but if it be man or woman that is thus cut for the Spleene, hee or shee loseth their laughing by the means. For sure it is, that vntemperate laughers haue alwaies great Splenes: In *Sccepis* (a countrey of Asia) the sheepe haue very small Splenes, and from them were deuised the remedies to cure the disease thereof, and to waite their excessive greatnesse.

The Spleene.

But about *Briblem* and *Thame* (the hills aboue named) the Deer haue foure Kidnies apeece: whereas on the contrarie side, neither feathered fowle nor scalie fish, haue any. Moreover, the Kidnies sticke close vnto the bones. The right Kidney in all creatures is the bigger, lesse fat, dryer of the twaine: howbeit in both of them, there is a fat sinueth out of the mids, saue only in Seales. All liuing creatures are fattest about the raines of the backe: and sheepe may be so far ouergrown with fat, that they will die thereof. Sometime there be little stones found within them. All foure-footed beastes that bring forth their yong quick, haue kidnies. And of such as lay eggs, the Tortoise alone, which also hath all other entrails. The Kidnies of a man, be like to those of Kine and Oxen, as if they were composed of many together.

Kidnies.

Nature hath embarrad the Breast-part (wherein lie the vitall members) with ribs round about: but toward the belly (which needs must grow and stretch) the hath not so done, but hath giuen it libertie for no liuing creature hath bones to compass the paunch. Mans Breast only is broad and square: in all others it is framed otherwise, like the keele of a ship: which is more euident, and to be seene in birds and in water-fowles most of all others. As for Ribs, man only hath eight that be full and whole: Swine haue ten: hound beastes thirtene: Serpents thirtie.

Breast & ribs.

Vnder the bellie and paunch in the fore-part of the bodie, hangeth the bladder: which no creature laying eggs hath, saue only the Tortoise. It is found in none but such as haue a paire of lungs, and the same with blood: neither in any creeping creature without fec. Betweene it and the

The Bladder.

The Matrix

Acidities

Marrow

Marrow

Marrow

the belly be certaine canals or arteries, reaching to the groine, which by the Greeks are named *Gilia* (i. the Flanks.) In the bladder of a Wolfe, is found a little stone called *Syrites*. But in some mens bladders, ye shall see otherwhiles certaine grosse haire to engender, like to bristles, also grauell and stones, which put them to intollerable paine. This bladder consisteth of a certaine tunicle or skin, which if it be once wounded, cannot again be consolidated, no more than those fine pellicles or rinds that enwrap the braine and the heart. For you must thinke, that there be many sorts of these membranes or filmes serving to sundrie vses.

As for women, their inward parts are answerable to mens in all these respects abovesaid: and besides, they haue by themselves adjoyning close vnto the bladder, another little bag or purse; whereupon it is called in Latine *Vermis*; and it hath another name beside, to wit, *Laci*, which we call the Matrix, the Mother, or the Wombe: and in other creatures it is termed *Vulua*. In Vipers, and such as hatch their eggs within them it is double. In those that lay eggs, it lyeth fast to the Midriffe. In women, it hath of either side two chambers or concauities. If at any time it chance to be peruered and turned the wrong way, or take aire into it, it is deadly, and riseth vp to stop the wind. If Kine be with Calfes, men say, they carrie not their yong but in the right cell or receptacle thereof, yea, although they goe with two Calues at once. Our fine-toothed gluttons do find a better tast in a Sows wombe that slips and casts her Pigs and together, or is cut out of her belly, than if the dam bringeth forth her fruit at full time. The one forthooth is called *Ejecticia*, the other, *Porcaria*. And the best is that of a yong Sow that neuer farrowed before: and contrariwise, of old Sows and such as haue giuen ouer to farrow. After the hath pigged, vnlesse he be killed the same day, the same hath a dead color, and is but leane. And yet that of a yong Swine is not greatly commended, vnlesse it be of her first Pigs. Howbeit, those of old Sows also be in request, so they haue not giuen ouer breeding: and namely, if they be taken either within two daies before they should pig, or within two daies after they haue pigged, or at leastwise, the very same day. The next to the cast-wombe abovesaid, is that of a Sow killed a day after the hath pigged. The paps and teats of such a Sow, newly hauing farrowed, is counted excellent good meat, so that it be taken before euer the Pigs sucked them drie: but those of a Sow which hath cast her pigs before time, is held for the worst of all. In old time they called this morcell in Latine *Abdomen*, and before it was growne hard and brawny, they neuer were wont willingly and wittingly to kil Sows, * euen vpon the point of their farrowing, and being readie to Pig [as our monstrous gluttons doe now adays, because they would haue the teats soft, tender, and full of milke.]

All horned beasts hauing teeth growing but in one jaw, and pasterne bones about their feet, do beare tallow or fetter, and feed fat. Those that be clouen-footed, or otherwise haue feet deu- uided into many toes, and beare no horns, haue no tallow, but greafe or fat. The tallow or fetter growes to be hard, and when it is thoroughly cold, is brittle and apt to crumble and breake; and is euer found in the edge and extremities of the flesh, contrariwise, the seam or greafe is inter- larded between the flesh and the skin, liquid it is, and easie to melt. Some creatures there bee that will neuer be fat, as the Hare and Partridge. Generally, whatsoeuer is barren, be it male or female, will soone feed fat. Sooner grow they to be old which are ouer-fat. No liuing creatures there are but haue a certain fat in their eies: & the tallow in any thing whatsoeuer, is senselesse: for neither hath it Arteries nor Veines. The fat also & greafe in most of them, is without fence. And hereupon it is, That some asstume, how Mice and Rats haue gnawed and eaten fat Hogs whiles they were alive, and made them nests in their backs: yea, and *Lucius Apronius* somtimes Consiul, had a sonne so fat that he could not goe, so heaue was he laden with greafe; in so much, as he was faine to take some of his greafe forth of the bodie, and so discharge himselfe and be- come lighter.

Marrow seemeth to be much of the same nature: in youth it is red, and in age waxeth white. This is neuer found but in hollow bones: and yet not in the legs of Horse, Ass, Mule, or Dog. And therefore if they chance to be broken, they will not powder and vnte againe, which hap- pens when the Marrow runs out to the place of the fracture. In those that carrie greafe or fetter, fattie it is and greafie: but in horned beasts it resembles Tallow. Sinciew it is, and that onely in the ridge of the backe of as many as haue no bones, as namely, in all fishes. Beares haue none at al. A Lion likewise hath but very little, to wit, in some few bones of his thighs & buts behind, and also of his legs before vnder his shoulders. For his other bones are so hard, that they will strike

A strike fire, as it were an hard flint. The Martow is hard in them that gather no greafe, but rather tallow.

The bones of Asses legs are good to sound shrill, and to make pipes of. Dolphins haue verie bones, and not pricke chins: for they bring forth their yong aliue. Serpents haue only pricke ridges. Fishes that be soft haue no bones: but their bodie is bound with certaine hoops or circles of flesh, as the Cuttill or Calamartie. Neither haue insects any bones at all. Those fishes which be not soft, but gristly, haue a kind of marrow in their ridgebone. Scales haue gristle, and no bone: The eares and nostrils of all creatures, if they beare vp but a little, haue a soft tender gristle apt to bend and wind: such is the goodness of Nature, providing that they should not breake. A gristle if it be broken, will not close together and be sound. Neither will bones, if ought be cut from them, grow againe: vnlesse it be in horses and such beasts of carriage, and namely, betweene the houle and the pasterns.

A man groweth in height and length vntill hee be one and twentie yeares of age: then be- gins he to spread and burnish in squareness. As well men as women-kind, shute vp most and vndoe the knot that hindered their growth, when they are come to fourteene yeares of age, and be vndergrowne: and most is this seene, if some sicknesse happen about that time.

As for the Sinewes, Ligaments, and Cords, which take their beginning at the heart, be coue- red (as it were) with a certain white and glutinous substance, and the like cause and nature they haue. These in all bodies, are tied to the slipperie bones: the knitting of the bones together, which be called joints, they fasten and bind together, some by comming betweene, others by clasping round about, & others againe, by passing crose ouer: in one place they be twined round, in another broad, according as the figure of each part doth require. Be they cut a two, as they cannot knit againe, so they put a man to no paine: pricke or wound them, a wonder to see, what extremitie of paine will thereupon ensue. Some creatures be without nerves and sinewes, as namely fishes, for they stand much vpon Arteries, and yet ye shall haue neither the one nor the other in fishy fishes. Look where there be Sinewes, Cords, and Ligaments, those that lie more in- ward and vnderneath, stretch out the part and giue libertie: whereas the vppermost that lie ouer them, draw the same in as much.

Among these are hidden the Arteries, that is to say, the passages of the spirit and life. And ouer them ride the Veines, euen the very conduits and channels that carie the blood. The Pulse or beating of Arteries, is most euident in the extremities or ends of any members, and for the most part bewraies hidden diseases. *Herophilus* that renowned Poet and interpreter of Physick, hath with marvellous skill reduced the order thereof into an art: he hath set downe most arti- ficially, the certaine measures and times, the compass, the metrical lawes thereof, according to euery age, when they strike euen and steadie, when too fast, when too slow. But the skill herof is little exercised, and his inuention in that behalfe neglected: because it seemed ouerwittie, sub- tile, and curious. Howbeit, the obseruation of the strokes, either comming thick & fast, or slow and softly, giueth a great light to iudge of the strength of Nature, that governs our life. Arteries want fence, and no manell, for they be without blood. Neither do they all containe within them vital spirit. For there haue bene knowne some of them cut in twaine, and yet that part of the body only is mortified, which receiued the offence. Birds haue neither Veines nor Arteries. Likewise, Serpents, Tortoises & Lizards, haue but very little blood. The Veines dispersed at the last into most fine and small threadie fibres vnder all the skin, grow at the length to bee so slender that the blood cannot possibly passe thorough them, nor any thing else: saue a thin hu- mor or moisture, which thorough infinite small pores of the skin doth breath forth, and stands there like a dew, and is called Sweat. The place where all the Veines doe meet in a round knot together, is the Nauell.

CHAP. XXXVIII.

¶ Of Blood, as well that which soone waxeth drie, as that which will not thicke at all. Also, which is the grossest blood, and beate itself, which the lightest and thinnest: and last of all, what creature is liuing haue no blood at all.

Those that haue much blood, and the same fat and grosse, are angrie and chollericke. The blood of males is commonly blacker than that of females: yea, and more in youth than in old

Bones and Gristle.

Growth.

Sinewes, Cords, & Ligaments.

Veines and Arteries.

old age: and the same in the bottome and lower part, fethleth fatter and groffer than aboue. In blood confits a great portion and treasure of life. When it is let out, it caries with it much vital spirit: howbeit, fencelesse it is, and hath no feeling. The strongest creatures bee they which haue the thickest blood: but the wisest, those that haue thinnest: the more fearefull, that haue least: but dull and blockish altogether which haue none at all. But blood of all other soonest congealeth and waxeth hard, and therefore poison it is, to be drunke especially. The blood of Bores, red and fallow Deere, Roe-bucks, and all Buffes, will not thicken. Asses blood is most fatty and grosse: and contrarily, mans blood is thinnest & finest. Those beasts which haue more than 4 feet, are bloodlesse. Those that be fat haue small store of blood, because it is spent in farnesse. Man only bleeds at the nose: some at one nostrill alone, others at both: and some againe void blood downward by the Hemorrhoids. Many there be that cast vp blood at certaine times, ordinarie, by the mouth: as non long since *Marcius Vrsus*, late pretor of Rome: and usually euerie yeare *Valerius Saurimus*, Prouost of the citie; who notwithstanding liued untill hee was aboue fourescore and ten yeres old. Blood is the only thing in the body that increaseth presently. For so we see, that beasts killed for sacrifice will bleed most freshly & in greater abundance, if they dranke a little before. Those creatures that lie hidden in the earth at certaine times, (as we haue said before) haue no blood in all that while; yntil it be some few, and those very small drops gathered about their hearts. A wonderful worke of Nature, that it should be so as al that in a man it should alter and change euer and anon, so as it doth vpon every small occasion: and the force and strength thereof varie, not only for defect and want of matter to disperse abroad, but also for euery little motion and passion of the minde, as shame, anger, and feare. For one while it sheweth pale, another while red, more or lesse, in much variety of degrees. In case of anger it will shew one color of shame and bashfulness appearing in another. In feare, doubtlesse it retires and flies backe, in such sort, as a man knowes not what is become of it: so as many in that fit haue ben stabbed and run thorough, and yet bleed not at all one drop: but this sudden change of colour happens to men only. For in other creatures, which (as we haue said) do alter their hue, it is an outward colour that they take from the reflection of certain places neer vnto them, man alone hath this change from within himselfe. To conclude, all maladies and death especially, consume the blood.

CHAP. XXXIX.

¶ Whether in Blood resteth the souerainetie or not. Also of the nature of Skin of Haues, and the Paps.

SOME measure not the finenesse of spirit and wit by the puritie of blood: but suppose that creatures are brutish, more or lesse, according as their Skin is, thicker or thinner: and as the other courtesies of their bodie be either grosse and hard, or thin and tender: as we see for example in Oisters and Tortoises. They ascribe moreover, that the thick hide in Kine & Oxen, and the hard bristles in Swine, impeach the entrance of subtil aire and fine spirit into their bodies: in such wise, that nothing can pierce and passe through, which is pure and fine, as it should be. And hereto they bring men also, as a prooffe, who are thicke skinned, and more brawnie: for to be more grosse of fence and vnderstanding: as who would say, that Crocodiles were not very wittie and industrious, & yet their skin is hard enough. And as for the Riuer-horse, his hide is so thicke, that thereof jaelines and speares are turned: and yet so industrious is that beast, that in some case he is his owne Physician, and he hath taught vs to open a veine, and let blood. The Elephants skin is so tough and hard, that thereof be made targuers and shields, of so good prooffe, that it is impossible to pierce them thorough, and yet they are thought to be of all four-footed beasts, most ingenious and wittie. Wherefore, conclude we may, that the skin it selfe is fencelesse, and hath no fellowship at all with the vnderstanding: and especially that of the head, and whosoever it is of it selfe naked and without flesh, be sure (if it be wounded) impossible it is to consolidate the wound, and namely, in the eie lids and bals of the cheekes. All creatures that bring forth their young quicke, are hairier: those that lay eggs, haue either feathers, as birds: skales, as fishes: or else be covered with shels, as Tortoises: or last of all, haue a plaine skin and no more, as Serpents. The quills of all feathers be hollow. Cut them, they will grow no more: plucke them, they will come againe. Insects flie with thin and brittle pellicles or membranes.

The

- A The sea Swallows haue them euermore moist and drenched in the sea. As for the Bat, he is afraid to wet them, and therefore flies about houses, & his wings besides are diuided into joints. The haire that grow forth of a thick skin, are commonly hard & grosse, but euermore thinner and finer in the females. In horses and mares they grow at length vpon their mains. Lions also haue them long about their shoulders and foreparts. Connies haue long haire about their cheekes, yea, and within-forth: as also in the soles of their feet: and so hath the Hares, according to the opinion of *Trogus*: who thereby collecteth, that hairy men likewise are more lecherous than other. The hairiest creature of all other is the Hare. In mankind only there grows haire about the priuy parts: and whosoever wants it, man or woman, is holden for barren, & not apt for generation. Haire in men and women are not all of one fort: for some they bring with them into the world, others come vp and grow afterwards. Those they haue from their mothers womb do not lightly fall and shed, and least of all in women. Yet shal ye haue some women to shed the haire of the head, by occasion of sicknesse: as also other women to haue a kinde of down vpon their face, namely when their monthly fleurs do stay vpon them. In some men the later kind of haire, to wit of the beard, &c. wil not come of their own accord without the help of Art. Four-footed beasts shed their haire yerely, and haue it grow again. Mens haire of their heads groweth most: and next to it that of their beards: if the haire be cut it grows not again at the cut end, but springs from the root. It grows apace in some sicknesse, and most of all in the consumption of the lungs, and in old age, yea, and vpon the bodies of the dead. In lecherous persons, the haire of their head, browes, and eie-lids, with which they came into the world, do fall more early than in others: but those that spring afterward grow sooner again if they be cut: and shauen. The wooll and haire that foure footed beasts do beare is more curle and thick by age, but it comes not in such plenty as before. And such haue alwaies their backe well covered with haire and wooll, but their bellies bare. Of Kine and Ox hides foddren there is made glew: but the Bulls hide hath no fellow for that purpose. Man only of all males hath euiden paps in his breasts: other creatures haue little nipples only in shew of teats. Neither hath all females teats in their breasts, but only such as are able to suckle their young: none that lay eggs haue paps: nor any haue milk vnles they bring forth their young liuing: and yet of all fowles I must except the Bat alone. As for the illfaured Scritchowles called Stryges, I think they be but tales that go of them: namely, That they will giue milk out of their breasts to young infants. True it is, all men agree in this, That the manner was in old time to vse in cursing and execration, the termes of Strix; but what bird it should be I suppose no man as yet knoweth.

CHAP. XL.

¶ Notable obseruations in liuing Creatures as touching their paps.

- SHEE Asses are much pained with the ache of their vdders, when they haue foled; and therefore after six months they will not giue them any more sucke: whereas mares doe suckle their colts a whole yeare almost. Those beasts which be whole hoofed, and haue not about two yong at once, haue all of them two paps and no more, and those in no other place else but between their hinder legs. Such as be clouen footed, and horned likewise, haue them in that place: but Kine haue foure teats. Ewes & Goats but two apiece. Such beasts as be very fruitful and bring many yong, and likewise whose feet are parted into toes, these haue many nipples or teat heads all along their belly, disposed and set in a double course, as namely Sows: of which those of the better sort haue 12; the common sort but tenne. Also Bitches after the same maner. Some beasts haue 4 teats in the mids of their belly, as Panthers: some twain and no more, as the Lionesse. The Elephant alone hath twaine vnder his shoulders or legs before, and those not euident in the breast part, but short thereof, and lying hidden as it were within the arm-pits. And generally, none that haue their feet diuided into toes, haue vdders behinde under their hin legs. A Sow at euery farrow giues the formost nipples to those pigs that come first, and so in order as they be farrowed: and those teats be they that are next to her throat and highest. Euery pig knowes the own pap, and will take it and no other when it comes first into the world: and thereof it is nourished. If a pig be taken from the sow, the milk of that pap will dry vp presently, or returne backe, and the pap it selfe fall flat to the belly. Also if it chance that but one sucking pig be left, that pap alone wil do the part and let down milke, which Nature

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ture first appointed for that one pig. She Beares haue foure paps apiece. Dolphins haue no more but two teats and nipples in the bottom of their belly, and those not very apparant to the eye, nor streit and direct, but lying somewhat aside and byas: and no beast besides giueth sucke as it runneth but she. To conclude, Whales, Wirlepooles, and Seales, nourish their young with their vdder and teats.

CHAP. XLI.

¶ Of Milke: and of what milke Cheefe cannot be made.

THe milke that comes from a woman before she hath gon 7 months with child is not good: but from that time forward it is wholesome, because the infant may liue and do well after that terme. Many are so frim and free of milke, that all their breasts are strut and full thereof euen as far as to their arm-holes. Camels giue milke untill they be great with yong again: and their milke is thought to be most sweet and pleasant in tast, if to one measure thereof you put three of water. A Cow hath no milke ordinarily before she hath calued. The first milke that she giueth downe is called Beestins: which, vnlesse it be delayed with some water, will soon turn to be as hard as a pumish stone. She Asses are not so soon with yong, but they haue milke in their vdders: but if they gon in good and battle pasture, it is not good their yong soles should suck their milke in two daies after, for the very tast thereof is enough to kil them: and this disease that comes of Beestins is called Colostratio. The milke that those giue which haue teeth in both chawes is not good to make cheefe of, because it will not cruddle. Camels milke of all others is thinnest, and Mares milke next to it. Asses milke is holden for to be thickest, and therefore they vse it in stead of renning, to turn milke and gather curds thereof. It is thought also to be very good for to make womens skin faire and white. Certes the Empreffe *Poppa*, wife to *Domitius Nero*, had alwaies whereofeuer she went, 500 she Asses milch, in her train: and in their milke she bathed and washed her whole body, as in an ordinary bain, supposing that thereby her skin was not only whiter, but also more neat, smooth, and void of ruuels. All sorts of milke will thicken with fire, and turne into whey with cold. Cowes milke maketh more cheefe than Goats milke, by twice as much almost, although you take no more of the one than the other. The milke of those that haue about foure paps is naught for cheefe: but theirs is better than haue but twain. The rennet of an hind-calse or Leveret, and a Kid, is much commended. But especially of a Leveret or Rabbet, which also is medicinable for the flux of the belly: a thing to be obserued in them alone, of all creatures that are toothed in both chawes. A wonder it is, that barbarous nations liuing of milke, haue for so many hundred yeares either not knowne, or else not regarded the benefit of cheefe: and yet they vsed to thicken their milke into a kind of pleasant soure curd in manner of a Sellibub; and to cham butter thereof, which is the skum and cream of milke, much thicker than that which is called whey. To conclude, I may not let passe, That Butter hath the vertue and properties of oile: in so much as forein and barbarous nations do anoint their children therewith, as we also do ours.

CHAP. XLII.

¶ Cheefes of sundry sorts.

AT Rome (the only place that hath best meanes neere at hand, to iudge of the fruits and commodities of all nations in the world) the cheefes which come out of the prouinces of Nemausum, and from the villages of Læso and Baux, are highly praised for the best; but they last not long: their commendation is for the present season while they be Greene and new. There are brought good cheefes from two coasts of the Alps, which greatly praise the pasture thereabout. Also dainty cheefes are made in Dalmatia, from whence we haue passing good; and namely from Drinaldi. Moreover, the prouince of Ceutronia sends vs excellent cheefe from Vatium. But the great store and plenty of cheefe cometh from the Appennine mountain: which yeldeth vs the Cebane cheefe out of Liguria, which is very fine meate, notwithstanding it be made most of ewes milke. Also out of Vmbria we haue good cheefe, from the dairies along the riuier Ætio. Howbeit in the confines between Tuscane and Liguria, the monstrous great cheefes are made, and namely about Luca, for one of them weigheth a thousand pounds.

A pounds. Next to these in goodnesse be those that are made neere the city of Rome about Vestinum: but from out of the Seditian territory and the plains thereabout, there come cheefe that passe all the rest. As for cheefes made of goats milke, they are not to be defrauded of their due praise, especially when they are fresh and new made: and if besides, they may haue a little drinck in smoke, which giueth both a good lustre, and also a pretty tast to them: for such cheefes be made within the very city of Rome, and go beyond all others. As for the cheefes made in France, they taste like a medicine, and haue an aromatical relish with them. For outlandish cheefes beyond-sea the Bithynian carry the best name. That there is a certain tarter or salter (if by nothing els) may well be known by the tast of the cheefe made thereof: for there is none, but the older they are, the more saltish they be: yet such are well known to recouer their fresh taste again, if they be soaked in Thyme vinegre. Some report, that *Zoroastres* liued in the desert wilderness 20 yeares with cheefe: the which was so well tempered, that it seemed nothing old, for it neither moulded nor yet bred vermin.

CHAP. XLIII.

¶ The difference between the members of Man and other Creatures.

OF liuing creatures vpon the land, Man alone is two footed. He only hath a cannel bone and shoulders, armes also to embrace: whereas others haue shoulders only & fore-legs to rest vpon. In all creatures that haue hands, they be fleshy within-forth only: for the back part consists of skin and sinewes. Some men there be with six fingers to one hand. Wee haue heard, that *M. Curiatim* a Nobleman of Rome had two daughters so handed: whereupon they were called *Sedigitæ*. Also there was a man named *Volatim*, who was an excellent poet, and had fix fingers to an hand, whereupon he was named *Sedigitus*. Euery finger of a mans hand hath three joints: the thumbe twaine, and it bendeth and boweth full opposite to all the rest of the fingers: and yet by it selfe it stretcheth awry from the others, and is thicker than the rest of the fingers. The little finger is equal in length to the thumbe: the fore-finger and the fifth (or ring finger) are iust of one size: between which the middle finger is the longest. Those foure footed beasts that liue of rauine and prey haue five toes to their fore-feet, whereas others haue but foure: Lions, Volues, and Dogs, and some few others, haue likewise 5 toes or paws in their hin-feet, and one like a spur, which beares forth behind, and hangs down from the pasterne bone of the foot. All other smaller beasts haue five to a foot. The armes of all men be not of a iust and euen measure: for it is well known, That there was a Thracian sword-Fencer named *Stadofus*, belonging to the fence-school of *C. Caligula* the Emperour, whose right arme was longer than the left. Certaine beasts without reason vse the ministry of their fore-feet in stead of hands, and as they sit on their rumpe reach meat therewith to their mouth, as squirrels,

CHAP. XLIV.

¶ The resemblance that Apes haue to men.

AS for all the race and kind of Apes, they resemble the proportion of men perfectly in the face, nose, eares, and eye-lids; which eye-lids these creatures alone (of all foure-footed) haue vnder their eyes as well as above: nay, they haue paps and nipples in their breasts, as women: armes also and legs bending contrarie waies, euen as ours doe. Nails they haue also and fingers like to vs, with the middle finger longer than the rest, as ours be. A little they differ from vs in the feet; for somewhat long they are, like as their hands be; and the sole of their foot is answerable to the palm of their hand. Thumbs and great toes they haue moreover, with joints directly like a man. And setting aside the member of generation, and that only in the he Ape, all inward parts are the very same that ours, as if they were made iust by one patterne.

CHAP. XLV.

¶ Of Nails.

NAiles are taken and reputed for the extremities and vtmost ends of the sinewes: and ye shall finde them in as many as haue fingers and toes. But in Apes they are channelled

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halfe round like a gutter tile, whereas in men they be flat and broad. When one is dead they will grow. In ravenous creatures hooked they be and bowing inward: in dogs right and strait, faue only that which in most of them crooks from behind their legs like a spur. All creatures that haue the fashion of a foot, haue toes thereto except an Elephant. And yet he seemes to haue an appearance of five in number, but they are not diuided asunder, or if they be, they are not distinct one from another but very sleightly, and like rather to houes than nails: the forefeet also are bigger than the hinder. In the hin-feet they haue short ioints. The elephant bends his hams inward, as doth a man: whereas all other liuing creatures bow the ioints of their hinder legs, otherwise than of the former. For such as ingender and breed yong aloue bend their knees before them: but the ioint of their hough behind cleane backward. Mens knees and elbows bow contrary one to the other: so do Beares and all the sort of Apes, which is the cause they be not so swif of foot as others. Foure footed beasts, as many as lay eggs (as the Crocodile and Lizards) haue their knees before, bending backward; but those behind bowing forward: and yet their legs be crooked like a mans thumbe. In like sort, they that haue many feet: vnlesse it be the hin feet of all, in as many as do skip and hop; for they all be straight. Birds, after the manner of foure footed beasts, doe bow their wings forward, but the ioint of their legges backward.

In the knees of men there is generally reposed a certaine religious reuerence, obserued euen in all nations of the world: for humble suppliant creep and crouch to the knees of their superiors: their knees they touch, to their knees they reach forth their hands: their knees (I say) they worship and adore as religiously as the very altars of the gods: and for good reason haply they do so, because it is commonly receiued, That in them there lies much vital strength. For in the very ioint and knitting of both knees, on either side thereof before there are two emptie bladders as it were, like a paire of cheeks; which hollownesse and concauities if it be wounded and pierced through, causeth as present death as if the throat were cut. In other parts likewise of the body we see a certain religious ceremonie: for as our manner is to offer the backe part of the right hand to be kissed, so we put it forth and giue it as well in testimonie of faith and fidelitie. It was an antient fashion in Greece, when they would make court and with great respect tender a supplication to some great personage, to touch the chin. In the tender lappet of the eare is supposed to rest the seat of remembrance, which we vse to touch when we mean to take one to beare witness of an artef or other thing done, and to depose the same in the face of the court. Moreover, behind the right eare likewise is the proper place of *Nemesis* (which goddesse could neuer yet find a Latine name, so much as in the very Capitol) and that place are we wont to touch with the fourth finger (which is next the least) in token of repentance, when we haue let fall some word rashly, and would craue pardon of the gods therefore. The crooked and swelling veins in the legs man alone hath, and women very seldom. *Oppius* writes, that *C. Marius* (who had bin Consul of Rome 7 times) endured, without sitting down for the matter, to haue those veins taken forth of his legs, a thing that neuer any was known to abide before him. All foure footed beasts begin to go ordinarily on the right hand, and vse to ly downe on the right side: others go as they list. Lions and Camels only haue this proprietie by themselves, to keep pace in their march, foot by foot, that is to say, they neuer set their left foot before their right, nor ouer-reach with it, but let it gently come forth of it and follow after. Men & women haue the greatest feet in proportion of all creatures: but females vsually in euery kind haue lesse & slenderer feet than males. Men and women only haue calues in their legs, and their legs full of flesh. Howbeit we read in some writers, That there was one man in *Aegypt* had no calfe at all to his legs, but was legged like a crane. Man alone hath palmes of his hands, & broad flat soles to his feet: and yet some there be who that way are deformed and disfigured. And therupon it came that diuers came to be surnamed *Planci* [i. flat footed:] *Planti* [i. play footed:] *Scari*, [i. with their ancles standing ouermuch out:] *Paufi*, [i. broad footed:] Like as of their misshapen legs some haue bin named *Pari* [i. wry legged:] others, *Vatia*, and *Fatinj*, [i. bow-legged:] which imperfections befalls also are subiect vnto. Whole hoofed are all they that beare not horns: in regard whereof they be armed with houe in stead of that offensive weapon: and such as they be haue no ancle bones: but all clouen footed haue those bones. Howbeit all that haue toes want ancles: and in a word, there is not one hath them in the fore-feet. Camels haue ancles like to Kine and Oxen, but somewhat lesse: for indeed they be clouen footed, although the

A the partition be very little, and hardy discerned vnder the foot, but seemeth flesh all ouer the sole, as Beares also, which is the cause that if they trauaile farre vnthod, their feet are surbated, and the beasts will tire.

CHAP. XLVI.

¶ A discourse of beasts houses.

THE Houses of Horses, Mules, Asses, and such like beasts of carriage onely, if they be pared and cut, will grow againe. In some parts of Sclauonia, the Swine are not clouen-footed, but whole hoofed. All horned beasts in manner be clouen-footed: but no beast beares two horns, and hath withall the house of one entire peece. The Indian Ass hath onely one home. The wild Goat also called Oryx, is clouen hoofed, and yet hath but one home. The Indian Ass moreover, of all the whole hoofed beasts alone, hath the pasterne or ancle-bones. As for Swine, a mungrell kind they are thought to be of both, in regard of those bones; and thereupon are reputed filthy and accursed. They that haue thought that a man had such, are soon conuined. As for the Once, he indeed alone of all those whole feet are diuided into toes, hath that which somewhat resembles a pasterne bone. So hath a Lion also, but that it is more crooked and winding. As for the straight pasterne bone indeed, it beareth out with a bellic in the ioynt of the foot, and in that hollow concauities wherein the said bone turnes, it is tied by ligaments.

CHAP. XLVII.

¶ Of Birds feet, and their Clawes or Talons.

OF Fowles, some haue their feet diuided into eeles and toes; others be broad and flat footed: and some are betweene both; which haue indeed their toes parted and distinct, and yet their feet be broad between. But of all them that haue foure toes to a foot: to wit, 3 in the forepart, and one behind at the heele in manner of a spur: howbeit this one is wanting in some, that are long legged. The *Wrinecke* or *Hickway*, with some few others, haue two before and other two behind. The same bird putteth out a tongue of great length, like to serpents. It turneth the necke about and looketh backward: great clawes it hath like those of Choughes. D Some bigger birds haue in their legs one other shanke-bone more than ordinarie. None that haue crooked talons, be long legged. All that stauke with long shankes, as they fly stretch out their legges in length to their tales: but such as be short legged, draw them vp to the midkt of their belly. They that say, No bird is without feet, affirme also, That * Martinets haue feet like as also the swift Swallow called Oee, and the sea Swallow *Drepanis*. And yet such birds come so little abroad, that they be seldom seen. To conclude, there haue been now of late, Serpents knowne flat-footed like Geefe.

CHAP. XLVIII.

¶ Of the feet of Insects.

ALL Insects hauing hard cies, haue their fore-legges longer than the rest, to the end that otherwise they might with them, scoure their cies, as we see. Some flies doe: but those whose hinder-legs are longest, vse to skip and hop, as Locusts. Howbeit, all of them haue six legs apeece. Some Spiders there be, that haue two ouer and aboue the ordinarie, and those be very long: and euery leg hath three ioynts. As for some sea-fishes, we haue said before that they haue eight legs: namely, Manyeet, Pourcuttles, Cuttles, Calamaris, and Crabfishes: and those moue their fore-eeles like armes a contrary way, but their feet either they turne round or else fetch them crooked at one side: and a man shall not see any liuing creature againe, al round, but they. As for others, they haue two feet to guide them and lead the way, but Crabs onely haue foure. There be Insects besides vnto the land, that exceed this number of feet; and then, they haue no fewer than twelue: as the most sort of wormes: yea and some of them reach to an hundred. No creature whatsoeuer hath an odde foot. As touching the legs of those which be whole hoofed, they be all full as long when they first come into the world, as euer they will be: well may they shoot out bigger and burnish afterward, but (to speake truly and properly) they

grow no more in length. And therefore when they be yong sucking soles, a man shall see them scratch the haire with the hinder feet: which, as they wax elder and bigger, they are not able to do, because their legges thrive only in outward compass, and not in length. Which also is the cause, that when they be new soled, they cannot feed themselves but kneeling, vntill such time as their neckes be come to their full growth and iust proportion.

CHAP. XLIX.

¶ Of Dwarfs: and genitall parts.

There are no liuing creatures in the world (euen the very fowles of the aire not excepted) but in each kind there be dwarfs to be found. As for those males which haue their instruments of generation behind, we haue sufficiently spoken. In Wolves, Foxes, Weesels, and Ferrits, those genitall members be of a bonie substance; and of them there be soveraigne medicines made, for to cure the stone and grauell in mans bodie engendred. The Beares pisse also, becommeth as hard as an horn (men say) so soone as his breath is out of his bodie. As for Camels pisses, they vse in the East countries to make their best bow strings therof, which they account to be the surest of all others. Moreouer and besides, the genitall parts put a difference between nation and nation; also between one religion and another: for the priests of *Cybele* (the great mother of the gods) vse to cut off their owne members and to giue them selves, without danger of death. On the contrarie side, some few women there be, monstrous that way, and in that part resemble men: like as we see there are Hermaphrodites, furnished with the members of both sexe. In the daies of *Nero* the Emperor, the like accident was seen (and neuer before) in some foure-footed beasts. For he, in very truth, exhibited a shew of certaine mares that were of the nature of those Hermaphrodites, found in the territorie of Treuirs in France: and they drew together in his owne coach. And verily a strange and wondrous sight this was. To see the great monarch of the world, sit in a charriot drawne by such monstrous beasts. As touching the stones of Rams Buckes, and greater beasts, they hang dangling downe between their legs: but in Bories, they be thrust together, & knit vp short close to the bellie. Dolphins haue these parts very long, and the same lying hidden within the bottom of their bellies. In Elephants likewise they be close and hidden. In as many creatures as doe lay egges, the stones sticke hard to their loines within the bodie: and such be euermost quick of dispatch in the act of generation, and soone haue done the feat. Fishes and Serpents haue none at all, but in stead therof there be two strings or vaines reach from their kidnies to their genitall member. The * Buzzard (a kind or Hawke) is provided of three stones. A man hath his cods sometime bruised and broken, either by some extraordinarie accident, or naturally: and such as be thus burst, are counted but halfe men, and of a middle nature betwene Hermaphrodites and goulded persons. To conclude, in all liuing creatures whatsoeuer, the males be stronger than the females, setting aside the race of Panthers and Beares.

CHAP. L.

¶ Of Tales.

There is not a liuing creature, excepting men and Apes (take as well those that bring forth their yong aliue, as others that lay egges only) but is furnished with a taile, for the necessarie vse of their bodies. Such as be otherwise rough-haired and bristly, yet haue naked tales, as Swine: those that be long, shagged and rugged, haue very little and short skuts, as Beares: but as many as haue long side haire, be likewise long tailed, as Horses. If Lizards or Serpents haue their tales cut off from their bodies, they will grow againe. In fishes they serue in good stead, as rudders and helmes to direct them in their swimming; yea they fit their turnes as well as oares, to let them forward as they stirre them, to this or that hand. There be Lizards found with double tales. Kine and Oxen haue the longest rumpe for their tales of any other beasts; yea and the same at the end, hath the greatest tuft and bush of haire. Asles haue the said docke or rumpe longer than horses: and yet all such beasts either for saddle or packe, haue it set forth with long haire. Lions tales are fashioned in the very tip therof, like vnto Kine or Oxen, and Rats are not after the same manner tailed. Foxes and Wolves haue

A haue shag tales like sheep, but that they be longer. Swine carie their tales turned and twined round. And Dogs, that be of cures kind and good for nothing, carie their tales close vnderneath their bellies.

CHAP. LI.

¶ Of Voices.

Aristotle is of opinion, That no liuing creature hath any voice, but such only as are furnished with lungs and wind-pipes: that is to say, which breath and draw their wind: and therefore he holdeth, that the noise which we heare come from Insects, is no voice at all, but a very sound, occasioned by the aire that gets within them, and so being enclosed, yeelds a certaine noise, and resoundeth againe. And thus it is (quoth he) that some keepe a humming or buzzing, as Bees; others make a cricking with a certain long traine, as the Grasshoppers; for euident it is, and wel known, that the aire entering into those pipes (if I may so term them) vnder their breast, and meeting with a certaine pellicle or thin skin, beates vpon it within, and so sets it a stirring, by which attrition, that shrill sound cometh. Again, it is as apparent, that in others, and namely, Flies and Bees, the buzzing which we heare, begins and ends euer with their flying. For (no doubt) that found cometh not of any wind: that these little creatures either draw or deliuer, but of the aire which they hold inclosed within, and the beating of their wings together. As for Locusts, it is generally beleued & receiued, that they make that sound with clapping of their feathers and wings and thighs together. In like manner, among fishes in the waters, the great Scallops make a certaine noise as they shoot out of the water. But soft fishes and such as lie covered with a crust or shell, neither vtter voice, nor yet yeeld found. As for other fishes, although they be without lungs and pipes, yet are they not quite mute, but deliuer a certaine found. Howbeit, they that would maintaine, that fishes are dumbe indeed, doe caill and say, that such a noise cometh of crashing and grinding their teeth together. But what will they say then to the water-Goat, & the riuier Bore, which in the riuier Achelous doe euidently grunt as also others, wherof we haue spoken? Again, such as lay egges do hiss: and Serpents draw their hissing out in length. The Tortoise hisses likewise, but after a broken manner, with staies and rests between. Frogs keepe a croaking after their kind, as hath been said before: and yet a man may seem well to doubt therof, how it (should be) considering, that the noise which they make comes but from their teeth and mouth outward, and is not framed in their breath or stomacke. Howbeit, in them there is great difference, by occasion of the nature of diuers countries. For in Macedonie (by report) they are mute: and there also the Swine be dumbe. As for birds, the least euermore be most full of chirping, chaunting, and singing; and most of all, about the treading time. Some of them keepe a singing when they fight, as Quails; others, when they goe to fight, as Partridges; and some againe after victorie, as cocks. And they haue a crowing by themselves differing from the cackling of hens; whereas in other birds you cannot discern the male from the female by the singing, as we see in Nightingales. Some sing all the yeare long, others at certaine times, as we haue more at large declared, in the particular treatise of each bird. The Elephant he sends out at his very mouth (somewhat short of his muffle) a certaine sound like to sneezing; but thorough that muffle or trunk of his, he sounds (as it were) out of a trumpet. Kine only of females, haue a bigger voice than Buls: for in euery kind else the female hath a smaller voice than the males: like as we see in mankind, the gelded Eunuchs. As an infant is coming into the world, it is not heard to crie all the while that it is in the birth, before it be fully born. When it is a yeare old, it begins to prattle and talke, but not before. King *Cresus* had a sonne, who lying fowled in his cradle, spake by that time he was 6 months old: but this was a prodigious signe, and presaged the final ruine of that kingdom. Those children that begin with their tongue betime, are later ere they find their feet. The voice in man or woman beginneth to change and waxe greater at 14 yeares old. The same in old age growes again to be smaller; and in no other creature doth it more often alter. Moreouer, as touching the Voice, there be strange and wonderfull matters reported, and those worth the rehearsal in this place. For first and foremost we doe, That vpon the skaffold or stage in publick Theatres, if the floore be strowed ouer well and thicke with saw-dust or sand, the voice of the actors will be drowned and lost, yea, and remain still about the skaffold, as if it were there buried: al somewhere there be hollow and vn-

euen wals round about or emptie drie-fats and runs fet, the voice will be taken vp in them, and G
 passe no farther. But the same voice, betwene two wals directly set one by another, runs apace:
 yea, and through a vault it may be heard from the one end to the other, be the sound neuer so
 low; provided, that all be smooth and euen between, and nothing to hinder the passage thereof.
 To speake yet somewhat more of the Voice: In it doth rest a great part of the countenance
 and visage of man, whereby he is discerned and knowne. For we know a man by hearing his voice
 before we see him, euen as well as if four eies were fixed vpon him. And see how many men and
 women there are in the world, so many sundrie voices there bee, for each one hath a severall
 voice, as well as a face, by himself. And hereof arises that varietie of nations, that diuersitie of
 languages all the world through. From hence come so many tunes in song, so many notes in
 Musick, as there bee. But above all, the greatest thing to be noted in Voice, is this, That whereas H
 the utterance of our mind, thereby doth distinguish vs from brute and wild beasts: the same euen
 among men maketh as great a difference betwene one and another, as the other is betwene
 man and beast.

CHAP. LII.

¶ Of the exercise and superfluitie of some members. Also the discourse and sayings
 of Aristotle as touching mans life

Looke what part is more than ordinarie by nature, in any liuing creature, the same is true to
 no use. As for example, the sixth finger in a mans hand is euen more superfluous, and there-
 fore fit for nothing. It was thought good in Ægypt once to nourish and keep a monstrous
 man who had foure eies, wherof two stood in the backe part of his head behind: but surely he
 saw neuer a whit with them. I wonder verily, that Aristotle not only beleueed, but also ticked
 not to set downe in writing, that there were certaine signes in mans bodie, whereby we might
 foreknow whether he were long liued or no. Which, albeit I take to be but vanities, & not rashly
 to be vttered without good aduisement (because I would not haue men amused, and busily
 occupied in searching Prognostications in themselves, as touching their owne life) yet will I
 touch the same, and deliuer them in some sort, since so great a clerk as Aristotle was, held them
 for Resolutions, and thought them worth the penning. He putteth downe therefore, as signes of
 short life, thin teeth, long fingers, a leaden hew, many lines in the palme of the hand, with crosse
 bars or short cuts. Contrariwise, he saith, That those who are Lute backed, thicke shouldered,
 and bending forward, who also in one hand haue two long life lines, and about 32 teeth in their
 head, and besides are wel hanged, and haue large eares, bee long liued. And as far as I can guesse,
 he requires not, that all these signes should concur and meet together, for to signifie as is be-
 fore said: but, as I suppose, his meaning is that euery one of them by it selfe is significant and
 sufficient. Surely, these Physiognomers & Chiromantines or Palmestrie, as friuolous and foo-
 lish as they be, yet now adays are in credite, and euery man is full of them. *Trogus*, a most graue
 and renowned Author among vs, is of opinion moreover, That there is judgment to be giuen,
 not only of mens complexions, but also of their conditions, by their very sight & countenance:
 and surely, I think it not amiss to set downe his very words. A large and broad forehead (saith
 he) is a token of a dull conceit and heauie vnderstanding: and contrariwise, they that haue a lit-
 tle forehead, are by nature, fickle and inconstant: and finally, a round forehead, and bearing out
 argues anger and chollier, as if this outward tumor thereof bewraied the swelling and boiling,
 of that humor. In whomsoever the eie-browes are straight and lie euen, they betoken soft and
 effeminate persons: but if they bend and bow toward the nose, they shew austeritie. Say their tur-
 ning and bending be toward the temples of the head, they are signes of a mocker and scorner:
 finally where they lie very low, such persons (be ye sure) are malicious, spitefull, and enuious.
 Long eies, in whomsoever they bee, do testifie hurtfull and dangerous persons. They that haue
 the corners full of fleshe, are of a malicious nature: where the white of the eie is spread large and
 broad, it is a token of impudencie. And such as euery whiles be winking and closing of their
 eie-lids, (trust me truly) they be giddie-headed, and vnstaid. Those that haue great eares, and
 especially the laps thereof, make account they be blabbe of their tongue, and fooles withal. Thus
 much of Physiognomie, according to *Trogus*.

CHAP.

CHAP. LIII.

¶ Of the Spirit and breath of liuing creatures: also what things be venomous in taste,
 and do kill. Of mens food. And last of all, what hindereth digestion
 and concoction of meat.

The breath of Lions hath a very strong deane and stinking smell with it: but that of a beare
 is pestilentiall and deadly: in so much, as no beast will touch where a beare hath breathed
 and blown vpon: for surely such will sooner corrupt & putrifie than others, as if they were
 blasted. As for the breath of a man, Nature hath suffered it to be infected many waies, namely,
 B by the viands and meat that he eateth: by faulty and rotten teeth; and most of all by old age.
 And yet our breath, without which there is no sense, feelth no pain it self, as being void of feel-
 ing and altogether senselesse. The same goeth and cometh continually without rest and in-
 termittion: the same is alwaies new and fresh: and as it shal depart out of the body last, so it shal
 remaine along, when all is gon besides it. Finally, returne it shal into the aire and the heauen,
 from whence it first came. Now, albeit this breath that we draw, be the very means whereby we
 liue, and without which we cannot maintain our life, yet otherwhiles troublefome it is vnto vs,
 and plagueth vs as a very punishment ordained for vs. The Parthians of all others be most sub-
 ject to this inconuenience, euen from their very youth, by reason of the grosse feeding of all
 meats indifferently, without choise and discretion: and specially of their drunkennesse. For ex-
 cessiue drinking of wine causeth stinking breath. But the Nobles and great States of that coun-
 C trey haue a remedy therefore, and make their breath sweet, by taking with their meats the
 kernels of Pome-citrons, which yeld a most pleasant sauer. The very breath of Elephants causeth
 Serpents to come out of their holes: but Stags and such other Deere, therewith do blast & burn
 them. As touching certain kinds of men, who by sucking only could draw & fetch out the poi-
 son out of bodie wounded by venomous Serpents, we haue already spoken. As for hogs, they
 will feed of Serpents, and do well enough, whereas to other creatures they be no better than poi-
 son. All those little creatures, which we named Insects, wil die if they be but sprinckled or wet
 with oile. The Vultures or Geires which flie from sweet ointments, are desirous yet of other
 odors and perfumes: like as Beetles like well the smell of Roses. Some Serpents there be that
 the Scorpion kills. The Scythians poison their arrow's heads with the venomous filthy blood of
 D vipers and mans together. A present poison this is, and remediless; and it no sooner toucheth
 but it taketh, and killeth forthwith. As touching those creatures that feed of poison, we haue
 spoken heretofore. Moreover, some creatures there be, which otherwise being harmlesse, if they
 be fed with venomous beasts or plants, become also themselves noisome & dangerous. The wild
 bores in Pamphylia, and vpon mountains of Cilicia, that haue eaten Salamanders, become ve-
 nymous: and whosoever chance to eat of their venison, are sure to die vpon it. And yet cannot
 a man know any such venome therein, either by sent at nose, or tast of tongue. Moreover, the ve-
 ry water or wine wherein a Salamander hath bin stifled and suffocated, or whereof it hath but
 drunk, wil kill a man that shal but sip thereof neuer so little. The like is to be said of that Frog
 which we call *Rubra* [i. the toad that liues in bushes.] See how many ambushes our life is sub-
 E ject vnto! Wasps feed greedily vpon Serpents, and vpon that food their stings be deadly. And
 therefore you see it skilleth much what meats we eat, and the manner of our food is very mate-
 rial. As we may learn farther in that treatise which *Theophrastus* wrote of the Ichthyophagi that
 liue of fish: where he hath set downe, That Kine and Oxen doth eat fish, but they must in any
 case be alive.

To come now vnto mens diet: their best and most wholsome feeding is vpon one dish and no
 more, and the same plaine and simple: for surely this huddling of many meats one vpon another
 of diuers tastes is pestiferous: but sundrie fauces are more dangerous than that. As touching
 our concoction: all tart and sharp meats are of hard digestion: also fulnesse and surfeiting:
 F halfe and greedie feeding likewise be enemies to digestion, and hurtful to the stomack. In sum,
 we digest our meat more hardly in Summer than in Winter, and in age worse than in youth.
 Now to helpe and remedie all this excess and enormitie, vomite hath bene deuised: but vnto
 it whosoever will, he shal find the naturall heat of his bodie thereby to decay: he shal sensibly
 perceiue that it hurteth the teeth, and eies especially. To goe to bed vpon a full stomack, and

to digest in sleepe, is better to make a man fat and corpulent, than strong and lusty. And therefore wrestlers and champions who are acquainted with full & liberall diet, y^e rather to walk after meat for to digest. And in one word, much watching maketh best digestion.

CHAP. LIIII.

¶ Of making bodies fat or leane. Also, what things being tasted, do allay hunger, and quench thirst.

Bodies grow to be burly and grosse, with sweet meats, fat feeding, & much drinke: contrariwise, drie diet, actually cold, and thirst withal, make a body lean. There be beasts in Affrick, and especially the lesser sort, which drink not about once in foure daies. A man may well liue 7 daies without any food whatsoever: & wel is it knowne, that many haue continued more than 11 daies without meat or drinke. There haue bin some known so hungry euermore that nothing would satisfie them, and such haue died for very famine, although they did nothing else but eat: a disease incident to no creature but a man. Some againe can assuage and appeale their hunger, yea, and slack and extinguisht their thirst with a very little, and yet preferue & maintain the naturall strength of their body: namely, with tasting butter, cheeke made of Mares or Asles milk, and Licorice. But to conclude and knit vp this discourse: the worst and most dangerous thing every way that can be in all the course of our life, is Excesse and Superfluity; but to the health of our bodies most of all: and therefore the best course is, to cut off by all meanes that which is offensive and heauy to the body. Thus much shall suffice as touching liuing and sensible creatures. Let vs therefore now proceed to the rest of Natures workes.



THE TWELFTH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proeme.

Thus you see by that which hath bin written before, what are the natures as well in generall, as particularly in parts, of all liuing and sensitive creatures within the compasse of our knowledge. It remaineth now to discourse of those which the earth yeeldeth: and euen they likewise are not without a soule in their kind (for nothing liues which wanteth it:) that from thence we may passe to those things that lie hidden within the earth, and are to be digged out of it: to the end, that as we keepe and benefite of Nature might ouerpasse our hands, and be omitted. And in truth, these treasures of hers lay long covered under the ground, in so much as men were perswaded, that Woods & Trees were the last & only goods left vnto vs and bestowed vpon vs by Nature. For of the fruit of trees had we our first food: their leaues and branches serued to make vs soft pallats and couches within the caves: and with their rinde and bark we clad and covered our nakednesse. And euen at this day, some Nations there be that liue still in that sort, and no otherwise. A wonderful thing therefore it is, that from so small and base beginnings we should grow to that passe in pride, that we must needs cut through great mountains for to meet with marble: send out as far as to the Seres for silk stuffe to apparell vs: due downe into the bottom of the red sea for pearls: and last of all sink deepe pits euen to the bottom of the earth, for the precious Hemerulid. For this pride

A wantie of ours, we haue deuised meanes to pierce and wound our eares: because, for sooth it would not serue our turns to weare costly pearles and rich stones in carkanets about our necke, borders vpon the haire of our head, bracelets about our arms, and rings on our fingers: vnlesse they were ingrauen also, and cut into the very flesh of our bodies. Well then, to follow the course of Nature, and the order of our life (as meet is it we should) we will treat in the first place of Trees, and lay before mens faces the life of the old world, and what was their behavior and demeanure at the first, in their manner of liuing.

CHAP. I.

¶ The honour done in old time to Trees: When the Plane-trees were first knowne in Italy, and of their nature.

Bold time, Trees were the very temples of the gods: and according to that ancient manner, the plaine and simple peasants of the country, fauoring still of antiquity, do at this day consecrate to one god or other, the goodliest and fairest Trees that they can meet withal. And verily we our selues adore not with more reuerence & deuotion the stately Images of the gods within our temples (made though they be of glittering gold, and beautifull yuorie) than the very groues and tufts of trees, wherein we worship the same gods in all religious silence. First and foremost, the ancient ceremonie of dedicating this and that kind of Tree to seuerall gods, as proper and peculiar vnto them, was alwaies obserued, and continueth yet to this day. For the mighty great Oke named Æsculus, is consecrated to *Iupiter*; the Laurell to *Apollo*; the Oliue tree to *Minerva*; the Myrtle to *Venus*; and the Poplar to *Hercules*. Moreover, it is receiued and beleued generally, That the Syluanes and Faunes, yea, and certaine goddes, are appropriate and assigned to woods and Forrests; yea, there is attributed vnto those places a certain diuine power and god-head, there to inhabit: as well as vnto heauen the proper seate for other gods and goddes. Afterwards, in proceesse of time men began to taste also the fruit of Trees, and found therein a iuice (without all comparisson) more lenitive and pleasant to the contentment of their nature than that which came of corn and grain: for therof made they Oile, a singular liquor to refresh and comfort the outward members and parts of the body: out of it they pressed wine, the onely drinke that giueth strength within, and fortifieth the vitall powers. From thence gather wee so many fruits, yereily growing and comming of themselves without the labour and industry of man. And albeit, to serue our belly & please our tooth, we stick not to maintain fight and deale in combat with wild beasts in the Forrests; although we hazard our selues in the sea, to meet with monstrous fishes which are fed with the dead bodies of men cast away by shipwracke; and all to furnish and set out the table; yet is not the cheare thought good enough, vnlesse fruits also be sent vp at the later end, that they may haue the honor in all feasts of the second seruice, and the banquet. Besides all this, Trees serue our turns for a thousand necessary uses, without which our life could not be well maintained. With Trees we saile ouer seas into strange lands, and by transporting commodities and merchandise too & fro, we make lands meet together: of Trees we build our houses, wherein we dwell. Trees were the matter in times past, whereof were made the images of the gods. For as yet no man thought of the costly Anatomy of the elephant, neither was their tooth in any account: whereas now adades we make the trefles, frames, and feet of our tables, euen of the same yuory that we see the faades of gods are portraied of, as if we had our warrant from them to begin to maintain our riot and superfluity in this behalf. We find in old Chronicles, That the Frenchmen and Gaules took occasion first to come down into Italy, & to ouerspread the whole country (notwithstanding they were before time debarred from thence by the impregnable fort as it were, and the vnpassable bulwark of the Alps between): because one *Elicia*, a Swisser or Heluctian, who had made long abode at Rome (where he was entertained for his skill in Smiths worke and Carpentry) at his return home again into his country, brought over with him dry figs and Raisons: the first fruits also as it were of oile & wine for a tast, to set their teeth a watering. And therefore the French had good reason, and might well be born withall and pardoned, for seeking to conquer euen by force of armes those countries where such fruits grew. But who would not maruell rather at this, That our people here should go into far countries, and fetch a tree from thence, euen out of another world, only for the shade that it giueth.

vethe: For surely, of fruitfull trees Italy hath store enough: and what tree should that be, but the very Plane: brought first ouer the Ionian sea into the Iile Diomedea, for to beautifie the tomb of *Diomedes*: from thence translated into Sicily, and so bestowed at length vpon Italy, & there planted as a most singular, rare, & speciall tree. But now is it carried as far as Tenwin and Tourmay in France, where it is counted an apperenance to the very soile that paieeth tribute: in so much, as people that wil but walk and refresh themselves vnder the shadow of it, must pay a custome therefore vnto the people of Rome. *Dionysius* king of Sicily, and the first of that name, caused them to be brought from Rhegium in Calabria to his Roial city, where his pallace was, only of a singularity, because they should be seen to giue a shade before his house, where afterwards was made the Colledge or place of publick exercise. But these trees did not greatly like the soile, for they neuer grew big, nor prospered to any purpose. Howbeit, I find in writers, that there were other besides in Italy, and namely about Adria, as also in Spain. And all this happened about the time that Rome was sackt by the Gauls. But afterwards they came to be so highly esteem'd, that for to make them grow the better, men would be at the cost to water them with wine: for this was found by experience, that nothing was so good for them as to poure wine to their roots. Thus haue we taught euen our trees also to drinke wine, and be drunke. The Plane trees of any great name at first, were those that grew in the walking place of the Academia in Athens, where the root of one outwent the boughs 36 cubits in length. Now in this age there grows a famous one in Lycia, neer to the high way were men passe too & fro, & it hath a pleasant cold fountain adioining to it: the same is hollow within like to a house, & yelds a caue of 81 foot in compasse: but it caries such an head withal like a groue, so large, so broad, & so branched, that euer arm resembles one entire tree: in so much, as the shade thereof takes vp & spreadeth a great way into the fields. And because in euery respect, it might resemble a very cabbin and caue indeed, there are stony banks & seats within, in form of an arbor round about, made as it were of pumish stone ouergrown with moss. And in truth, this tree, and the situation thereof is so admirable, that *Licinius Mutianus* thrice Consul, and lately Lieutenant generall and Gouernor of that Prouince, thought this one thing worthy to be recorded as a memoriall to posterity, that he and 18 more persons of his company, vsed to dine and sup within the hollownesse of that tree: where the very leaues yelded of the own sufficient bed and bench-room to rest and repose themselves: where they might sit secured from danger of wind to blow vpon them: where whiles he sat at meat, he wished nothing more than the pleasure to heare the showers of rain to pat drop by drop, and rattle ouer his head vpon the leaues: & finally, that he tooke much more delight to lie within the said cabbin, than in a stately chamber built of fine marble, all glorious within with hangings of tapistrie and needlaworke of sundry colours, and the same seeled ouer head with an embowed rooffe laid with beaten gold. Moreover, *Caligula* the Emperour had such another Plane tree growing in the country about Velitra, most artificially: wherein he vsed to take great pleasure, with admiration of the sundry lofts and planks one ouer another, the large fetles also and spacious branches that the boughs yelded, where he was wont to sit at repast, making one of the 15 guests. For the room was of that capacity, that it would not only receiue so many to sit with ease at the table, but also the gentlemen and seruitors that waited and ministered vnto them: and he termed this supping place by the name of. His nest: because it seemed like a birds nest in a tree. There is to be seen at Gortyna, within the Island Candy, one Plane tree neere vnto a faire fountain: recorded it is as well by Greekes as Latines in their writings, and by the testimony of them both, neuer sheds the leaues, but remains alwaies green, as well in Winter as Summer: by occasion whereof arose the tale (so much giuen is Greece to deuise fables by and by of euery small matter) That *Isipiter* vnder that tree deuoured the yong lady *Euroopa*: as if (forsooth) there were no other tree but it of the same kind and nature, in Cyprus. But as the nature of man is euermore curious, and seeketh after nouelties, the Candiores desirous to haue of the same rarer within Crete, set many slips thereof in sundry places, as if they longed to haue more such vicious fruit (as is before named:) for in very deed that Tree is in no one thing more commendable, than for excluding the heat of the Sunne in Summer, and admitting it in Winter. In the time of *Claudius Caesar*, late Emperour, there was an enfranchised slaue belonging to *Maecellus Efernius*, a daintie goulded Eunuch of Theffalie, and exceeding rich, who caused certain Plane trees to be brought out of Candie into Italie, for to plant them at a manor which he had in the the territorie neare vnto Rome. This freed Eunuch for to grow into

more

A more power and fauor with *Caesar*, had ingrafted himselfe, as adopted among his freed men: and surely for his wealth might well be called *Dionysius*, who was the first that transplanted these kind of trees. Thus you see, that ouer and about those monstrosities which Italy hath deuised of it selfe, we haue remaining and reigning among vs those also of strange and forraine nations abroad in the world.

CHAP. II.

¶ Of the low or dwarfse Plane tree: And who first deuised to clip and shred Arbours.

B AS big as these Plane-trees, are yet there be those of a forced smallnesse to the other, called *Chamaeplatan*: whereby a man may see, that we haue inuented the means to haue abortiue trees also, euen to hinder their growth, that they cannot come to their full perfection. And therefore euen in Trees as well as in other liuing creatures, there is a certaine infelicicie, which may well be termed, A dwarfish vntowardnesse. This smallnesse in trees may come, by the manner of planting them, as well as by cutting and keeping them downe. The first man that deuised to shred and cut arbours, was one *Cn. Martius*, a gentleman of Rome, and a fauorite of the Emperour *Augustus*; and this inuention hath not bin knowne above 80 yeares.

CHAP. III.

¶ Of Trees that be strangers in Italy: and namely of the Citron or Limon Tree.

C Herry-trees, Peach-trees, and generally all that either haue Greek names or any other but Latine, are held for aliens in Italy. Howbeit, some of them now are enfranchised and taken for free denizens among vs: so familiar they be made vnto vs, and they like the ground so well. But of them, we will speake in the ranke of those trees that beare fruit. For this present we are to treat of those that be mere forrainers: and for good lucke sake, begin we will with that which of all others is most holesome, to wit, the Citron tree, called the Assyrian tree: and by some, the Median Apple-tree: the fruit whereof is a counterpoison and singular Antidote against all venome. The tree it selfe, beares the leafe like vnto an Arbut tree; many it hath certain pricks among. The Pomecitron is not so good to be chewed and eaten of it selfe: howbeit very odoriferous it is: as be the leaues also thereof, which are vsed to be laid in wardrobes among apparel; for the smell thereof wil passe into the cloths, and preserve them from the moth, spider and such like vermin. This tree beares fruit at all times of the yere; for when some fall for ripe, others wax mellow, and some again, begin then but to shew their blossome. Many forrainers haue assaied to transplant them, and set them in their own countries, in regard of their excellent vertue to resist poisons. And for this purpose they haue caried yong quicksets, or plants of them, in earthen pots made for the purpose, and inclosed them well with earth: howbeit the roots had liberty giuen them to breath (as it were) at certain holes for the pones, because they should not be clunged and pent in prison. Which I rather note, because I would haue it knowne once for all, and well remembered, That all plants which are to be removed and carried far off, must be set very close, and vsed in the same order most precisely. But for all the care and paines taken about it, for to make it grow in other countries, yet would it not forget Media and Persia, nor like in any other soile, but soon die. This is that fruit, the kernels whereof (as I said before the lords and great men of Parthia vsed to seeth with their meat, for to correct their soure and stinking breaths. And verily there is not a tree in all Media, of better respect than is the Citron tree. As for those trees in the region of the Seres (which beare the silk wool or cotton) we haue spoken thereof in our Cosmographie, when we made mention of that Nation.

CHAP. IV.

¶ Of Indian Trees: and when the Ebene was first knowne at Rome.

I N like manner, discoursed we haue of the tallnesse and grearthe of Indian trees. Of all those trees which be appropriate to India, *Virgil* hath highly commended the Ebene above all the rest:

rest: and he affirmeth, That it will not grow elswhere. But *Herodotus* assigneth it rather to *Aethyopia*; and saith; That euery three yeares the *Aethyopians* were wont to pay by way of tribute vnto the kings of *Persia*, * 100 billets of the timber of that tree, together with gold and yuory. Moreover, I must not forget (since that mine author hath so expressly set it downe) that the *Aethyopians* in the same regard were bound to pay in like manner, twentie great and massive Elephants teeth. In such estimation was yuorie then, namely in the 310 yeare after the foundation of *Rome*, at what time as *Herodotus* put forth that historie at *Thurij* in *Italy*. The more maruell it is, that we giue so much credit to that writer, saying as he doth, how that in his time & before, there was no man knowne in *Asia* or *Greece*, nor yet to himselfe, who had not so much as seepe the river *Po*. The Card or Map of *Ethiopia*, which lately was presented and shewed to the Emperor *Nero* (as we haue before said) doth sufficiently testifie, That from *Syene* (which confines and boundes the lands of four Empires and dominion) as far as to the Island *Meroe*, for the space of 990 miles, there is little *Ebene* found: and that in all those parts betwene, there be few other trees to be found, but Date trees. Which peradventure may be a cause, That *Ebene* was counted a rich tribute, and deferred the third place, after Gold & *Iuory*. Certes, *Pompey* the Great, in that solemnitie of triumph for the victorie and conquest of *Mithridates*, shewed one *Ebene* tree. *Fabianus* is of opinion, that it will not burne: howbeit, experience sheweth the contrary, for take fire it will, yea and cast a pleasant and sweet perfume. Two kinds there be of *Ebene*: the one, which as it is the better, so likewise it is rare and geason; it carrieth a trunk like another tree, without knot, the wood thereof is blacke and shining, and at the very first sight, faire and pleasant to the eye, without any art or polishing at all. The other is more like a shrub, and putteth forth twigs as the *Tretrisfolie*. A plant this is, commonly to be seene in all parts of *India*.

CHAP. V.

¶ Of certain Thorne, and Fig-trees of *India*.

Here groweth also among the *Indians*, a Thorne resembling the later kind of *Ebene*: and found to serue for the vse of candles: for no sooner cometh it neere vnto the fire, but it catcheth a flame, & the fire leaps presently vnto it. Now it remains to speak of those trees, which set *Alexander* the Great into a wonder, at what time as vpon his victory he made a voyage for to discouer that part of the world. First and foremost, there is a fig tree there, which beareth very small and slender Figs. The property of this tree, is to plant and set it selfe without mans help. For it spreadeth out with mighty armes, and the lowest water-boughes vnderneath, doe bend so downward to the very earth, that they touch it againe, and lie vpon it: whereby, within one yeares space they will take fast root in the ground, and put forth a new Spring round about the Mother-tree: so as these branches thus growing, seeme like a traile or border of arbors most curiously and artificially made. Within these bowers the Shepherds vse to repose and take vp their harbor in Summer time: for shady and coole it is, and besides well fenced all about with a set of young trees in manner of a pallisado. A most pleasant and delectable sight, whether a man either come neere, and looke into it, or stand a farr off: so faire and pleasant an harbour it is, all Greene, and framed arch-wise in iust compasse. Now the vpper boughes thereof stand vp on high, and beare a goodly tuft and head aloft like a little thicke wood or forest. And the body or trunk of the Mother is so great, that many of them take vp in compasse three or foure paces: and as for the foresaid shadow, it couereth in ground a quarter of a mile. The leaves of this Tree are verie broad, made in forme of an *Amazonian* or *Turkish* Targuer: which is the reason, that the Figges thereof are but small: considering that the leafe couereth it, and suffereth it not to grow vnto the full. Neither doe they hang thicke vpon the Tree, but here and there very thinne, and none of them bigger than a beane. Howbeit, so well and thoroughly ripened they bee with the heate of the Sunne, notwithstanding the leaues are betwene, that they yeeld a most pleasant and sweet rellice in tast, and are a fruit for a king, answerable to the mightie, huge, and prodigious tree that beareth it. These Fig-trees grow abundantly about the river *Acefine*.

CHAP.

CHAP. VI.

¶ Of the tree named *Pala*: of other Indian trees, whereof the names be unknowne.
Also of those that beare wool or Cotton.

Another tree there is in *India*, greater yet than the former, bearing a fruit much fairer, bigger, and sweeter than the figs aforesaid; and whereof the *Indian* Sages & Philosophers do ordinarily liue. The leafe resembleth birds wings, carrying three cubits in length, and two in bredth. The fruit it puts forth at the bark, hauing within it a wonderful pleasant iuice: in so much as one of them is sufficient to giue 4 men a competent and full refection. The trees name is *Pala*, and the fruit thereof is called *Ariena*. Great plenty of them is in the country of the *Sydraci*, the vtmost limit of *Alexander* the Great his expeditions and voiajes. And yet is there another tree much like to this, and beareth a fruit more delectable than this *Ariena*, howbeit, the guts in a mans belly it wringeth, and breeds the bloody-flux. Whereupon *Alexander* made open proclamation and straitly forbad, That no man should taste thereof. As for the *Macedonian* souldiers, they talked much of many other trees, but they described them in generall termes only, and to the most of them they gaue no names at all. For one tree there is besides, in other respects resembling the *Terebinth*, and it carrieth a fruit much like to *Almonds*, onely it is lesse, but of a most sweet and toothsome taste. In *Bactriana* verily, some take it to be a speciall kind of the *Terebinth* indeed, rather than a tree like vnto it: but that treewhich carrieth a fine flax, whereof they make their dainty linnen & lawn, it hath leaues like to those of the *Mulberry* tree, and beareth a red berry like to the hips of an *Eglantine*. They plant and set these in their fields and plains: and surely, standing as they do in such order, there are no rowes of any trees that yeeld a fairer sight and prospect. The *Oliue* tree of *India* is but barren, saue that it brings a fruit much like the *Wild Oliue*.

CHAP. VII.

¶ Of Pepper trees: of the Clooue tree, and many other.

The trees that beare Pepper euery where in those parts, be like vnto our *Iuniper* trees. And yet some haue written, That they grow only vpon the front of the hill *Caucasus* on that side which lieth full vpon the Sun. The corne or graines that hang chereupon, differ from *Iuniper* berries: and those lie in certain little huskes or cods like to the pulse called *Fase* or *Kidney* beans. If that be plucked from the tree before they gape and open of themselves, they make that spice which is called long Pepper: but if as they do ripen, they cleaue and chawne by little & little, they shew within, the white pepper: which afterwards being parched in the Sun, changeth colour, and waxeth black, and therewith riueld also. Peppers be subiect to the injury of the weather as well as other fruits: for if the season be vnkindly and vntemperate, they will catch a blast, and then the seeds will be deafe, void, light, & naught. This fault is called among the *Indians*, *Brechmasis*, which in their language significeth, an abortiue or vntimely fruit. This pepper of all other kinds is most biting and sharp, but it is the lightest, and pale of colour with all. The blacke is more kindly and pleasant: and the white is more milde in the mouth than both the other. Many haue taken *Ginger* (which some call *Zimbiperi*, and others *Zingiberi*) for the root of that tree: but it is not so, although in taste it fomewhat resembles pepper. For *Ginger* grows in *Arabia* and *Troglodytica* in meadows about the villages: and it is a white root of a certain little herbe. And howsoeuer it be very bitter and biting, yet it quickly meeteth with a worrne, and rots. A pound of *Ginger* is commonly sold at *Rome* for six deniers. Long pepper is soon sophisticated, with the *Sennie* or mustard-seed of *Alexandria*: & a pound of it is worth fifteen *Romane* deniers. The white costeth seuen deniers a pound, and the blacke is sold after foure deniers by the pound. As for Pepper, I wonder greatly that it should be so much in request as it is: for whereas some fruits are sweet and pleasant in taste, and therefore desired; others beautiful to the eye, and in that regard draw Chapman: Pepper hath neither the one nor the other. A fruit or berry it is (call it whether you will) neither acceptable to the tongue, nor delectable to the eye: and yet for the biting bitterness that it hath, we are pleased therewith, and we must haue it set forsooth from as far as *India*. What was he, gladly would I know, that sent

tured first to bite of pepper and vse it in his meates: Who might he be, that to prouoke his appetite and find himselfe a good stomack, could not make a shift with fasting and hunger onely? Surely, Ginger and Pepper both grow wild in those countries where they do like, and yet wee must buy them by weight, as we do gold and siluer. Of late daies here in Italy, wee haue made means to haue the Pepper tree growing among vs: and verily a little scrubby plant it is, or shrub rather, bigger somewhat than the myrtle, and not far unlike. The graine that ours beareth, carrieth the very same bitteresse that the greene pepper of India is thought to haue before it be full ripe. For here it wanteth the due parching and ripening against the sun: and by that means cometh forth of the riuels and blacknesse that the outlandish pepper hath. Sophisticated it is, by intermingling with it the grains or berries of Iuniper: for surely, they do marvellous soon take the taste and strength of pepper. And as for the weight, there be diuers waies to deceiue the chappman therein.

Ouer and besides, there is another fruit that cometh out of India, like vnto pepper comes, and it is called Cloues, but bigger somewhat and more brittle. And they say, that it groweth in a certain groue consecrated to their gods in India. Transported ouer it is vnto vs for the sweet smell that it casteth.

Moreover, the Indians haue a thorny and prickly plant, which beareth a fruit like to pepper, and passing bitter: the leaues be smal and grow thick after the maner of Priuet: it putteth forth branches 3 cubits long: the bark is pale, the root broad and of a woody substance, resembling the colour of box. Of the infusion of this root in faire water, together with the seed, in a brazen vessell, is made that medicine or composition which is called Lycium. A bush there groweth likewise vpon mount Pelion [like Pyxicantha, i. the Berberrie bush] whereof is made a counterfeite Lycium. In like manner, the root of the Asphodill, with an Oxe-gal, Wormewort, Frankincense, and the mother and lees of oile, wil do the same: but the best Lycium, and most medicinal, is that which doth yeld a great froth or scum. The Indian merchants do send it ouer in bags made of the skins either of Camels or Rhinoceroties. In some parts of Greece they name the very bush whereof this Lycium is made, Pyxicanthum Chironium.

CHAP. VIII.

¶ Of Macir, Sugar, and the trees of the region Ariana.

The Macir likewise is brought out of India. A reddish bark or rind it is, of a great root; and beareth the name of the tree it selfe: but the form of that tree I know not how to describe.

This rind foddeth in honey, & so condit as a Succade, is a singular good medicine for those that be troubled with the Dysentery or bloody-flux: as for sugar, there is of it in Arabia; but the best comes out of India. * A kind of honey it is, gathered and candied in certaine Canes: white this is like gum [Arabick] and brittle between a mans teeth. The graines hereof when they are at the bigge, exceed not a filberd nut, and serue only for physick. In the realm of Ariana (which consisteth and boundeth vpon the Indians) there is a certain thorny plant, so full of sharp prickles, that it is comberous to them who come about it; which yeelds a precious liquor issuing out thereof, like to Myrrhe. In the same province there grows a pestilent venomous shrubbe called Rhaphanus, bearing leaues like the bay tree, which with their fragrant smell train horses thither to eat thereof; but they are so good for them, that they left not Alexander the Great scarce one horse of all his Cauallerie, they died to fast of that food at his first entrance into the country. The like accident befell to him also among the Gedroians. In like manner, there is another thornie plant (by report) in that region, leaued like the Laurell: the iuice and liquor whereof, if it be sprinkled or dashed in the eyes of any liuing creature whatsoever, puts them quite out and makes them blind. Moreover, they haue an herb there, of a singular pleasant savor, but cowed all ouer it is with little venomous serpents: their sting is present death. *Onesicritus* reports, That in the vales of Hircania there trees like fig-trees, which the Hircanians call Occhi, out of which there distills or drops honey euery morning for the space of two houres.

CHAP. IX. ¶ Of Bdelium: and the trees growing by the Persian gulf.

Nere to these parts lies Baetiana, wherein is the most excellent Bdelium. The tree that beareth it is black, of the bignesse of an Oliue, with leaues like an Oke; and the fruit resembleth

A bleth wild figs, and is of the same nature. The gum thereof, some call Brochos; others, Malachra; and there be again that name in Maldacon. Howbeit, when it is blacke, and brought into roles or lumps, they giue it another name, and call it Hadrobolon. But indeed the right Bdelium when it is in the kinde, should be cleare, as yellow as wax, pleasant to smell vnto, in the rubbing and handling farty, in taste bitter, and nothing foure. Being washed and drenched with wine (as they vse it in sacrifices) it is more odoriferous. There is found of it in Arabia, India, Media, and Babylon. As for that which is brought out of Media, they call it Peraticum: this is more tractable and gentle in hand, more crutty and bitter than the rest. But the Indian Bdelium is the mostifer and more gummy: this is sophisticated with Almonds, whereas the other kinds be made counterfeite with the bark of Scordalus, a tree that yeelds the like gum. But this trumpety and deceit is found by the smell, colour, weight, taste, and fire. And let this one word for all, serue as a generall rule to proue all such drugs and spices by. The Baetrian Bdelium when it is in the fire, yeeldeth a dry and smoky fume, and hath many white markes in it resembling the nailles of ones fingers: besides, it hath his iust poise and weight that it ought to haue, neither more nor lesse; for as it should not be ouer weighty, so it may be too light. Commonly the price goeth after this rate, to wit, three deniers a pound.

Vpon these regions about named, consisteth Persia, whereas the red sea (which we named in our Geographic, the Persian gulf) floweth at certain tides far into the land, and in these sands and downes are to be seen diuers trees of strange natures: for when the tide is past, you shall see at a low water some trees with their roots bare, as if they were eaten with the salt water; & a man cannot tell whether they were brought thither with the tide, or left in the ebbe: but surely the naked roots seem to clasp & take hold of the barren sands, as if they were Polype fishes should cling to any thing. And yet the same, when the sea floweth again, notwithstanding they be beaten vpon with the waues, stand fast and stir not. Again, at some high water and spring-tide, they be covered all ouer with water: and by good arguments it is euident to the eye, That nourished they be with the roughnesse of the surging sea-water. Their heights is wonderfull: and fasthioned they be in forme of an Arbut tree: the fruit without-forth like to Almonds, but the kernels within be writhed.

CHAP. X.

¶ The Trees of the Island Tylos within the Persian sea. Moreover of the trees that beare Woolle or Cotton.

Within the same gulf of Persia, there lieth an Isle full of woodds to the East side, euery vpon that coast which is ouerflowed with the tide. Euery tree within, is equall in bignesse to the fig-tree: the blossoms that they carry, are so sweet, as it is wonderful & vn-speakable: the fruit like a Lupine, yet so rough & prickly, as no beast wil gladly touch it. In the highest part and knap of the same Island, there be trees bearing woolle, but not in such sort as those of the Seres: for whereas the leaues of those do carry a downe or cotton, these are altogether without and barren thereof: and but that they be somewhat lesse, they might seeme to be vine leaues. Howbeit they beare a fruit at the last, like Gourds in fashion, and as bigge as Quinces, which when they be full ripe, do open and shew certain balls within of down: whereof they make most fine and costly linnen clothes.

CHAP. XI.

¶ Of the Gossampine trees: as also of other Cotton or Bombast trees, whereof clothes be made. In what manner diuers trees do yeeld their fruit.

There is a lesser Isle named Tylos, ten miles from the other, where be trees called Gossampines, which yeeld more cotton than those in the greater. King *Iuba* saith, that this cotton groweth about the branches of the said trees, and that the linnens made thereof be far better than those of the Indians. As for those trees in Arabia whereof they make their linnen cloth, he affirmeth that they be called Cynae, and haue leaues like the Date tree. Thus you see, how the Indians be clad with trees of their own. In those Islands called Tyli, there is another tree which beareth a blossome much like the floure of a White Violet, or Cock-gilliflowe, but foure times

as big, which may seeme strange in that tract. And yet there is another Tree not unlike to it, howbeit fuller of leaues, and bearing a blossom like to a Damask or incarnate Rose. This floure sheweth close in the night, beginneth to open in the morning at the Sun-rising, and by noone sheweth out at the full. The inhabitants haue a by-word and saying among them, That it sleepest all night, and wakes in the morning. The same Island, bringeth forth Date trees, Oliue trees, Vines, and amongst other fruits Figges also. No Trees there, doe shed their leaues: for the Island is well watered with cold and quicke springs: and besides it hath the benefit of raine. As touching Arabia, which lieth nere and bordereth vpon these Islands, the spices and odoriferous fruits that be therein, are to be treated of with distinction: for their merchandise doth consist of roots, branches, barke, iuice or liquor, gums and rosins, wood, twigs, floures, leaues and apple.

CHAP. XII.

¶ Of Costus, Spike-nard, and the diuers kinds of Nard.

But the root and leafe be of greatest price in India. And first and foremost the root of Costus bites and burns in the mouth, and is of a most excellent and soueraigne smell: for otherwise the branches or body of the shrub is good for little or nothing. In the Island Patale (which lieth at the very first fosse and mouth where the riuer Indus falleth into the sea) there be found two kinds thereof: namely, the black, and the white, which is counted the better. A pound of Costus is held at 16 Roman deniers.

As touching the leafe of Nardus, it were good that we discoursed thereof at large, seeing that it is one of the principall ingredients aromatically that go to the making of most costly & precious ointments. The plant it selfe Nardus, hath a masse, heavy, & thick root, but short, black, and brittle, notwithstanding that it be fatty and oleous. Soone it winoweth and catcheth a kind of mustineesse, and like to the Cyresse (or Cyperus) it hath a sharp taste, rough and smal leaues, but comming thick. The head of Nardus spreads into certain spikes or eares, whereby it hath a twofold vse, both of spike and also of leafe, in which regard it is so famous. A second sort there is of it growing along the riuer Ganges, condemned altogether as good for nothing, for it hath a strong and stinking sauer: whereupon it is called Ozrenitis. There is an herbe growing euery where called Pseudonardus, or bassard Nard, which is obtruded vnto vs and sold for the true Spikenard. A thicker leafe it hath and a broader than the other: the colour is more pallat and weak, inclining to white. Also the very root of the right Nard, for to make the better weight, is mingled with gums, with Litharge of siluer, Antimony, or the rind of Cyperus. But the good, sincere, & true Nard is known by the lightnes, red colour, sweet smell, and the taste especially: for it drieth the tongue and leaueth a pleasant rellish behind it. The Spike carieth the price of an 100 Roman deniers a pound. As touching the leaues, the diuersitie thereof makes difference also in the price: for that which hath the larger leaues, and therupon is called Hadrosphærum, is worth 30 deniers a pound. A second sort there is with a smaller leafe, and of a middle size, named therefore Mesosphærum: and that is bought after 60 deniers the pound. But the best of all is that with least leaues, and carrieth the name of Microsphærum: and that the merchant selleth for 75 deniers the pound. What kind fouer it be, the greener and newer it is, the better it is reputed, and more odoriferous, than that which hath been long kept. Yet say it be old gathered, if the colour hold and keepe well, men preferre it before the blacker, though it be new. With vs in Italie, and in this part of the World, the leafe of Nardus comming from Syria, is esteemed best: next to it the Celtick, out of France; and in the third place that of Candy, which some name Agrion, [i. the wild] others Phiu: and this hath a leafe resembling Loueack or Aleanders, a stalk a cubite long full of ioints and knots, of a weake whitish and light purple colour; the root groweth crooked, full of strings and haire hanging to it, and is much like to birds claws or feet. As for Baccharis, it is called likewise Rustick-nard: but of it we speak among other flowers. All these kinds of Nard are to be reckoned herbs, saue that only of the Indians: of which, the Celticke or French Nard, is plucked and gathered together with the root: and for the better preparing thereof, it ought to be well washed and soaked in wine, and so dried in the shade out of the Sunne. Then is it made vp into certaine bundels of an handfull apiece, bound vp in papers, and differeth not much in goodnesse from the Indian Spikenard: How-

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Abeit, lighter it is than that of Syria. A pound of it is worth at Rome 13 deniers. The only proof and triall of all their leaues is this, That they be not brittle, and rather ripe drie, than sere or rotten-dry, That they breake not and fall in pieces. With the Celticke and French Nard there euenmore groweth another herbe, called Hirculus, and it taketh that name of a strong and Goatish smell which it yeeldeth: besides, so like it is vnto the other, that it is soisted in among the good, and so sold with it. Yet herein is the difference; for that this hath no stem or stalk at all; the leaues thereof also are lesse: and last of all, the root is neither bitter in taste, nor sweet in smell.

CHAP. XIII.

¶ Of Afara-Bacca, Amomum, Amomis, and Cardamomum.

ASarum or Sole-foot, called otherwise, Afara-Bacca, hath the very properties and vertues of Nard: and therefore some haue called it Wild Nard. An herbe it is, carrying leaues like to Luic, saue that they be more round and softer: it putteth forth a purple floure, and hath a root like vnto the French Nard. The floure is full within of seeds like grape kernels, of an hot taste, and resembling wine. In shadowie mountaines it floures twice a yeare. The best groweth in Pontus, the next to it for goodnesse is found in Phrygia: that of Illyricum is dry a third ranke. The root is digged vp when it beginneth to put forth leaues. They vse to of it in the Sun: soon it wil venow and be mouldy, quickly also it waxes old, and loseth the strength. Of late daies there was an herbe found in Thracia, the leaues whereof differ in nothing from the Indian Nard.

As for the grape of Amomum, which now is in vse and much occupied, some say it groweth vpon a wilde vine in India. Others haue thought, that it commeth from a shrubbe like Myrtles, & carieth not aboue a hand-bredth, or 4 inches in height. Plucked it is together with the root: and gently must be laid and couched in bunches by handfulls, for if great heeds be not taken, it will soone burst and breake. The best Amomum and most commendable, is that which carieth leaues like to those of the Pomegranate, without riuels and wrinkles, and besides, of a red colour. The next in goodnesse is that which is pale. The greene or grasse coloured is not all out so good, but the worst of all is white: and that colour comes by age, and long keeping: a pound of these grapes intire and whole in the cluster, is worth 60 Roman deniers. But if they be crumbled and broken, it will cost but 48. This Amomum groweth likewise in a part of Armenia named Otene: also, in the kingdomes of Media and Pontus. It is sophisticated with the leaues of the Pomgranate, and with some other liquid gum besides, that it may hang vnited together and roll round into the forme of grapes.

Now as touching that which is called Amomis, it is lesse full of veins, and nothing so sweet smelling, but harder than Amomum: whereby it appeareth, that it is either a diuers plant from it, or els if it be the same, it is gathered before it be full ripe.

Cardamomum is like to these aboue rehearsed, both in name, and also in making and forme: but it bears a longer graine for seed. The maner also of gathering and cutting it downe, in Arabia, is the same. Four kinds there be of it. The first is most green and fatty withal: hauing foure sharp corners, and if a man rub it between his fingers, he shall find it very tough and stubborn: and this is most esteemed of all the other. The next to it is somewhat reddish, but inclining to a whitish colour. A third sort is shorter, lesse, and blacker than the rest. Howbeit, the worst is that which hath sundry colours, is pliable and gentle in the rubbing, and smelleth but a little. The true Cardamomum ought to come neare in resemblance to Costus. And it grows in Media. A pound of the best will cost 12 deniers.

The great affinitie or kindred rather in name, that Cinnamon hath with these spices before rehearsed, might induce me to write thereof in one suite, euen in this place: but that more meet it is to shew first the riches of Arabia, and to set down the causes why that country should be first named Happy and Blessed. Wee will begin therefore with the chiefe commodities thereof, namely, Frankincense and Myrrhe: and yet Myrrhe is found as well in the Troglodites country, as in Arabia.

THere is no region in the whole world that bringeth forth frankincense but Arabia: and yet is it not to be found in al parts thereof, but in that quarter only of the Atramites. Now these Atramites inhabit the very heart of Arabia, and are a country of the Sabæi. The capital city of the whole kingdom is called Sabota, seated vpon a high mountain: from whence vnto Saba, the only country that yeelds such plenty of the said incense, it is about 8 daies journey. As for Saba (which in the Greeke tongue signifieth, a secret myserie) it regards the Sunne rising in Summer, or the North-East, enclosed on euery side with rocks inaccessible: and on the right hand it is defended with high cliffes and crags that beare into the sea. The soile of this territorie, by report, is reddish, & inclining to white. The Forrests that carry these Incense trees ly in length 20 Schænes, and beare in breadth half as much. Now that which we call Schænus, according to the calculation of *Eratosthenes*, contains forty stadia, that is to say, fife miles: howsoever some haue allowed but 32 stadia to euery Schænus. The quarter wherein these trees grow is full of high hills: howbeit, go down into the plains and valley beneath, you shall haue plenty of the same trees, which come vp of their own accord, and were neuer planted. The earth is fat, and standeth much vpon a strong clay, as all writers do agree. Few Springs are there to be found, and those that be are full of Nitre. There is another tract by it selfe confronting this country, wherein the Minæans do inhabit: and through them there is a narrow passage, whereby the frankincense is transported into other parts. These were their first neighbours that did traffique with them for their Incense, and found a vent for it: and euen so they doe still at this day, whereupon the frankincense it selfe is called of their name, Minæum. Setting these people of the Sabæans aside, there be no Arabians that see an Incense tree from one end of the yere to another: neither are all these permitted to haue a sight of those trees. For the common voice is, that there be not about 3000 families which can claime and challenge by right of succession that priuiledge to gather incense. And therefore all the race of them is called Sacred and Holy: for looke when they go about either cutting and slitting the trees, or gathering the Incense, they must not that day come neere a woman to know her carnally, nay they must not be at any funerals, nor approach a dead corps, for being polluted. By which religion and ceremonious obseruation the price is raised, and the incense is the dearer. Some say, these people haue equall liberty in common to go into these Woods for their commodities when they will: but others affirme that they be diuided into companies, and take their turns by yeares. As concerning the very tree I could neuer know yet the perfect description of it. We haue waged warres in Arabia, and our Roman armie haue entred a great way into that country. *C. Cesar* the adopted son of *Augustus* was great honour and glory from thence: and yet verily, to my knowledge, there was neuer any Latine Author, that hath put down in writing the form and fashion of the tree that carrieth incense. As for the Greeke Writers, their bookes doe vary and differ in that point. Some giue out, that it hath leaues like to a Pearre tree, only they be somewhat lesse, and when they come forth they be of a grasse green colour. Others say that they resemble the Lentiske tree, and are somewhat reddish. There be again who write, that it is the very Terebints and none else, that giueth the Frankincense: of which opinion king *Antigonus* was, who had one of these shrubs brought vnto him. King *Iuba* in those bookes which he wrot and sent to *C. Cesar*, son to the Emperor *Augustus*, (who was inflamed with an ardent desire to make a voyage into Arabia, for the great fame that went thereof) saith, That the tree which beares Frankincense hath a trunk or body written about, and putteth forth boughes and branches like for all the world to the Maple of Pontus. Item, that it yeeldeth a iuice or liquour as doth the Almond tree; and such are seene commonly in Carmania: as also those in Egypt which were planted by the carefull industrie of the *Ptolemæes*, Kings there. Howeuer it be, this is receiued for certaine, that it hath the very barke of a Bay tree: Some also haue said that the leaues be as like. And verily such kind of trees were they which were seen at Sardis: for the Kings of Asia likewise were at the cost and labor to transplant them, and desirous to haue them grow in Lydia. The Embassadors who in my time came out of Arabia to Rome, haue made all that was deliuered as touching these trees, more doubtfull and vncertaine than before. A strange matter, and wonderfull indeed, considering that twiggies and branches of the Incense tree haue passed betwene:

by

A by the view of which impes, we may judge what the Mother is: namely, euen and round in the bodie, without knot or knar, and from thence she putteth out shoots.

They vse in old time to gather the Incense but once a yere, as hauing little vent, and small returne, and lesse occasion to sell than now adaies: but now, since euery man calleth for it, they feeling the sweetnesse of the gaine, make a double vintage (as it were) of it in one yere. The first, and indeed the kindly season, falls about the hottest daies of the Summer, at what time as the Dog daies begin: for then they cut the Tree where they see the bark to be fullest of liquor, and whereas they perceiue it to be thinne and strut out most. They make a gash or slit only to giue more libertie; but nothing do they pare or cut cleane away. The wound or incision is no sooner made, but out there gusheth a fat some or froth: this doone congeales and grows to be hard:

B and where the place will giue them leave, they receive it in a quilt or mat made of Date tree twigs, plaited and wound one within another wicker-wise. For elswhere, the floore all about is paved smooth, and rammed downe hard. The former way is the better to gather the purer and clearer Frankincense: but that which falleth vpon the bare ground, procures the weightier. That which remains behind, and stickes to the Tree, is parted and scraped off with knives, or such like yron tooles; and therefore no maruell if it be full of shavings of the bark. The whole wood or Forrest is diuided into certaine portions: and euery man knowes his owne part: nay, there is not one of them will offer wrong vnto another, and encroch vpon his neighbors. They need not to set any keepers to look vnto those Trees that be cut, for no man will rob from his fellow if he might, so just and true they be in Arabia. But beleue me, at Alexandria where Frankincense is tried, refined, and made for sale, men cannot look surely enough to their shops and work-houses, but they will be robbed. The workman that is employed about it, is all naked, save that he hath a paire of trowsers or breeches to couer his shame, and those are sowed vp and sealed too, for feare of thrusting any into them. Hood-winked he is sure ynough for seeing the way to and fro, and hath a thicke coife or maske about his head, for doubt that he should bestow any in mouth or eares. And when these workmen be let forth againe, they be stripped stark naked, as euer they were borne, and sent away. Whereby we may see, that the rigor of justice cannot strike so great feare into the heues here, and make vs so secure to keepe our owne, as among the

C Sabæans, the bare reuerence and religion of those woods. But to returne againe to our former cuts. That Incense which was let out in Summer, they leaue there vnder the Tree vntil the Autumne, and then they come and gather it. And this is most pure, cleane, and white.

A second Vintage and gathering there is in the Spring: against which time, they cut the bark before in the Winter, and suffer it to run out vntil the Spring. This comes forth red, and is nothing comparable to the former. The better is called Carphotum, the worse, Dathiatum. Moreover, some say, that the gum which issueth out of the young trees is the whiter: but that which comes from the old, is more odoriferous. There be others also of opinion, that the better Incense is in the Islands. But King *Iuba* doth aouoch constantly, that there is none at all in the Islands. That which is round like vnto a drop, and so hangeth, we call the male Incense; whereas

E in other things lightly we name the male, but where there is a female. But folk haue a religious ceremonie in it, not to vse so much as the tearme of the other sexe, in giuing denomination to Frankincense. Howbeit, some say, that it was called the Male, for a resemblance that it hath to cullions or stones. In very truth, that is held for the cheife and best simply, which is fashioned like to the nipples or teats that giue milk, standing thick one by another: to wit, when the former drop that distilled, hath another presently followeth after, and so consequently more vnto them, and they all seeme to hang together like bigs. I read, that euery one of these were wont to make a good handfull, namely, when men were not so hasty & eager to carry it away, but would

F giue it time and leifure to drop softly. When it is gathered in this sort, the Greeks vse to call it Stagontias and Atomus: but the lesse goblets they name Orobias. As for the small crums or fragments which fall off by shaking, wee called Manna, [*i. Thuris.*] And yet there be found at this day drops of Incense that weigh the third part of a pound, that is to say, about * 39 Roman deniers. It happened on a time, that king *Alexander* the Great being then but a very little child, made no spare of Incense, but cast still vpon the altar without all measure when he offered sacrifice. Whereupon, *Leonides* his tutor and schoole-maister, by way of a light reproofe, said vnto him thus, Sir you should in that manner burne Incense when you haue once conquered those nations where there grows Incense. Which rebuke and checke of his tooke so deep a print in

or rather 39
and a scruple

Alexander

Alexanders heart, and so well he carried it in memorie, that after he had indeed made conquest of Arabia, he sent vnto the said *Leonides* his Tutor, a ship full fraught and charged with Incense, willing him not to spare, but liberally to bestow vpon the gods when hee sacrificed. To returne againe to our historie. When the Incense is gathered (as is before said) conueighed it is to Sabota, vpon Cammels backs, and at one gate (set open for that purpose) is it brought into the citie. For by law forbidden it is on paine of death, to take any other way. Which done, the Priests there of the god whom they call *Sabis*, take the thirde or tenth part of the Incense, by measure, and not by weight, and set it apart for that god. Neither is it lawfull for any man to buy or sell, before that duty be paid: which serueth afterwards to support certaine publick expenses of the citie. For all strangers and traucellers within the compasse of certain daies journey, if they come to the citie, are courteously receiued, and liberally entertained at the cost and charge of the said god *Sabis*. Caried forth of the country it cannot be, but thorough the Gebanites and therefore there is a custome paid to their king. The head citie of that kingdom, *Thoma*, is from *Gaza* (the next port-towne in Iudaea toward our coast) seven and twentie miles foure times told: and this way is diuided into 61 daies journey by Camels. Moreouer, besides the tyth aforesaid, there be measures bestowed vpon the Priests to their owne vse: and others likewise to the kings Secretaries and Scribes. And not only these haue a share, but also the Keepers, Sextons, and Wardens of the temple, the Squires of the bodie, the Guard and Pensioners, the kings officers, the Porters, Groomes, and other seruitors pill and poll, and euery one hath a snatch. Moreouer, all the way as they trauell, in one place they pay for their water, in another for fodder and provender, or else for their lodging & stable-room, & euery where for one thing or other they pay toll: so as the charge of euery Camell from thence to the sea vpon our coast, commeth to 688 deniers: and yet we are not come to an end of payments. For our Publicanes and customers also belonging to our Empire, must haue a feece for their parts. And therefore a pound of the best Incense will cost 16 deniers: of the second 15: and the third 14. With vs it is mingled and sophisticated with parcels of a white kind of Rosin which is very like to it, but the fraud is soone found, by the meanes aboue specified. The best Incense is tried and knowne by these markes, viz. If it be white, large, brittle, and easie to take a flame when it comes neare a coale of fire; last of all, if it still not abide the dent of the tooth, but flie in pieces and crumble sooner than suffer the teeth to enter into it.

CHAP. XV.

¶ Of Myrrhe, and the Trees that yeeld it.

Some haue written, That the Trees which beare the Myrrhe, doe grow confusedly here and there in the same woods, among the Incense Trees: but more there are who affirme, That they grow apart by themselves. And in truth, found they are in many quarters of Arabia, as shall be said when we treat of the severall species of Myrrh. There is very good Myrrh brought out of the Islands: and the Sabæns passe ahe seas, and trauell as far as to the Troglodites country for it. There is a kind of Myrrhe tree planted by mans hand in Hort-yards, and much preferred it is before the wild that groweth in the woods. These Trees loue to be raked, bared, and cleaned about the roots: they delight (I say) to haue the superfluous spurnes rid away from the root: and the more that the root is cooled, the better thrieth the Tree. The plant groweth ordinarily fve cubits high, but not all that length is smooth and without prick: the bodie and trunk is hard and writhen, thicker than the Incense trees: it is greatest toward the root: and so arises smaller and smaller, taperwise. Some say, that the bark is smooth and euen, like vnto that of the Arbut Tree: others againe affirme, that it is prickly and full of thornes. It hath a leafe like to the Olive, cut more crisped and curled, and withall it is in the end sharp-pointed like a needle. But King *Iuba* writes, that it beareth the leafe of Loueach or Alifanders. There be who write, that it resembles the Iuniper, saue only that it is more rough and beset with sharp prickles. And some let not to dream & talke, that both Myrrhe and also Incense came from one and the same Tree. Indeed, the Myrrhe trees are twice cut and launced in one year, and at the same seasons, as well as the Incense trees: but the slit reacheth from the very roo't to the boughes, if they may beare and abide it. Howbeit, before that incision be made, they sweat out of themselves a certain liquor called *Stacte*, which is very good Myrrh, and none better. As well of this

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A frank and garden myrrh tree, as of the wild in the woods, the Myrrh is better that is gathered or runs in Summer time. There is no allowance of myrrh offered and giuen to the god *Sabis*, as there was of Incense, because it is found in other countries. Howbeit the King of the Gebanites hath payed vnto him for toll and custome a fourth part of all that passeth through his kingdom. To conclude, whatsoeuer is bought in any market or place abroad, they put and thrust it hard together in leather bags one with another: but the Druggists and Apothecaries can soone separate the better from the worse, and be very cunning and ready to digest them according to the marks that they go by, as well of smell as fattnesse.

CHAP. XVI.

¶ Diners kinds of Myrrhe: the nature, vertue, and price thereof.

Many forts there be of Myrrh. Of all the wild kinds, the first is that which groweth in the Troglodites country. Next to it is the *Minea*, in which rank you may place *Attramittica* and *Ausaritis*, which both come out of the realme of the Gebanites. In a third place reckon that which they call *Dianitis*. A fourth sort is gotten here and there in all parts, and huddled together. In the fifth range is *Sembracena*, so called of a city within the kingdom of the Sabæans, and is next vnto the sea. The sixth they call *Dusaritis*. Besides all these, a white myrrh there is found but in one place, which ordinarily is brought to the city *Mesalum*, & there sold. The Trogloditick myrrh they chuse by the fattnesse thereof, and for that it seemes to the eye greener: it shewes also foule, rude, and lissaured: but sharper it is, and more biting in mouth than the rest. The *Sembracene* hath none of these faults, but is pleasant and cheerefull to see to, howbeit of small operation and strength. But to speake in a word, and once for all, the best myrrh is known by little pieces which are not round: and when they grow together, they yeeld a certain whitish liquor which issueth and resoluth from them, and if a man break them into morsels, it hath white veines resembling mens nailes, and in taste is somewhat bitter. A second degree there is in goodnes, when it sheweth sundry colors within. And the worst of all is that which within-forth is black; and the same is worse yet, if it be as black without. As touching the price of myrrh, it alters as it is more or lesse in request, and according as it meeteth with many or few chapmen. For ye shall haue *Stacte* sold somtimes for 6 deniers a pound, and otherwhiles for 50. The greatest price of the garden frank-Myrrh, or that which is set by mans hand is 22 deniers. The red called *Erythrea* is neuer aboue 16: and this is taken to be the true myrrh of Arabia. The kernell within of the Trogloditick Myrrh will cost 13 deniers a pound: but that which they call * *Odoraria* is sold for 14. All kinds of Myrrh be mingled and sophisticated with pieces of Masticke coming from the *Lentiske*, and with other gum: *Item* with *Elaterium* [the iuice of the wild cucumber] to make it more bitter: as also, that it might seem weightier, with the some of lead, or litharge of siluer. And surely setting aside these two corruptions, all the rest are found by the very tast of the gum, which also will sticke vnto the teeth in the chewing. But the craftiest and finest deuice to counterfeit it, is with Indian myrrh, gathered there from a certain thorny plant which growes among them. This is the onely thing that India bringeth forth worse than other countries. And verily so bad it is, that soone it may be knowne from other myrrhes.

CHAP. XVII.

¶ Of Mastick, Ladaneum, and Bruta of Ephemus, Sirobus, and Syrac.

From the foresaid Myrrh therefore last named, let vs for the assinitic passe to Mastick: which comes also of another thorny tree in India, as also in Arabia, called *Lama*. Howbeit of Mastick there be two sorts: for both in Asia and also in Greece there is found an hearbe, which directly from the root putteth forth leaves, and it beareth a bur or thistle head like an apple, full of seeds. Cut the top of this herbe, and there will issue forth a certain liquor so like vnto the right mastick, that hardly a man shall know the one from the other.ouer and besides, there is a third sort of Masticke in Pontus, more like to Bitumen. Howbeit, the very best Mastick is brought out of the Island *Chios*, and the same is white, and a pound of it is worth in Rome 20 deniers: but the black ye shall buy for twelue. As for the Chian Mastick, it issueth forth

* or *Adonia*
i. *Styriana*,
which serueth
for perfume
in temples

forth as a gum out of the Lentisk tree. Mingled this is also like as frankincense, with rosin.

Moreover, Arabia doth glory even yet in their Ladanum. And many haue reported, that this comes by fortune or chance, and by occasion of violence and wrong done to an odoriferous plant that yeeldeth it in this manner following: The Goats they say, harmefull creatures as they be to all plants, but more desirous to be browsing of sweet and aromaticall shrubs (as if they knew how precious they were) use to crop the sprouts and sprigs of this plant which beareth Masticke, which being so full of this odoriferous and sweet liquor, that they smell again, doth drop and distill the said moisture, which the shrewd and vnhappy beast catcheth among the shag long haire of his beard. Now by reason that dust getteth among it, baltereth & clutereth into knots and balls, and so is concocted into a certaine consistence in the Sunne. And hereupon it is, that in Ladanum are found goats haire. But this hapneth by their saying, in no other place but among the Nabatæans in the frontiers of Arabia toward Syria. The later moderne writers call the plant which yeeldeth Ladanum, Strobos; and they asseme, That in the forests of Arabia where these do grow, the boughes are much broken by the browsing of these goats, and so the iuice and liquor stickes to their locks and beards. But the true Ladanum (say they) is peculiar to the Island Cyprus (for, giue me leave I pray you, to speake by the way of euery kind of spice and aromaticall drugs, & not strictly to keep & obserue the order & consequence of places where they be found.) And by report, after the same manner as this Ladanum in Arabia, there hangeth and cleaueth to the beards and shagge haired legs and flanks of the goats there also, a certain grease and fattinesse called Ocyprus: but, according to them, it must be gotten when they crop off the leaues and floures of the herbe Cistus, in a morning for their breakefast, at what time as the Island Cyprus standeth all with a dew. Now when the morning mist is dispatched by the heat of the Sunne, there gathereth dust amongst these moist and wet haire of theirs, and sticketh to: and then the Islanders come and comb from their beards and flanks that which they call Ladanum. Some call that plant in Cyprus whereof it is made, Ledon: and in truth thereof it taketh the name of Ledanum amongst them. For by their report, this herbe hath a fatty substance setting vpon it, and the peasants of the country roll the herbs together into balls or rundles, with small cords, and so make vp those little lumpes yee see. By which we may perceiue, that as well in Arabia as Cyprus there be two kinds of Ladanum: the one mixed with earth, and naturall of it selfe: the other brought into balls and artificiall. The earthy is brittle and will crumble: the artificiall is tough, clammy, and will cleaue to ones fingers. Moreover, it is said that there be certain shrubs in Carmania that beare Ladanum, as also about Egypt, by occasion of plants thither brought by the Ptolomæ, kings of Egypt: as some say it is the Incense tree that bringeth it forth: and is gathered after the manner of a gum issuing out of the tree by incision made in the bark, and is recieued in goat skins. The best Ladanum is worth forty Asles a pound. Sophisticated it is with Myrtle berries, and with other filth of beasts. The good Ladanum indeed, which is of it selfe without other mixture, ought to haue a wild and sauage smell with it, as if it came out of a wilderness. Greenish it is, and drie to see to: but handle it neuer so little, and presently it doth relent and wax soft. Set it on fire, and it burneth bright and cleare, and then it casts a sweet and pleasant odour. But all that is counterfeited and mixed with myrtle berries may soon be knowen, for they will crackle in the fire. Besides, the true Ladanum hath rather stony grit comming from the rocks, mingled with it, than dust.

In Arabia, the Oliue tree also hath a kind of liquour which issueth out of it: and thereof is compounded a certain soveraign salue named of the Greeks Enchaemon, which is singular good to draw vp wounds and heale them clean. In the maritime parts and sea coasts the said Oliue trees at some tides are ouerflowed with the waues. Yet recieue the Oliue berries no hurt thereby: notwithstanding it be certain, that the sea doth leaue salt vpon the leaues. Thus you see what be the peculiar commodities as touching trees, proper vnto Arabia. True it is that it hath others besides, but because they be found elsewhere, and knowne to be better in other places than in Arabia, I will treat of them in their course and ranke when it commeth. And yet Arabia it selfe, as fruitful and happy as it is in this behalfe, is wondrous cager in seeking after forreine spices, and sendeth for them into strange countries. So soone are men glutted and haue their fill of their owne: and so greedy and desirous be they of other countries commodities.

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A They send therefore as far as the Helymæans, for a tree named Bruta, like to a spreading cypress, hauing boughes couered with a whitish bark, casting a pleasant smelling perfume when it burneth, and highly commended in the chronicles and historie of *Claudius Caesar* for strange vertues and wonderfull properties. For he writeth, That the Parthians vse to put the leaues thereof in their drinke, for to giue it a good tast and odoriferous smell. The odour thereof resembleth the Cedar very much: and the perfume is a singular remedie against the stinking and noisome fumes of other wood. It groweth beyond the great channell of the riuer Tigris, called Pasitigris, vpon the mount Zagrus neare vnto the citie Citaca.

They send moreover to the Carmanians for another tree called Strobos, and all to make sweet perfumes: but first they infuse the wood thereof in Date-wine, and then burn it. This is an excellent perfume: for it will fill the whole house, rising vp to the chambers aloft to the arched feelings of the roofe, and returning downe againe to the very floore and ground beneath, most pleasantly. But it stufes a mans head, howbeit without any paine or ach at all. With this perfume they procure sleep to sick persons. And for the traffick of this commoditie, the merchants meet at the citie Carras, where they keep an ordinarie faire or mart: and from thence they went customably to Gabba, twentie daies journey off, where they were wont to haue a vent for their merchandize, and to make returne: and so forward into Palestine of Syria. But afterwards (as *K. Iuba* saith) they began to go to Charace, and to the kingdom of the Parthians, for the same purpose. For mine owne part, I thinke rather with *Herodotus*, That the Arabians transported these odours and spices to the Persians first, before that they went therewith either into Syria or Ægypt: and I ground vpon the testimonie of *Herodotus*, who affirmeth, That the Arabians paid euery yeare vnto the KK. of Persia the weight of a talent in Frankincense, for tribute.

C Out of Syria they bring back Storax, with the acrimonie and hot smell whereof, being burnt vpon their hearths, they put by and driue away the loathsomnesse of their own odors, wherewith they are cloyed: for the Arabians vse no other fuel at all for their fires; but sweet wood. As for the Sabæans, they seeth their meats in the kitchen, some with the wood of the Incense tree, and others with that of Myrthe: insomuch as both in citie and country their houses be full of the smoke and smell thereof, as if it came from the sacrifice vpon the altars. For to qualifie therefore this ordinarie sent of Myrthe and Frankincense wherewith they are stufed, they perfume their houses with Storax, which they burne in Goats skins. Lo, how there is no pleasure whatsoever but breeds lothsomnesse, if a man continue long to it. The same Storax they vse to burn E for the chasing away of Serpents, which in those forests of sweet trees, are most rife & common.

CHAP. XVIII.

Of the silicities of Arabia.

N Either Cinamon nor Cassia do grow in Arabia, and yet it is named Hæppie: vnworthie country as it is, for that surname, in that it taketh it selfe beholden to the gods about therefore, whereas indeed they haue greater cause to thanke the infernal spirits beneath. For what hath made Arabia blessed, rich, and happy, but the superfluous expence that men be at, in funerals, employing those sweet odors to burne the bodies of the dead, which they knew by good right were due vnto the gods. And verily it is constantly affirmed by them who are acquainted well with the world, and know what belongeth to these matters, That there commeth not so much Incense of one whole yeares increase in Saba, as the Emperor *Nero* spent in one day, when he burnt the corps of his wife *Poppæa*. Calt then, how many funerals euery yeare after were made throughout the world: what heaps of odors haue been bestowed in the honor of dead bodies: whereas they offer vnto the gods by crums and graines only. And yet when as men made supplication to them with the oblation of a little cake made with salt, and meale, and no more; they were no lesse propitious and merciful, pay they were more gracious and fauourable a great deale, as may appeare by histories. But to returne againe to Arabia, the sea enricheth it more than the land, by occasion of the orient pearles that it yeeldeth and sendeth vnto vs. And surely our pleasures, our delights, and our women together, are so costly vnto vs, that there is not a D yeare goeth ouer our heads, but what in pearles, perfumes, and silkes; India, the Seres, and that demy-Island of Arabia, stands vs at the least in an hundred millions of *Sesereces*, and so much fetch they from vs in good money, within the compasse of our Empire. But of all this masse of Spice

Spice and Odors, how much (I pray you) commeth to the seruice of the coelestiall gods, in comparifon of that which is burnt at funerals, to the fpirits in fernall

CHAP. XIX.

¶ Of Cinamon, and the wood thereof called *Xylocinnamomum*,
Also of Canell or *Casia*.

FAbulous antiquitie, and the prince of lyers *Herodotus*, haue reported, That in that tract where *Bacchus* was nourished, Cinamon and Canell either fell from the nests of certaine fowles, and principally of the Phoenix, thorough the weight of the venifon and flesh which they had preyed vpon and brought thither whereas they builded in high rockes and trees; or else was driuen and beaten downe, by arrowes headed with lead. Also that Canell or *Casia* was gotten from about certaine marishes, guarded and kept with a kind of cruell Bats, armed with terrible and dreadfull tallons, and with certain flying Pen-drasons. And all these deuises were inuented only to enhance the price of these drugs. And this tale is told another way, namely, That in those parts where Canell and Cinamon grow (which is a country in manner of demy-Iland, much enuironed with the sea) by the reflection of the beames of the Noon-sun, a world of odoriferous smells is cast from thence, in such sort, that a man may feele the sent at one time of all the aromaticall drugs as it were met together, and sending a most fragrant and pleasant fauour far and neare: and that *Alexander* the Great sailing with his fleet, by the very smell alone discovered Arabia a great way into the maine sea. Lies all, both the one and the other: for Cinamon or Cinamon, call it whether you will, groweth in *Aethiopia*, a country neare vnto the Troglodites, who by mutual marriages are linked together in great affinity. And in very truth the *Aethiopians* buy vp all the Cinamon they can of their neighbours, and transport it into other strange countries ouer the vast Ocean, in small punts or boats, neither lured with helme and rudder, nor directed to and fro with oares, yet carried with sailes or any such meanes of navigation: one man alone (shall see you there in a boat, armed and furnished with boldnesse only in stead of all, to haue himself and his goods in the surging sea. These fellows, of all times of the yeare, take the dead of the winter, and then (to chuse) they will venture to crosse the seas for their voyage, when the Southeast winds are aloft & blow lustily. These winds fer them forward in a freight and dire & course thorough the gulfes; and after they haue doubled the point of *Argeste*, and coasted along, bring them into the famous port or hauen-towne of the *Gebanites*, called *Ocila*. And albeit this voyage be long & dangerous (for the merchants hardly can return in five yerres, and many of them miscarie by the way) yet by report they are nothing dismayed and daunted therewith, but willingly aduenture still. And being at *Ocila*, what thinke you doe they exchange for, and wherewith freight they their vessels back againe homeward? euen with glasse, vessels of copper and brasse, fine cloth, buckles, claspes, and pincers, bracelets and caracnets, with pendant jewels: so as a man would verily thinke, that this traffike were maintained and the voyages enterprised vnder the credit & for the pleasure of womankind especially. Now as touching the plant that beares Cinamon, the tallest is not about 2 cubits high above ground, nor the lowest vnder one hand-breadth or 4 inches: in compasse about 4 fingers thicke: immediately from the earth it putteth forth twigs, and is full of branches of six fingers length, but it looketh as if it were drie and withered: whiles it is Greene it yeelds no smell at all, and the leaf resembleth *Origan*: it loues drought, for in rainie weather it is lesse fruitfull, and yet it is of this nature, To be cut as a coppis. It will grow verily in plaines, but gladly it would lodge among the thickest rough of bushes, greeces, & briars that are to be found: so as men haue much adoe to come by it and to gather it: but neuer is cut or cropped without especiall permission of a certaine god, which they take to be *Iupiter*; and this patron of the Cinamon tree, they call *Assabius*. To obtaine leaue and license so to do, they are glad to sacrifice the inwards of 44 Kine or Oxen, Goats also and Rams: and when they haue all done, yet permitted they be not to go about this businesse either before the Sun rising, or after his setting. Now when these twigs and branches be cut, the Sacrificer or Priest diuides and parts them with a iauelin, and sets by one portion for the god aboue said: the rest doth the merchant put vp and bestow in paniers for the purpose. This manner of diuision is otherwise reported, namely, That the whole heap is cast into three parts, wherof the sunne hath one for his share: but they draw lots first for eury one

A one of these trees feuerall bundles or parcels of Cinamon sticks; and that which falleth to the Sun is let alone and left behind: but of the own accord it catcheth a light fire and burneth. The best Cinamon is thought to be that which growes about the slenderest sticks, for the length of an hand breadth from the vpper end. The second sort in goodnesse is that which is next it, and somewhat lower, but it beareth not full so much as an hand breadth; and so consequently in order by degrees downward; for the worst and of least price is that which is neereff the root. Because there is least barke, the chiefe thing required in Cinamon: which is the cause that the twigs in the tree top are preferred before the rest, for that in them there is most barke. As for the very wood it selfe, which is called *Xylocinnamomum*, there is no reckoning made of it, because of the acrimonie and sharpenesse that it hath, resembling *Origan*. A pound thereof is worth 20 deniers. Of Cinamon there be (according to some) two kinds; to wit, the whiter and the blacker. In times past, the white was in more request: but now adays the black is most set by: yea, and that of diuers colours is better esteemed than the white. But the truest marke, indeed to chuse the best, is to see that it be not rough, and that it crumble not quickly if one piece be rubbed against another. That which is tender and hath besides a white barke, is not regarded at all, but condemned for the worst. Moreover, this is to be noted, that the King only of the *Gebanites* setteth the price and sale of Cinamon: he it is that selleth it in open market according as it is by him taxed. In old time a pound of it was sold for 1000 deniers, and this price afterward rose higher by one halfe, by reason that the forrests of Cinamon were (as men say) burnt by the barbarous *Troglodites* their neighbors in their furious wrath. Now why it should be so deare, no man certainly knows: whether it were through the great rich merchants who ingrossed all into their hands by way of monopoly, or by some other casualtie and chance of fire afore said. But true it is and well knowne by that we find in diuers writers, That there be such hot Southerne windes blowing in those parts, that in Summer many times they set the woods on fire. *Vespasian Augustus* the Emperor was the first that dedicated in the Temples of the Capitoll and goddesse *Peace*, garlands and chaplets of Cinamon enclosed within fine polished gold. In that temple which the Empresse *Augusta* caused to be built in the palace vpon Mount *Palatine*, for the honor of *Augustus Caesar* late Emperor, her husband, I haue myself seene a Cinamon root of great weight, set in a cup of gold, which yearly did put forth certain drops which congealed into hard grains. That monument remained there to be seen, vntill the Temple and all was consumed by fire.

E As concerning *Casia* or Canell, a plant it is, which groweth neer to the plains from whence the Cinamon comes; but it loueth to liue vpon mountaines, and beareth a bigger and rounder wood in the branches than the Cinamon, and hath a thin rinde or skin, more truly than a bark: the slenderer that the same is, and lighter, the more reckoning is made of it; clean contrary to the Cinamon. This shrub that beareth *Casia* groweth to the height of 3 cubits: and 3 colours it carrieth; for when it comes vp first, for a foot from the root it is white: then as it shooteth halfe a foot higher it waxeth red: but as it riseth farther it is blackish: and this part is held for the best; and so the next to it in a degree lower: but the white is of no regard at all, and therefore they neuer cut the twigs and branches neere the root, nor about two cubits in length. And when they haue cut them in this manner, they presently sow them vp in Greene skinned of four-footed beasts, killed new and fresh for that purpose, that of their corruption and putrefaction there might breed certaine wormes to eat out the wood within the barke, and so make it hollow; for the bark is so bitter that the worm will not touch it. The newest and freshest Canell is reputed best, and that which hath a most delicate smell; very hot in the mouth, and burning the tongue, rather than gently warming it without any great biting. Such Canell is of a purple colour, and very light in hand; which seeming much to the eye, yet weigheth little: besides, the pipes be but short, and the outward rinde or coat is not brittle and easie to fall in pieces. This select and choicest Canell the barbarous people call *Lacta*. Another sort there is named *Ballamodes*, because it hath a smell resembling Balm: bitter it is in the mouth, & therefore of more vse in physicke; like as the blacke is most employed in sweet perfumes and oynments. There is no drugs that varieth more in price than the Canell: for whereas the best will cost fifty deniers Romana pound, all the rest a man may buy for five.

CHAP. XX.

¶ Of *Iscinamon, Cancamum, and Tarum.*

THe Hucksters and regraters that buy and sell againe haue another kinde, which they call Daphnoides, and they syname it Iſo-cinnamon: and ſurely they hold it at 300 deniers a pound. Mingled it is and made counterſeit with Storax, with the ſmalleſt and tendreſt branches alſo of Lawrell, for the likenefſe it hath to the bark thereof. Moreouer, it is ſet & planted in our part of the world here in Italy, alſo in the vtmoſt marches and confines of our Empire, along where the riuier Rhine runs, it liueth, being ſet neere vnto Bee-hiues. Howbeit, becauſe it wants the parching heate of the Sun, it is nothing ſo deepe coloured; and thereupon alſo it comes ſhort of the ſmell that the other hath. Out of the regions which bound on thoſe parts where Caſia and Cinamon groweth, there are brought ouer vnto vs two other ſpices, called Cancamum and Tarum: but by the way of the Troglodite Nabathæans, who onely of the ancient Nabathæans there ſetled and remained,

CHAP. XXI.

¶ Of *Serichatum, Gabalum, and Myrobalanum, [i. Ben.]*

IN the ſame country, the Arabians come charged alſo with Serichatum and Gabalum: but they make an hand with it among themſelues, and ſpend it quite in ſuch fort, as their drugs are known vnto in name to vs in this part of the world, albeit they grow together with Cinamon and Caſia. And yet otherwhiles there is Serichatum brought vnto vs, which ſome perfumers vſe to put into the compoſition of ointments. And a pound of it is commonly exchanged for ſix deniers.

As for Myrobalanon, [*i. Behen*] it growes ordinarily in the region of the Troglodites, about Thebais, and that part of Arabia which diuideth Iury from Egypt: a drug that Nature hath brought forth only for ointment, as the very name giueth it. Whereby it appeareth alſo, that it is a very nut of a certain tree, which beareth leaues like to Heliotropium: whereof we will ſpeak among other herbs. The fruit that this plant beareth is about the bignes of a filberd nut. That which growes in Arabia, and yet called Syriaca, is white: but contrariwiſe that about Thebais is black. The former of theſe two is commended for the goodneſſe of the oile which is preſſed out of it: but the Thebaick Ben is in greater requeſt for the plenty that it yeeldeth. As for the Trogloditick, it is the worſt of all, and the cheapeſt. And yet ſome there be that prefer the Æthiopian Ben before all other. The Nut and fruit thereof is black and fat, with a ſmal and ſlender kernell within: howbeit the liquor preſſed forth of it is more odoriferous: and it groweth in champain countries and plains. It is affirmed moreouer, that the Egyptian Ben is more oleous and fat, hauing a thicker ſhell, and the ſame red. And albeit that it grow in mariſh ground, yet is it a ſhorter plant and more dry than the others. But contrariwiſe they ſay, that the Arabick is green of colour, and thinner in ſubſtance: and for that it groweth vpon the mountaines it is more maſſie and weighty. But the beſt ſimply by many degrees, is that Ben which is called Petrea, coming from about the town aboueſaid, with a blackiſh rind, & white kernell. Now the Perfumers and Apothecaries, do preſſe only the huſks and ſhells, but the Phyſicians extract an oile out of the very kernels, which as they ſtamp, they poure hot water euer and anon vnto it, by little and little.

CHAP. XXII.

¶ Of *Phenicobalanus, Calamus odoratus, and Squinantib.*

THe Date in Egypt called Adipſos hath the like vſe in ointments, and is next in requeſt for ſuch odoriferous compoſitions, as the Myrobalanus, or Ben aforeſaid. Green it is in colour, it ſmelleth like vnto a Quince, and hath no woody ſtone within. But to ſerue for thoſe purpoſes aboue recited, it muſt be gathered ſomewhat before it beginneth to ripen. That which is left behinde vngathered is called Phenicobalanus. This waxeth blacke, and maketh them drunke that eat thereof. As for Myrobalanus, or Ben, it is worth two Romane deniers a pound.

A pound. The occupiers and ſhopkeepers call the very ſetling and grounds of their ointment and compoſitions, by the name of Myrobalanon.

Moreouer, within Arabia there growes alſo the ſweet Calamus, which is common to the Indians & Syrians likewiſe. That of Syria paſſes all the reſt, and comes vp in a tract of that country diſtant from the coaſt of our Sea fiftie ſtadia. Between mount Libanon and another mountain of no account [for it is not Antilibanon as ſome haue thought] in a little vale beneath neer vnto a lake, the marſhes and flats whereof are drie in Summer for the ſpace of thirtie ſtadia, there grow both ſweet Calamus, and alſo Squinantib or Iuncus Odoratus, [*i. the Sweet ruſh.*] For let vs ſpeak alſo in this place of the ſaid Scenanth: and although it be but a ruſh, and another booke is appointed for the treatiſe and hiſtorie of ſuch Hearbes, yet becauſe we haadle the Species that go to the compoſition of ſweet Perfumes, Pomanders, & ointments, I cannot paſſe it ouer. Well then, neither the one nor the other of theſe twaine, differ in ſight from the reſt of that kind. But Calamus is the better of the twaine, and hath a more pleaſant ſmell; for a man may wind the ſent of it preſently a great way off: beſides, it is ſofter in hand: and better is that which is leſſe brittle, and breaketh in long ſpils and ſhivers, rather than knappeth off like a Ra-diſh root. Within the pipe of this reed, there lieth a certaine matter like vnto a Spiders-web, which the Apothecaries call the flower of it, and that Calamus is counted better, which hath more in it of theſe floures. There is another mark alſo of good Calamus, namely, if it be black: and yet in ſome place, they make no reckoning of the blacke Calamus. But in a word, the ſhorter and thicker that the reed is, the better is the Calamus: and the ſame is more ſupple and pliable when a man would breake it. As for Calamus, it is worth eleuen deniers the pound: but Squinantib is ſold for fifteen. Moreouer, ſome ſay that there is a ſweet ruſh or Squinantib found in Campania. And now are we gone from thoſe lands that coaſt vpon the deep ocean, and come to thoſe that confront and lie vpon our Mediterranean ſeas.

CHAP. XXIII.

¶ Of *Hammoniacum, and Spagnum.*

TO begin withall, in the ſands of thoſe parts of Affrick, which lie vnder Æthiopia, there is a liquor diſtilleth, called in Greeke *Hammoniacum*, of *Hammon*, which ſigniſieth Sand, and the Oracle of *Iupiter Hammon*, for neare vnto the temple where the ſaid Oracle returns Answers, there grow certaine trees within the ſands, which they call Metopia, from which, *Hammoniacum* droppeth in manner of a roſin or gum: and of it there be two kinds: the one is named *Thrauſton*, like vnto the male or better Frankincenſe, and is moſt eſteemed: the other is fat and full of roſin, and they call it *Phyrama*. The manner to ſophiſticate *Hammoniacum* is with ſand, to make men beleeue that it grew among the ſands, and gathered it in the growing and coming vp: and therefore the good *Ammoniacum* is known when it is in leaſt morcels, and thoſe very cleare. The price of the beſt is after ſortie aſſes the pound.

Beneath theſe quarters, and within the prouince Cyrenaica, there is found a paſſing ſweet Moſſe, called *Sphagnos*, and of ſome Bryon [*aromaticum*]. Of all ſuch Moſſes, this is thought to be the beſt. Next vnto it, is that of Cyprus and in a third ranke, the moſſe which groweth in Phœnicia. There is ſuch Moſſe (by report) in Ægypt, and likewiſe in France: whereof, for my part, I make no doubt: for they be nothing elſe but the grey and whitith haire that we ſee hang to trees, and about the oke eſpecially, called commonly Moſſe; but only that theſe be ſweet and odoriferous. The cheife praiſe is of the whitest and lightest: a ſecond commendation belongs to that which is red: but the blacke is worth nothing, neither is any reckoning made of that which groweth in Iſlands and rockes, and (to conclude) all thoſe that ſmell not as Moſſe ſhould, but rather like to Dates, or the plants whereof they come.

CHAP. XXIII.

¶ Of *Cypus, Aſpalathus, and Marm.*

THere is a tree in Ægypt called *Cypus*, bearing leaues like to *Ziziphus* or the *Iuſube* tree, and a grain reſembling *Coriander* ſeed, with a white floure very pleaſant and ſweet. Theſe floures be ſteeped and ſodde in common oile: out of which is afterwards preſſed medicinale

cinnaire oile called *Cyprus*, or *Cyprinum*. A pound of it will cost five Roman deniers. The best comes from that tree which grows vpon the banks of that river *Nilus* about *Canopus*, which is the first mouth where it discharges it selfe into the sea. The second in goodnesse groweth about *Afcalon* a citie of *Iudæa*. The third in worth for smell and sweetnes, is had from the *Iste Cyprus*. Some take this *Cyprus* to be the plant, which in Italy is called *Ligustrum*. [i. *Prinet*.]

In the same tract groweth *Alpalathus*: a white thornie shrub it is, of the bignesse of a small tree, and beareth a floure resembling a rose. The root of it is in request for the making of sweet perfumes and ointments. There goes a common speech, That euery plant ouer which the rainbow is seen bent, will cast the same sent that *Alpalathus* doth: but if it chance that the rainbow settle ouer *Alpalathus*, then it wil yeeld a sweet fauor incomparable, and such as cannot be expressed. Some call it *Erycpestrum*, others *Scedrum*, simply. The good *Alpalathus* is red, or rather of a ferie colour, massie and heauie in hand, with a smell of *Castoreum*. It is sold for fiftene deniers the pound.

In *Ægypt* likewise there groweth *Marum*, but it is not so good as that of *Lydia*; for it hath greater leaues, and those spotted with sundry colours; whereas the other hath little short leaues, but they smell passing sweet.

CHAP. XXV.

¶ Of Baulme, as well the liquor thereof called *Opobalsamum*, as the wood named *Xylobalsamum*. Also of *Storax*, [*Calamita*] and *Galbanum*.

But the Baulme is that sweet and odoriferous liquor that goes beyond all others. The tree that yeelds it, Nature hath bestowed only vpon the land of *Iurie*. In old time it was not to be found but in two parkes or hortyards, belonging both to the kings of *Iurie*, whereof the one contained not aboute twentie jugera or acres, the other not so much. The Emperors *Vespasians*, both father and son, brought one of those little Balm trees to Rome, and shewed it openly to the whole citie. *Pompey* the Great likewise made proud boast and vaunted much, when hee said, That trees alfo by him were borne in triumph. Now this Balm tree serueth and doth homage, yea is tributarie with the whole nation where it groweth: but it is of a nature far different from that which both our Latine writers, & those also of forrain countries, haue described: for more like it is to a vine than a Myrtle. It is planted by slips and branches, as the vine: and of late bound and tied also like a young vine. It spreadeth and filleth the hills where it is set, after the manner of those vines in vineyards, which without any helpe of props, support and beare vpon themselves. Cut likewise it is, pruned, and cleaned, from those superfluous shoots that it puts out. It loveth to be well husbanded, digged about, raked, and trimmed: and with this ordering, grows apace, so as within three yerres it is fruitfull. It beares a leafe much like to Rue, and continueth with a Greene-head all the yeare long. At the sacking and destruction of *Ierusalem*, the Iewes in a furious rage both against their owne persons & their goods, would needs haue wreaked their anger and been reuenged on the poore Baulme trees, and haue spoiled them for euery: but the Romans on the other side stood in their defence, so as about this very plant, there was a cruell battell fought. But now these trees are vnited vnto the domaine of our Empire: and by order from the state, are set and maintained: so as neuer at any time before, were they more in number, or taller of growth: howbeit the highest exceeds not two cubits. And three sorts there be of them. The first hath small branches and small like haire: and whereupon it is called *Euthenistos*, [i. easie to be cut or lopt.] The second, rough and rugged to see to, bowing and bending forward, full of twigs and branches; sweeter also than the other to smell to, and this they name *Trachy* in Greeke, which is as much to say as Rough. The third they call *Eumeces*, because it is higher than the rest, and it hath besides a smooth barke: this in goodnesse is the second; and the first, named *Euthenistos*, is the worst. The fruit or seed that the Baulme tree beareth resembleth wine in tast, of colour red, and it is not without a certaine veine of fat. The worst part of the graine or fruit, is the lighter in weight, and the greener. It is clad with boughes and leaues thicker than the Myrtle. Now, for to draw the precious liquor out of it called Baulme, incision ought to be made in the barke, with glasse-knives, with sharp flint stones, or lancets of bones. For it may not abide, that any instrument of yron or Steele should come neare vnto the quicke; it dieth presently if you touch the heart of it therewith: and yet the same will suffer all

superfluous

A superfluous boughes and branches to be cut off and pruned. But he that launceth and maketh incision, must guide and gage his hand very artificially in the cutting, that he go not too deep, nor perre a jot farther than the barke. This feat being wrought, there issues out of the wound a juice or liquor, which they call *Opobalsamum*, of an excellent and surpassing sweet smell: but it comes forth by small drops: and as it thus weepes, the teares ought to be receiued in wooll, and then afterwards it is gathered and laid vp in small hornes. Out of which it is poured into earthen pots that neuer were occupied. This Baulme when it is fresh and new, may be likened to Oile, in thicknesse and consistence, but in colour it is white; in time it grows reddish, and hard withall, howbeit, cleare and transparent, that a man may see thorough it. During the wars that *Alexander* the Great waged in *Iurie*, it was ordinarie in a Summers day to gather one spoonefull of this liquor, and that was all that might be done. And when the season serued best for this purpose, and that it was counted a plentifull yere, the greater hort-yard or parke of the kings abovesaid, neuer yeeldeth in all aboute 6 gallons, and the lesse but one: sold it was commonly for the double weight in siluer. But at this day, euery tree that may beare it, and hath a larger veine to abide incision, is launced thrice in a summer: and after that, it is lopt and shed. And those cuttings are good chaffer, and sold very well to the merchant. For being thus lopped once in 5 yeares at the farthest, they yeeld in branches for wood only, eight hundred deniers. This is called *Xylobalsamum*, and it goes into odoriferous compositions: for in default of the right Baulme liquor, the Apothecaries make a shift to serue their turne with the wood alone, called *Xylobalsamum*. As for the very bark, it enters also into many medicinable concoctions: no manuell therefore if it carrie some price. But it is the liquor only that is so precious, the liquor it is which yeelds that most fragrant smell; then follows the grain or fruit in a second degree, the bark in a third, and the wood as it is last, for it hath least grace and credit. Of the wood, the best is that which in color resembles Box, and gives sweetest sent. But of the fruit, the greatest graines and the weightiest, be most esteemed; such bite at the tongues end, and be hote in the mouth. Howbeit, this is adulterated with the seed of * *Hypericum*, that comes from the citie *Petra*. But the deceit is soone detected and found, for that seed is not so big, so massie and full, nor so long as the true graine of Baulme: besides, it hath but a dull fauor or none at all, and in tast resembles pepper. The liquor is knowne to be right or good, if it be oileous and fat, thin, and therefore, somewhat inclining to red, and, if in rubbing betwene your fingers, it renders a pleasant saueur. The white Baulme may be ranged in a second place of goodnesse: the Greene and the thicke is not so good as it: but the blacke is worst. For Baulme as well as Oile, will be stale and worse for the age, if it be kept too long. This is moreover obserued, that in euery incision, that which flowed forth before the seed is ripe, is most precious.ouer and besides, this Baulme may be sophisticated with the owne seed: and hardly can this couenaunce be found out, but that it hath a bitterer tast than that which is naturall. For the good Baulme should be pleasant and delicate in the mouth, not soure nor tart at all: only in smell it should haue a harsh vertue. Corrupted it may be otherwise, with Oile of Roses, of *Cyperus*, of *Lentiske*, or *Masticke*, of *Ben*, of *Terebinth*, and *Myrtles*, also with *Rosin*, *Galbanum*, and *Cyprian waxe*, as occasion serues, and according as men list to sophisticate it. But the greatest knauerie of all, is to mingle gum among it: for being so handled, it will thicke and cleaue to the palme or inside of a mans hand, nay, it will sinke in water to the bottome, which are two chiefe properties of the right Baulme. For the very pure and perfect Baulme ought to cleaue too: but when it hath gum mingled among, stick it will likewise, but it will gather soon a brittle rouse or crust vpon it, which quickly cracks and breaks. Also this sophistication is found out by the tast. But in case there be any trumperie of Wax or *Rosin*, the fire will soone bewray it; for when it burnes, it will yeeld a more muddie and blacke flame. As for the sophistication made with honie, it may soon be knowne: for presently the flies will take it, and gather thicke about it.ouer and besides, put a drop of pure Baulme into warme water, it will settle to the bottom of the vessell, and congeale: but contrariwise, the counterfeit Baulme, will flote and swim aboue like oile. Again, if it haue *Galbanum* in it, yee shall see a white streak or circle round about it. To conclude, you may know in a word the right Baulme indeed: It will turne milke, and cruddle it: and it will not stain a cloth. In summe, there is no merchandise and commodity in the world, wherein there is practised more fraud and deceit, than in the traffique of Baulme. For a Sextare or wine quart of Baulme will cost a thousand Roman deniers by retails, which was bought for three hundred and no more at the hands

of the factors vnder the Emperour, who sold it first. Whereby a man may see how gainfull it is to increase this liquor by sophistications. As for the Baulme wood Xylolalsamum, the price of it is six deniers a pound.

Now it remains to speake of Storax [Calamita] coming out of that part of Syria, which about Phoenice, confluents and borders next to Iurie: and namely, about Gabala, Marathus and the mount Casius in Seleucia. The tree that yeldeth this gum or liquor, is also named Stryax, like vnto a Quince tree. It hath first a rawish austere tast, which afterwards turnes to be more sweet and pleasant. There is found within a resemblance of canes and reeds, full of this iuice. Howbeit, about the rising of the Dog star there be certain winged wormes settle vpon the said reeds, creepe in and eat away the marrow (as it were) which lay within: so as a man shall find nought left behind but a mouldy dust or rotten powder, good for nothing. Next to this Storax of Syria, great account is made of that which commeth out of Pisidia, from Sidon, Cypres, and Cilicia: but least reckoning is made of that which Candie sendeth vs. That which is brought from the mount Amanus in Syria, is good for the Physicians, but better for the perfumers and confectioners. From what nation soeuer it comes, the best Storax is that which is red, somewhat glutinous besides by reason of the fattines. The worst is that which hath no confidence and tenacitie, but crumbles like bran, and is so mouldie that it is ouergrowne with a white hoarie mosse. The pedlers and such like petie merchants can skill how to sophisticate this drug also, with the rosin of cedar and gum: otherwhiles also with honie, or bitter almonds. But all these deceits are known by the tast. The price of the best is 19 deniers a pound. There is a Storax besides which Pamphylia doth yeld, but drier it is, and nothing so full of moisture.

Moreouer, we haue from Syria out of the same mountain Amanus, another kind of gum called Galbanum, issuing out of an hearbe like Fennell-geant, which some call by the name of the said Rosin, others Strazontis. The best Galbanum, and which is most set by, is gristly and cleare withall, resembling Hammoniicum, without any spils of wood in it. For in that which the hucksters vse to deceiue chapsmen by mingling beanes with it, or the gum Sagapenum. The right Galbanum, if you burn it, chafeth away Serpents with the strong perfume or smoke thereof. It is sold for five deniers the pound: and is vsed only in Physicke for medicines.

CHAP. XXVI.

¶ Of Panaces, Spondylium, and Malobathrum.

The same perfumers seeke also into the same Syria for Panaces growing there, and yet it is to be found also about Psophis, a citie in Arcadia; and the fountaines from whence floweth the riuier Erymanthus: yea, and in Affricke besides, and Macedonie. This Panax is an hearbewith a tall stalk and round tuft in the head like Fennell, and yet it is a plant by it selfe, growing to the height of five cubits. At the first it putteth out foure leaues, and afterwards six. They be very large and round withall, lying vpon the ground: but toward the top they resemble the leaues of an Oliue: it beareth seed in the head hanging within certaine round tufts, as doth the Ferula. Out of the stalk of this hearb there is drawn a liquor by way of incision, made in harvest time: and likewise out of the root in Autumne, or the fall of the leaf. And this is called Popopanax. The best lookes white when it is gathered and congealed. The next in worth and weight, is that which is yellow. As for the blacke it is of no account. The better Popopanax costeth not above two Asses a pound.

Another hearbe there is of this Fennell kind, namely Spondylium, somewhat different from the former, but in leaues only, because they be lesse than those of Panax, and diuided after the manner of the Plane leaues. This Spondylium groweth no where but in cold and shadowie places. It carrieth a fruit or graine called also Spondylium, which resembleth the forme of Sil or Siler montanum, and serueth for no vse but Physick.

We are beholden moreouer to Syria for Malobathrum. This is a tree that beares leaues rolled vp round together, and seeming to the eie withered. Out of which there is drawne and pressed an Oile for perfumers to vse. Egypt is more fruitfull of this hearbe than Syria. And yet there comes a better kind thereof from India than both those countries. It is said, that it grows there in meeres and standing waters swimming aloft, after the manner of Fen-lentils or Duckes meat, more odoriferous than Saffron: etic lining to a blacke colour: rough in handling, & in tast

A *Sit* or brackish. The white is not so well esteemed. It will soon be mouldie when it is stale. The reddish thereof ought to resemble Nardus at the tongues end. The perfume or smell that * Malobathrum or the leafe yeeldeth when it is boiled in wine, passeth all others. It is strange and monstrous, which is observed in the price: for it hath risen from one denier to 300 a pound, whereas the Oile it selfe doth cost 60.

CHAP. XXVII.

¶ Of Oile Olive, made of Greene Olives, likewise of Grape Veriuce.

For the mixture and composition of ointments, the Oile of vnripe Olives and Veriuce is very good: and verily, made it is in two kinds, & after two sorts, to wit, of the Olive, and the Vine. Of the Olives, if yee would haue good, they ought to bee pressed whiles they be yet white; for if they turn colour once and be blackish, the worse is the Oyle or Veriuce that cometh thereof. And such kind of Olives be called Drupes, namely, before they be fully ripe and good to eat, and yet haue lost their colour. And herein is the difference, for that the oyle of this later sort is green, the other is white. Now as for grape Veriuce, it should be made of the Vine Phythia, or Amminca, and before the canicular daies, when as the grapes bee but new knit, and no bigger than the Cich-pease. The grapes (I say) must be gathered for this purpose, at the beginning before they change colour, & the iuice thereof ought then to be taken. Then should the Veriuce that comes from it, be sunned: and heed must be taken in any case, that no dewes by night do catch it, and therefore it would stand in covert. Now when this iuice or veriuce is gathered, it is put up in earthen pots: and otherwhiles kept also in vessels of copper. The best grape veriuce, is red, sharp, and foure in taste, dry withall and scyptick. A pound or a pinte of such veriuce is worth six deniers. It may be made in another sort: namely, by punning and stamping vnripe grapes in morters: drying it afterwards in the Sunne, and so made vp into certain rolls or trochisks.

CHAP. XXVIII.

¶ Of Bryon and Oenanthe: of the tree Elate, and Cinnamon Caryopis.

The mosse of the white Poplar or Asp, which is reputed as the grape thereof, is vsed likewise in these odoriferous and sweet compositions. The best grows about Cnidos or Caria, in thirly, dry, and rough places. A second sort is that which is found vpon the Cedar of Lycia. To this pertaineth Oenanthe, which is no more but the grapes of the wild vine called Labrusca. Gathered it is when it floureth, that is to say, when it smells best. It is dried in the shade vpon a linnen sheet lying vnder it, and then put vp into little barrels. The chiefe commeth from Parapotamia: the second from Antiochia and Laodicea in Syria: and a third sort from the mountaines of Media: and this is best for medicine. Some prefer before all these, that which groweth in the Island Cyprus. As for that which is made in Affricke, it is meet for Physitions onely, and is called Massaris. Now, the better euery is that which they gather from the white wild vine, than from the black. Moreouer, there is another tree which serues for perfumes: some call it Elate, and we Abies; i. the Fir, others Palma or the Date, and some againe Spathe. That which grows about the sands of Affricke, where *Iupiter Hammoni* temple standeth, is highly commended above the rest: and after it, that in Egypt. Next thereto is the Syrian. This tree is odoriferous when it grows in dry places only: it hath in it a certaine fat liquor or Rosin, and entrect into compositions of sweet ointments, for to correct and mitigate the other oile. In Syria there is a drug which they call Cinnamon Caryopis. A iuice or oyle this is, pressed out of a certain nut. This Cinnamon differeth much in some from the stickes of true Cinnamon: indeed about specified although in smell it commeth neare vnto it. A pound thereof is worth to be bought and sold 40 Asses, [i. 2 shil. 6. d.]



THE THIRTEENTH BOOK OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proeme.

Thus far forth the woods and Forrests are of estimation in regard of the pleasure they doe vnto vs for perfumes and sweet odors: and in truth, if we consider duly these aromaticall plants, admirable they be euerie one in their kinde, euen as they be weighed apart by themselves alone. But such is the riot and superfluitie of man, that being not content with that perfection of Nature shining in those plants and trees about rehearsed, he hath not ceased to mingle and compound them, and so of them all together for to make one confused smell: and thus were our sweet ointments and precious perfumes densified, whereof we purpose to write in this booke next insuing.

CHAP. I.

¶ Of Ointments, Perfumes, and their compositions: and when they came into knowledge first at Rome.

As touching the inuention of Ointments, it is not well knowne who was the first that deuised them. Certaine it is, that during the raigne of the Troianes, and whilest Ilium stood, men knew not what they meant: nay, they vsed not so much as Incense in Sacrifice and diuine seruice. The fume and smoke of the Cedar and the Citron trees onely, the old Troianes were acquainted with when they offered sacrifice: their fuming and walmng steame (more truly I may so terme it, than any odoriferous perfume) they vsed: which they might easily come by, since they were plants growing among them, and so familiar; now withstanding they had found out the iuice of Roses, wherwith yet they would not correct the foresaid stung fumes in those daies; for that also was knowne to be a commendable qualitie of Oile Rosate. But the truth is, The Persians and none but they ought to be reputed the inuention of precious perfumes and odoriferous ointments. For they to palliate and hide the ranke and stinking breath which cometh by their surfeit and exesse of meats and drinks, are forced to helpe themselves by some artificiall means, and therefore goe euermore all to be perfumed and greased with sweet ointments. And verily, so farre as euer I could finde by reading histories; the first prince that set such flore by costly perfumes, was King Darius, among whose coffers (after that Alexander the Great had defeated him and woon his campe) there was found with other roiall furniture of his, a fine casket full of perfumes and costly ointments. But afterwards they grew into so good credit euen among vs, that they were admitted into the ranke of the principal pleasures, the most commendable delights, and the honestest comforts of this life. And more than that, men proceeded so far, as therewith to honour the dead: as if by right that duty belonged to them. And therefore it shall not be amisse to discouurse of this theame more at large. Wherein I must aduertise the Reader by the way, that for the present I will but only name those ingredients that go into the composition of these ointments: such I mean as come not from herbs and trees, shrubs & plants; reseruing the treatise of their natures, vertues, and properties, vnto their due place.

First

A First and formost therefore, all perfumes took their names either of the country where they were compounded, or of the liquors that went to their making, or of the plants that yielded the simples and the drugs: or els of the causes and occasions proper and peculiar vnto them. And here it would be noted also principally, that the same ointments were not alwaies in like credit and estimation: but one robbed another of their honor and worth: in so much, as many times vpon sundry occasions, that which was lately in request and price, anon gaue place to a new and later inuention. At the first in antient time, the best ointments were thought to come from Delos; but afterwards, those that were brought out of Egypt: no talke then but of Mendesium, compounded at Mendes, a city there. And this varietie and alteration was not occasioned alwaies by the diuersity of composition and mixture, but otherwhiles by reason of good or bad drugs: for ye should haue the same kind of liquors and oiles better in this country for one purpose, and in that for another yea, and that which in some place was right and true, the same did degenerate and grow to a balstard nature, if you changed once the region: for a long time, the oile or ointment of Iris or the Floure-de-luce root made at Corinth, was in much request, and highly praised: but afterwards that of Cizicum won the name and credit, for the artificiall composition thereof. Semblably, the oile of Roses that came from Phaselus, was greatly called for: but in proceesse of time, Naples, Capua, and Præneste, stole that honor and glory from thence in that behalf. The ointment of Saffron, consected at Soli in Cilicia, imported for a good while and carried the praise alone: but soone after, that of Rhodes was euery mans money. The oile drawne out of the floures of the wild vine in Cyprus, bare the name once; but afterwards that of Egypt was preferred before it: & in the end the Adramyttians gained the credite and commendation from both places, for the perfect and absolute consfection thereof. The ointment made of Marjoram, gaue credit for a certain time to the Isle Cos: but not long after, their name was greater for another made of Quinces. As for the oile Cyprinum, which came of Cypros, the best was thought to be made in Cyprus: but afterwards there was a better supposed to be in Egypt: where the ointments Metopium and Mendesium all of a sudden were better accepted than all the rest. It was not long first, but that Phoenice put Egypt by that credit for those two singular compositions, & left the Egyptians the name alone for the foresaid oile Cyprinum. The Athenians were renowned for their antient Panathenaicum, & euer held their own. There was in old time a notable composition named Pardalium, made in Tharsus: but now the mixture & making thereof is quite lost. The ointment likewise Narcissinum, where the floure of the Daffodil was the Basis, is now forgotten, and no more made of it. The manner of compounding all these ointments, was twofold, to wit, either of the iuice & liquor, or els of the very substance & body of the simples. The former sort resemble rather the nature of oiles: but the later of ointments. And these the Greeks call either Stymmata, which yeeld the consistence & thicknes to ointments; or Hedysmata, which serue to aromatize and giue a compleat perfection to them. There is a third thing between these, requisite also to the full making of these sweet ointments, namely, the colour: although many take no regard at all of it. And for this purpose, the perfumers put into their compositions Cinnabaris [i. Vermillion] or Sanguis Draconis and Orcanet. The salt moreover that is strewed among, serueth to repress and correct the nature of the oile that mixteth all the ingredients besides. But those that haue the root of Orcanet in them, need no salt at all to be put in besides. As for Rosin and Gum, they are mingled with the rest to incorporate the drugs and spices, and to keep in the sweet odour thereof, which otherwise would evaporate and soon be lost. We are to prescibe by all likelyhood, that the first composition of ointments and soonest made, was of the odoriferous mosse Bryon, and the oile of Ben onely: wherof we haue written in the former booke. Then came in place a more compound ointment called Mendesium, and that receiued Rosin also to the foresaid oile of Ben. And more than that, another besides named Metopium. Now is this Metopium an oile compounded, which the Egyptians do presse out first of bitter Almonds, but they added thereto for to incorporate the better, grape Veriuiace; and the ingredients besides, were Cardamanum, Squinanth, sweet Calamus, Honey, Wine, Myrrhe, the graines or seeds of Baulme, Galbanum, Rosine, and Terpentine. One of the meanest and basest ointments now adates, and therefore thought to be as antient as any other, is that which consists of the oile of Myrris, sweet Calamus, Cyresse, and Cypros; [Squinanth] Lentiske, and the rind of the Pomegranat. But I would thinke verily, that Ointments came to be so divulged and common euery where abroad, by meanes of Roses most

of all: considering, that nothing grows more ripe in all places. Which was the cause, that the simple mixture of oil of Rose, without any sophistication besides, continued for a long time, hauing the addition of grape Veriuce, the floure of Roses, the Saffron, Cinnabaris, or Sang- Dragon, Calamus, Hony, Squinanth, the floure of salt called Sperma-ceti, or els in lieu thereof the root of Orcanet, & Wine. The oil or ointment of Saffron was after the same sort made, by putting thereto Cinnabaris, Orcanet, & wine. Semblably is to be said of the oil of the sweet lesse Maioran, wherein was mixed grape veriuce and sweet Calamus. This composition was singularly well made in Cyprus & at Mitylene, where great store of sweet *Majoran grows. There be other oiles likewise which are not of so good reckoning, namely, of Myrtles, & Bayes, which receive a mixture with the addition of Majoran, Lillies, Feni- greek, Myrrhe, Casia, Spikenard, Squinanth, & Cinnamon. Moreouer, of great quinces & the lesse called Mala Struthes, is made the oil Melinum, whereof we will speake hereafter: which the perfumers vse in their ointments, by putting thereto grape-veriuce, the oil of Cyprinum, the oil of Sesamine, Baulme, Squinanth, Casia, & Sothernwood. As touching the oil of *Lillies, which is the most subtil and thinnest of all other, it is made of Lillies, Ben, sweet Calamus, Hony, Cinnamon, Saffron, Myrrhe, & Aspalathus. Also the foresaid oil of Cyprinum is made of the floures of Cypros, of Veriuce, Cardamonum, Calamus, Aspalathus, & Sothernwood. Some there be that put moreouer vnto this oil, Myrrhe & Panace. The Sidonians are excellent at the making of this composition: & after them the Egyptians, so that they put not in Sefanium oil: for it wil last & keep good ful four yeres: & if it begin to lose the smell, it is quickened and refreshed again with Cinnamon. Now as touching the ointment of *Feni-greek, it is made of fresh oil, Cyperus, Calamus, Melior Feni-greece, Hony, oil of Quinces, the greater & the lesse sweet Maioram. This was of highest reputation in the daies of *Menander* the comical poet. But long after there succeeded into the same place of credit, the ointment Megalium: so called for the great glory that it caried: & this was compounded of the oil of Ben, of Baulm liquor, sweet Calamus, Squinanth, Balm-wood, Casia, & Rosin. In the making hereof, this property it had by it selfe, that all the while it was a compounding and seething, it should euer and anon be vented, & shifted out of one vessell into another, vntill the smell of it were gone. Which neuertheless it would recouer againe after it was once cold. Moreouer, some liquors there be of themselves, that without any other mixtures may serue and go for noble sweet ointments. Among which, that of Malabathrum is the chief: next to it the Flour-de-luce of Sclauonia, and the great sweet Maioram of Cyzicum. Howbeit, the Herbarists loue to be putting in some few spices besides, as well in the one as the other: but some make choise of one thing, some of another to intermingle withall. They that take delight to haue their mixtures most compound, adde vnto either of those abouenamed, Hony, the floure of salt, grape veriuce, the leaues of Agnus Castus, and Panace, & generally all that be strange and forraign, to make their compositions seem more wonderful. To the oil or ointment of Cinnamon, there goes the oil of Ben, Balm-wood, sweet Calamus, Squinanth, the *fruit or feedes of Balsamanum, Myrrh, & Hony Aromaticall. This is of all other the thickest ointment in substance. The price of this, is from 35 deniers to 300 the pound. As for the ointment Nardinum or Foliatum, it is composed of the oil of green Oliues or grape veriuce, of the oil of Ben, of Squinanth, Costus, Spikenard, Amomum, Myrrhe, and Baulme. Howbeit, this point would not be forgotten in the making of this composition, that it is a very easie matter to sophisticate it, by reason, that there be no fewer than nine herbs or simples which we haue declared, that come neere to the Indian Spikenard, and may be taken for it. Finally, to quicken and fortifie the best of all these ointments, there must no spare be made of Costus and Amomum, which of a-
 L other drugs pierce into the nostrils, and cast a strong smell. To make them thicker and more pleasant, there would be good store of Myrrhe put in: but to haue them better for the vse of Physicke, and more medicinable, it is good to season them wel with Saffron. As for Amomum, of it selfe alone it causeth all ointments where it comes to be most quicke and penetratiue: in-
 M fomuch as it causeth head-ache. Some for to spare cost, thinke it sufficient to aromatize onely these ointments with those drugs that are so deare and precious, either by strewing the powder, or sprinkling their liquors amongst, whereas the rest of the ingredients be boiled: but such compositions be nothing so effectuall, as when all be sodden and fermented together. As for Myrrhe it selfe, it maketh alone a precious ointment without any other oil. I meane that onely of the liquor Staë: for otherwise it is exceeding bitter and vnplesant. If it bee mingled with

A with the oil of Cyprinum, it looketh greene; if with the oil of Lillies, it will be fatty and vnGu-
 ous: if with Mendefium, blacke; with oil of Rose, white; with that of Myrrh, pale. Low hat were
 the inuentions in old time of aromatical and odoriferous ointments: loe what were the deu-
 is after wards of the shopkeepers and perfumers, to picke pence out of our purses, and to rob vs.
 It remains now to speake of the paragon indeed of all these pleasures and delights: of that I say
 wherein consisteth the very height and chiefe point of this argument in hand.

CHAP. II.

¶ Of the Ointment called Roiall: of diu Perfumes, Powders, and Pomanders: and how they be kept.

B The Roiall Ointment therefore (which the Partian kings vsed ordinarily, and of whome
 it took that name to be called Roiall) is tempered and composed in this manner: to wit,
 of Ben, Costus, Amomum, Cinnamon, the Arbut or Comarus, Cadamonum, Spikenard,
 Marum, Myrrhe, Casia, Storax Calamita, Ladanum, Baulme liquor, sweet Calamus, Squinanth
 of Syria, the floure of the wild vine, Malabathrum, Serichatum, Cyperus, Aspalathus, Panace
 Saffron, Cypros, Maioram the greater, clarified, or purified Hony, and Wine. As for Italy (the
 lady and conqueresse of all other nations) there grows nothing in it good to make ointments,
 no nor nothing throughout all Europe, vnlesse it be the Flour-de-luce root, and the Celticke
 Spikenard: for wine, Roses, Myrrle leaues, and oil, are well known to be common for all coun-
 tries.

As for those mixtures which be called Diapasmata, they consist of dry spices and drugs. Al-
 so the dregs or grounds of Ointments, they call Magma. Moreouer, this is to be obserued in the
 mixture and composition of those Ointments, that the drugs which be put in last, are euer the
 strongest and most effectuall.

Now as touching the keeping of Ointments, they are best preferred in pots or vessels of Ala-
 baster: and Odors are surest maintained and continue longest, being incorporate in oil: which
 the fatter that it is, serueth better for a continuance of their sent; as a man may see very well in
 the Oil of Almonds. And to say a truth, the older that an ointment is, and the longer ferment-
 ed, the more vertue it hath for the age. The sun is an enemy vnto them, and therefore they must
 D incorporate and vnite together in the shade, and be put vp in vessels of lead. The trial of them
 is taken with the back-part of the hand, for feare lest that the heat of the fleshe side within,
 should corrupt and marre them.

CHAP. III.

¶ Of the Superfluitie in expence at Rome, about these Ointments: and at what time they were first vsed there.

A T this day there is not in Rome any thing wherein men more exceed, than in these costly
 and precious ointments: and yet of all other, they are most superfluous and may be best
 spared. True it is, that much money is laid out vpon pearles and precious stones; but these
 E are in the nature of a domaine and inheritance, and fall to the next heire in succession. Again, they
 are rich and costly apparell stand vs in a great deale of coine; howbeit they are durable and last a
 long time: but Perfumes and ointments, are soone done and gone; they exhale and breath away
 quickly; they are momentanie, they serue but for the present, and die suddenly. The greatest
 matter in them, and their commendation is this. To cause a man (what businesse soeuer he hath
 in them) to cast his eie and looke after a gentlewoman as she passes by perfumed in the streets,
 otherwise to smell from her as she goes. This is all the good they do: and yet forsooth a pound
 and sendeth a smell from her as she goes. This is all the good they do: and yet forsooth a pound
 of this ware must cost 400 deniers: so deare is the pleasure that passes from our selues & goes to
 F another: for the party himselfe that carrieth the perfume about him, hath little or no delight at
 all in it: others they be that read the benefit and pleasure thereof. And yet among these odori-
 ferous compositions, there is choise and difference betweene one and another. We finde in the
 writings of *M. Cicero*, that he made more account of those ointments that suored of the earth,
 than those which smelled all strong of Saffron: as if he meant thereby, That in this excessive
 disorder and most corrupt enormitie of all others, a certaine moderation yet and sad delay
 would

would do well, and that a feverity (if I may so say) in the vice it self, were better to be liked. But some take delight especially in thick and grosse ointments, and are not content to be perfumed yea and bathed all over, unless they be belmeared, greased, and daubed also therewith. I have my selfe seen some of them to annoint the very soles of their feet with these precious Baulms. and (by report) it was *M. Otho* that first taught the Emperor *Nero* this wanton delicacie. But I would gladly know, and some good body tell me, I pray, how he could feele the smell thereof, and what delight or contentment it might yeeld from that part of the body? I have heard say besides, by some of the inward familiars and speciall favorits of this prince, That he commanded the very walls of his baines and stouves to be perfumed with precious ointments: and that *C. Caligula* the Emperor, caused the very vessels and seats wherein he vsed to sit when he bathed or swet in his hot house, to be in that manner annointed. And because this might not seeme to be a speciall pleasure fit for an Emperor onely, I knew one of *Neroes* seruants afterwards, who vsed so to do as well as his lord and master. But I enquire and manuell at nothing so much, as that this wanton delight should find the way and enter so far as into the mids of the camp. For wot ye what? I assure you the very standards and ensignes, the *Egles* (I say) and *Minotaur*s, so dusty as they be otherwise, so foule and ill-fauored, as being kept so long, and standing by vnoccupied, are wont forthwith to be annointed and perfumed vpon high and festiual daies. And, so god helpe me, I would I knew who it was that first brought vp this fashion and needlesse superfluitie: Certes, I would not defraud him of his due honor: I would (I say) recommend his name vnto all posterity. But thus it is (no doubt) and it cannot otherwise be; Our *Egles* and standers (bribed, hired, and corrupted with this so good a reward) haue therefore in recompense conquered the whole world. Vnder such colors and pretences (indeed) we decieve our selues, and cloak the vice and ryor of our times: and thus hauing for good a reason as this, to induce and draw vs on, we may not sticke to haue precious baulms vpon our heads, so it be vnder our saltats and mourours.

To say for certainty and precisely, when this enormity entered first into Rome and began there to raigne, I am not able. Sure it is, as appeareth vpon record, That after the subduing of *K. Antiochus* and the conquest of Asia, which was about the 365 years from the foundation of Rome, *P. Licinius Crassus*, and *L. Iulius Caesar* the Censors, published an edict, prohibiting and forbidding to sell any forreine or strange ointments within Rome: for so they termed these sweet mixtures and compositions. But (beleeue me) now adaies, some there be so wanton and delicate, that there is no wine or other drinke good with them, nor will go downe their throat, unless it be spiced and aromatized with these baulms: and so little passe they for the bitternesse of these odours and smells, that they are well content to waite and spend a deale thereof, without and within, behind and before, aboue and beneath, to enjoy the perfume thereof in all parts of the body. Well knowne it is, that *L. Plinius*, brother to *L. Plancus*, a man of great credit and authority, as hauing bin twice Consul, and Censor besides, being outlawed and proclaimed a banished person by the decree of the * *Triumvirs*, was discouered within a certaine caue at Salernum, where he lay close hidden and sure enough otherwise, by the very smell onely of a precious ointment that he had about him: and so by that meanes (besides the shame and disgrace that he receiued, thus to detect himselfe and be found of his enemies) the rigor of the act and arrest that passed against him, was executed and performed vpon his body. And who would euer pity such persons, & not iudge them worthy to come to so bad an end: but to conclude all this discourse, there is not a country in the world that yelds such plenty and varietie of drugges fit for these compositions, as Egypt: and next to it, Campaine in Italy may carry the name, for the store of roses there growing.

CHAP. III.

¶ Of Dates, and Date trees: their nature and severall kinds.

The land of Iury is as much renowned, or rather more, for the abundance of Palms or Date trees which it affordeth: the discourse whereof we will now enter into. True it is, and it cannot be denied verily, that there be of them found in Europe, and namely, eury where in Italy; but such, be all of them barren. Also in the maritime parts and sea-coasts of Spaine, ye shall meet with Palmes that beare Dates, but they are but rart and vnpleasant, and indeed neuer come

A come to their maturity and ripenesse. Those of Africk, I must needs say, bring forth a sweet and pleasant fruit, but it will not last, and soon is gone: whereas contrariwise, in the East parts, the people make wine thereof, and in some countries they vse it for bread, yea the very bruite and four-footed beasts do ordinarily feed of Dates: and therefore we hold and conclude, that Dates may be truly called forreine fruits, and their Trees, meer strangers in this part of the world: For in Italy a man shall not find so much as one Palm tree that comes vp of it selfe without it be first or planted by mans hand: neither in any other region whatsoever, unless it be in some hot climate: but to beare fruit ye shall neuer know it in any country, if the same be not extreme arid and scorching. Date trees loue a light and sandy ground, and specially (for the most part) if it stand much vpon a vein of Nature besides. And yet contented will they be to grow by the water side, where they may haue, as it were, one foot in the water, and be euer drinking of the yere long, especially in a drie season. Some thinke, that dung is as contrary and hurtfull vnto them, as to some kind of Citron trees in Assyria, unless it be mingled & tempered with water, or the trees planted neere to some running river. Moreover, many kinds there be of Date trees, and the first are smal, and exceed not the bignesse of shrubs: these in some parts are barren, and in others fruitful: they shute out little short branches round about, but very full of leaues, the which in most places serue in stead of parget & rough-cast, to defend walls of houses against the weather and drifts of rain. Howbeit a second sort there be that are much taller, and whole Forrests stand only vpon those trees: they put forth leaues sharp pointed, and they grow round about disposed one close vnto another in manner of comb-teeth: and these must of necessity be taken for wild, and no better: and they loue here and there as it falleth out, to be intermingled among those of the tamer kind, as if they tooke I wot not what pleasure in their company. The rest growing in the East parts, be freight, round, and tall, enuironed about the body with circles or housemade of the very barke it selfe, and they are of the thickenesse of a mans thumbe, for in order one aboue another like steps & greeces neere together, in such sort that the people of the East may easily climbe them, by the means of the said barke, which serueth not onely for a vestiment to the tree, but also for staires to him that would mount vp, so that it is a wonder to see how nimble a man will run vp to the top. These Date trees beare all their branches toward the head, and their fruit comes not forth among the leaues as in other trees, but hangerth to certaine branches and twigs of the owne between the boughes like clusters of grapes: inasmuch as it resembleth partly the nature of a grape, and partly of an apple. The leaues made in forme of a knife blade sharp toward the point, slit as it were and clouen in the edge along both sides, make shew at the first of certain faire and beautifull gems: and now they serue in stead of cords, and to bind vines together: also being diuided and sliced into flakes, they are good to plait for hats and light bongraces for the head, against the heat of the Sunne. Moreover, all learned men who are deeply studied in the secrets of Nature, be of opinion & do teach vs, That in all trees and plants, nay rather in all things that proceed out of the earth, quen in the very herbs, there are both sexes. Let it suffice therefore to haue spoken thus much once for all in this place. But there is no tree whatsoever, in which this distinction of male and female appeareth more, than in Palme trees: for the male putteth forth his bloome in the branch, but the female streweth no floure at all, but sprouteth and shooteth out buds in manner of a thorne: howbeit both in the one and the other, the pulp or flesh of the Date commeth first, and after it the woody stone within, which stands in stead of the grain and seed of the Date. And this appeares evidently by a good token, for that in the same branch there be found little young Dates without any such stone at all. Now is the said stone or kernell of the Date, in forme long, not so round and turned like a ball as that of the Olive. Besides, along the back it hath a cut or deep slit chamfered in (as it were) between two pillows, but in the mids of the belly on the other side, for the most part it hath a round specke, formed like a naill, whereat the root or chit beginneth first to put forth. Moreover, for the better planting of Dates, they set two together of their stones in a ranke with the bellies downward to the earth, and as many over their heads: for if one alone should come vp, it were not able to stand of it selfe, the root and young plant would be so feeble: but foure together so ioinc, clasp, and grow one to another, that they do well enough and are sufficient to beare themselves upright: the kernell or woody substance within the Date, is diuided from the fleshy pulp and meat thereof, by many white pellicles or thin skins between: neither lieth it close thereto, but hollow a good distance from it, saue that in the head it is fastened therunto by a thred or

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string:

string: and yet there be other pellicles that cleave fast and sticke to the substance of the Date within. The Date is a year in ripening. Howbeit in certaine places, as namely in Cyprus, the meat or fleshe pulp thereof is sweet and pleasant in taste, although it be not come to the full ripeness: [where also the leafe of the tree is broader, and the fruit rounder than the rest:] many then you must take heed not to eat and swallow down the very boddy substance of it, but spit it forth after you have wel chewed & sucked out the iuice thereof. Also they say, that in Arabia the dates haue but a faint & weak sweetness with them: & yet K. *Iuba* makes greatest account of those which the region of the Scenites in Arabia doth yeeld, where they be called *Dabula*: and he commends them for their delicate and pleasant taste, before all others. Moreover, it is constantly affirmed, That the females be naturally barren, and will not beare fruit without the company of the males among them to make them for to conceiue: yet grow they wil neuertheless and come vp of themselves, yea and become tall woods: and verily a man shall see many of the females stand about one male, bending and leaning in the head full kindly toward him, yeelding their branches that way as if they courted him for to win his loue. But contrariwise, he a grim fir and a coy, carries his head aloft, bears his bristled & rough arms vpright on high: and yet what with his very lookes, what with his breathing, and exhalations vpon them, or else with a certain dust that passes from him, he doth the part of an husband, in so much as all the females about him, conceiue and are fruitful with his only presence. It is said moreover, that if this male tree be cut downe, his wiues will afterwards become barren and beare no more Dates, as if they were widows. Finally, so euident is the copulation of these sexes in the Date trees, as if they were deified, also to make the females fruitful, by casting vpon them the blooms and down that the male bears, yea, and otherwhiles by strewing the powder which he yeelds vpon them. Besides the manner aboue said of setting date stones for increase, the trees may be replanted of the very truncheons of two cubits long, sliced and diuided from the very brain (as it were) of the green tree in the top, and so couched and interred, leaving only the head without the ground. Moreover, Date trees will take againe and liue, if either their slips be pluckt from the root, or their tendrils & small branches be set in the earth. As for the Assyrians, they make no more adoe, but if it be a moist soile, plash the very tree it selfe whole as it stands, and draw it along and so trench it within the ground, and thus it will take root and propagate: but such will neuer proue faire trees, but skrubbs only. And therefore they deuise certain Seminaries or Nource gardens of them, and no sooner be they of one years growth, but they transplant them; and so againe a second time when they be two years old: for these trees loue alone to be removed from one place to another. But whereas in other countries this transplantation is practised in the spring, the Assyrians attend the very mids and heat of Summer, and in the beginning of the Dog-dates vie to replant them. Moreover, in that countrey they neither cut off the heads, ne yet fired the branches of the yong plants with their hooks and bills, but rather bind vp their boughes, that they may shoot vp in height the better. Howbeit, when they are strong, they cut their branches, for to make the bodies burnish and waxe thicker, but yet in the lopping they leaue stumps of boughes halfe a foot long, to the very tree, which if they were cut off, in other places, would be the death of the mother stocke. And forasmuch as Date trees delight in a salt and nitrous soile (according as hath bin before said) the Assyrians therefore when they meet not with a ground of that nature, strew salt, not close about the roots, but somewhat farther off. In Syria and Egypt, there be some Date trees that diuide themselves and are forked in twaine, rising vp in two trunks or bodies. In Crete, they haue three, and some also fise. The nature of the Palme or Date tree, is to beare ordinarily when they be three years old: howbeit in Cyprus, Syria, and Egypt, it is foure years first ere fere bring fruit: yea and fise yeares before others begin: and such neuer exceed a mans heigh, neither haue they any stone or woody kernel within the Date so long as they be young, and tender: during which time they haue a pretty name for them, and call them Gelded Dates: and many kindes there be of these trees. As for those that be barren and fruitlesse, all Assyria and Persia throughout, vse them for timber to make quarters and pannels for feeling, wainefoot, and their fine ioyned workes. There be also of Date trees coppey woods, which they vse to fell and cut at certaine times: and euermore they put forth a yong spring from the old root and stock. These haue in the very head and top, a certain pleasant and sweet marrow, which they terme, The braine: and therefore those that loue to eat it, will cut and take it away, & yet the tree will liue neuertheless: a thing

A a thing that ye shall not lightly see in any others of that kinde. As for those Date trees which haue broader leaues, & the same soft and pliable, very good to make windings to bind vines and such like, they be named by the Greeks *Chamæropes*: great abundance there is of them in Crete, but more in Sicily. The wood of Date trees yeelds coles, that in the burning will keep fire long: howbeit a dead flame it is that they make, and nothing quicke. As touching those that be fruitfull, some beare Dates with a short stone or kernel within; others with a longer: these are more soft, those be harder. Some carry a kernel of a bony substance, like the Moon Croissant, which many are wont to polish with some tooth, and in a kind of religion are persuaded, that it is good against witchcraft, & is of vertue to procure womens loue. Some of these stones be clad and couered with many skins or pellicles, & others with fewer: ye shall haue in this Date, those tunicles thick & grosse, in that thinner and more fine. In sum, if a man would search into them particularly, hee should find fifty sundry sorts of Dates (aue one, with feuerall, strange, and barbarous names, and as many different wines made of them. But the principall and most excellent of all the rest, synamed *Rioall* Dates, for that they were reserued for the kings owne mouth of Persia, were knowne to grow nowhere els but in Babylon, and in one hortiard or park only of a Bagos (for so they vse to call their eunuchs or gelded persons, and such in times past reigned as KK. ouer them): and this park was euermore annexed to the crowne, and went with the royal Scepter, as a chiefe demaine of the Empire, and passed from one Prince to another by succession. But in the South-countries and meridional parts of the world, the Dates synamed *Saggi* are highly commended aboue all others, and most esteemed: and next to them, those which be called *Margarides*, are in account and good request: these be short, white, and round, more like in form to berries and little buttons, than to malt-fruit and Dates indeed: whereupon they took their name of Pearls, which they do resemble. It is reported, that in the city Chora, there is one of the trees that bears Dates like to Pearles; as also another that carries the Dates *Syagri*. I my selfe verily haue heard strange things of this kind of tree, and namely in regard of the bird Phoenix, which is supposed to haue taken that name of this Date tree [called in Greeke *φαινικ*] for it was assured to me, that the said bird died with that tree, and reuiued it selfe as the tree sprung againe. Now at the very time that I wrote this History of Natures works, I saw the same tree with fruit vpon it: the Date that it beares is great, hard, rough in handling, and in taste resembling some harsh and wild fruit, far different from other kinds of Dates: in such sort, as I wondered not at the name of *Syagros*, so like it tasted to the flesh and venison of a wild Bore in the Forrest, that comes to our board. In a fourth rank of Dates for goodness, are to be ranged those which they call *Sandalides*, for the resemblance of slippers or pantofles which they vsed in old time, named *Sandalio*. But in these daies they be as rare, as otherwise pleasant: so that within the bounds of Ethiopia (a wonderful matter) there be not aboue fise of them to be found. After the *Sandalides*, the Dates *Caryotæ* are in greatest request; for they be not only good to eat, but also a wine is made of their iuice, which they yeeld in great abundance: for all the people of the East make their speciall drink thereof. But true it is, that this kind of wine is hurtfull to the head, and therefore the Greeks gaue it that name. Now as these countries aboue said doe afford plenty of Date trees, and the same fruitful enough, so Iury alone carries the name and the praise for goodness of Dates; and not all Iury neither, but the territory about Iericho especially: and yet I must needs say, that there be gathered very good Dates in the vales of Iury, which be named *Archelais*, *Phaelis*, & *Liuias*. And these Dates of Iury, haue this special property aboue all others. To be full of a fat white liquor resembling milk, which hath a certaine taste of wine, and is exceeding sweet and pleasant withall like honey. The drier kind of these Dates be those that rooke name of one *Nicolas*, and were called *Nicola*: passing faire and great they be aboue all others by far, for foure of them laid in a rank one at the end of another, will make a cubit in length. Other Dates there be, not so faire to the eie as these *Caryotæ*, but surely for pleasant taste they may be well their sisters, like as they be called thereupon *Adelphides*. And a third kind there be of the same *Caryotæ*, which they commonly call *Pateon*: ouer full they are of liquor, and so drunke (as a man would say) with their own iuice, that they burst euene as they hang vpon the tree their mother, yeelding their wine in that manner of their owne accord, as if they were troden with mens feet in a wine-press, and thereupon they got that name. Another kind there is yet by it selfe, of those Dates that be drier than the rest, and they be very long and slender, yea, and otherwhiles not streight, but bending and crooked. As for those

which we dedicate to holy vses, and namely, when we sacrifice and offer oblations to the gods, the Jews (a nation about all others noted for contempt and mockery of the gods their worship and diuine seruice) do name Chydai: [i. vile and of no price.] The Dates in Egypt called Thebaides, as also those in Arabia, be all ouer-drie and withered, poore, leane, and thin. Parched as they be continually with the heat of the sun, a man would deem they were couered with a crust or shell, rather than with a skin or pill. Go further into Æthiopia, there they be so dry that they will soon crumble into powder like meale; and indeed they make thereof their bread, when it is tempered and wrought with water. These Dates be round, and bigger than a good apple; and they grow vpon a plant or shrub which spreads branches of a cubit length: and the Greeks call them Cycas. They hang 3 yeres before they be ripe: and euermore you shall see vpon the tree Dates ripe, when others come new forth green and small. As for the Dates of Thebais in high Egypt, so soon as they be gathered, presently they are put vp into barrels, whiles their naturall heat is in them; for if that coulde were not taken with them, it would soon exhale and vanish away: yet will they decay and rot, if they be not baked againe in the oven. As touching all other Dates, they seeme to be the common and vulgar sort, simply called Dates: and yet both the Syrians and K. Inba, hold them for junkers and banquetting dishes. For as in some part of Phœnicie, and Cilicia they be called Balani, [i. glandes or mast] so we at Rome terme them by the verie name of their own country Phœnicie, & by no other. And euen of them there be many kindes; and those different one from another, either in forme, for that some be round, others long, or els in colour, whiles there be of them red and black: in which regard, a man may obserue in them, (by report) as great variety as in figs: howbeit the whitest be the best and most commended. Great diuersity there is also among them in quantity and bignesse, in so much as yee shall haue many of them that want nothing of a cubit, and other for them againe no bigger than a beane. Now as touching the Dates that be barreled vp and kept, they be such only as come from salt and sandy grounds, as in Iury, and Cyrenaica in Africk: for those of Egypt, Cyprus, Syria, and Seleucia in Assyria, will not keepe, and therefore they must be spent out of hand: for which they take good order to franke their swine and feed other cattel fat with them. The true signe to know a faulty or a stale date, is this, If a certaine white specke or wart which sticke vpon it when it grew on the branch, be shed and fall off. Now to conclude this treatise, I thinke it not amisse to set downe for an example, what did betide the souldiers that were of Alexanders army, who with eating of green dates new ripe, were choked, and so died. In the Gedrosians country, this accident befell vnto them, onely by the nature of the fruit it selfe, eat they of it as moderately as they coulde: but in other parts, their greedy and ouerliberal feeding vpon them, was their bane. For surely new dates as they come from the tree, are so exceeding pleasant and delicious, that a man can hardly forbear and make an end in good time, before hee surfeit of them and catch a shrewd turne.

CHAP. V.

Of the trees in Syria.

Besides the Date tree, there be other excellent trees in Syria proper vnto that country: for in the first place there are a kind of Nuts there growing, commonly knowne and called Pisticks. And (by report) this vertue they haue, either taken as meat, or drunke in drink. To resist the stinging and biting of serpents. Also out drye * Figs, and a lesser sort than they named Coptana come from thence. Also the Damascene pruncks, growing vpon the mount Damascus, as also the fruit Sebesten are the commodities of Syria: how fouer they are now familiar here with vs in Italy. As for Sebesten, there be wines in Egypt made thereof. Also the Phœnicians haue a lesse kind of Cedars much like to the Iuniper: and two sorts there be thereof, the Lycian and the Phœnician, which differ in the leafe: for that which hath an hard, sharpe, and prickie leafe, is called Oxycedrus: full of branches it is besides, and so knurrie, that it is troublesome to the hand. As for the other Cedar, it hath an excellent smell. Both twaine doe beare a fruit of the bignesse of Myrtle leaues, and sweet in tast. Moreover, of the greater Cedar there be two kindes: that which doth blossome, beareth no fruit: and contrariwise, that which is fruitfull, sheweth no blossome: and in this, the new fruit cometh forth alwaies before the old of the former yere be ripe and gathered: also the seed of it is like that of the Cypresse. Some call this Cedar,

A Cedar, Cedrelate: whereof cometh the best Rosin. And the timber of it is euerslasting, wherefore in old time they were wont to make the images of the gods, of this wood, as it appears by the statue of Apollo Sotanius, made of Cedar wood, brought from Seleucia. In Arcadia there is a tree like the Cedar, but in Phrygia it is called a shrub.

CHAP. VI.

Of the Terebinth.

Moreouer, in Syria grows the Terebinth or Terpentine tree. The male beareth no fruit. The females be of two sorts: the one carrieth red grains of the bignesse of Lentils, the other bring forth pale seeds. This fruit of the Terebinth ripeneth with grapes. Vpon the mountaine Ida neere Troas, it is as big as a beane, more pleasant to smell to, and glutinous like Rosin, if a man handle it. But in Macedonie the tree is but short, and spreadeth branches like a shrub: contrariwise, about Damascus in Syria; it is very great and tall. The timber of it is verie tough, continueth a long time, and neuer shrinks for age: of colour blacke, but passing faire, and resplendent withall. It puts forth floures in clusters after the manner of the Olive, but it is red: and the leaues otherwise grow very thick. It beareth also certaine small cods or bladders full of a gummy and clammy moisture (which also issueth out of the barke) and out of those bladders there come forth little flies like gnats.

Also the male Rhus or Sumach of Syria doth beare fruit: whereas the female is barren. This plant putteth forth leaues like to the Elme, but that they be somewhat longer, and full of hairs, and euermore the steles of the leaues grow contrary one against the other. As for the branches, they be slender and short, good for curriers to dresse their skins and make leather white. The feed or graine thereof resembles Lentils: and being ripe, it is red, and commonly with the grape. The which is called Rhus or Sumach, euen as the tree: a necessarie fruit for many medicines.

CHAP. VII.

Of the Egyptian and Cyprian Sycomores or Fig-trees.

In Egypt likewise there be found many trees which grow not elfewhere: and principally the Sycomore, which therupon is called the Egyptian Fig-tree. The tree for leafe, bignesse, and barke, is like vnto the Mulberry tree. It beareth fruit hot vpon the branches, but out of the very body of the stocke. And the same is a passing sweet fig, but without any grains at all within. It doth increase in exceeding great abundance, so it be scraped and clawed only with yron hooks: for otherwise it will not ripen. Come then foure daies after to gather it, you shall not misse but find it ripe, and new coming vp in the place. Thus in euery summer you shall haue a 7 fold increase, and the same in much plenty, yielding also great abundance of milke. And say that you do not vse the scraping or paring aboue named, yet shal you be sure of 4 fruits in a summer, one vnder another, but so as the new will driue the old before it, and cause it to shed: and fall before it be well ripe, for want of that handling before said. The timber of this tree is counted right good and profitable, hauing one singular property by it self. No soother is it hewed, but presently it is cast into standing pooles, and there drowned. This is the only way to season, and dry it. At the first (I say) it sinks downe to the bottom: but afterwards it begins to float aboue: & without all question the water which vseth to wet and drench all other trees, sotheth and fackes forth the sap and humidity of this wood. Now when it begins once to swim aloft, it is a signe that it hath the full seasoning, and is good for building and other workes.

Like to this Sycomore in some sort is a certaine tree in Candy, which is called the Cyprian fig-tree. For this likewise beareth fruit coming out at the very stock, or the maine armes and boughes thereof, when they be growne to any thicknesse: but it puts forth certain spris without any leaues at all, and they resemble roots. Now this tree is in body much like to the Poplar, but in leafe, to the Elm. It beareth fruit foure times a yere, and as often doth it bud. But the green figs will hang so still and neuer ripen, vntill they be scarified and skiced so, as the milky substance may run out. The fruit within, is made like a fig, and hath the same pleasant tast: but it is no bigger than the Sorus.

CHAP. VIII.

¶ Of the cod or fruit called *Ceraunia Siliqua* [*i. Carob.*]

THere is a kind of coddie shrub which the Ionians call *Ceraunia*, not vnlike to the Egyptian *Sycamore* above said, for the fruit thereof comes likewise forth of the stock, but yet is contained within a cod: and thereupon it is that some haue called it the Egyptian fig tree, but they are grossly deceiued: for it doth not so much as grow in Egypt, but in Syria and Ionia, also about Gnidos and Rhodes. The tree hath green leaues all the yeare long: it putteth forth white floures of a strong smell. From the root there spring shoots, and about the foot of the tree it bears many yong imps, which are such suckers of the sap, that they draw away all the goodnesse, and rob the parts aboue of their nourishment, whereby the head is yellow, and nothing fresh and green, but fadeth in the top. The fruit of the former yere is gathered about the rising of the Dog-star the yeare following: and then presently it brings forth new. Afterwards commeth a blossome, and the fruit thrieth and waxeth all Winter, vntill the occultation of Arcturus.

CHAP. IX.

¶ Of a tree in Egypt called *Perfica*: of *Cucum*, and the Egyptian thorne *Acacia*.

THere is found in Egypt a certain kind of tree by it self called *Perfica*, like to a pear tree, but that it is green all the yeare long, and sheds not the leaues: also it beareth fruit continually; for gather to day, and ye shall find new to morrow growing forth of the place. The fruit is ripe about the Canicular daies when the Etesian winds do blow. It resembleth a Pear, saue that it is longer, and inclosed with a shel or green husk like the Almond: but where the Almond hath an hard shel without as a nut, this is soft in manner of a pear or plum, containing the stone within: and yet it differs somewhat both in thornesse and tenderesse. The fruit is very good meat: and although the exceeding sweetnesse thereof entice one to eat still and not giue ouer, yet no danger of surfeit ensueth thereupon. As touching the wood of this tree, it is durable, hard, strong, and black withall, in which respects it resembles the Lote-wood very much. They vied in times past to make images and statues thereof, nor so beautifull altogether, nor of so fine a grain as some others; but for the timber thereof, which continueth sure and lasteth long, as that of the tree which we called *Balanus*. Much whereof grows curbed and crooked, and therefore is good only for shipwrights to make keels. But contrariwise, the wood of *Cucus* is highly esteemed.

A tree this is not vnlike to the Date tree, in this regard especially, that the leaues be good to twist and plaie for mats & such like: herein is the difference, for that it spreads into arms and great boughs. The fruit which it beareth is as much as a man may well hold in his hand, of colour reddish or deep shining yellow, and the taste very commendable; for it yeelds a iuice between foure and sweet, and therefore wholesome for the stomacke. The woody stone within is great, massie, and exceeding hard, whereof they vse to turne for curtain rings and saile pullies. In the belly of it there lieth a sweet kernell whiles it is fresh and new. But if it be once dried it passeth for hardnesse, in so much as no tooth can chew it, vnlesse it be steeped in some liqueur many daies before. As for the wood and timber of the tree, it hath a most dainty, fine, and curled grain, in which regard the Persians set much store by it.

In the same country there grows a thorny plant which the inhabitants make great account of: especially that which is in colour black, because it will abide the water, & netter nor rot putrifie in it, and therefore excellent good for the ribs & sides of ships. As for the white thorn of this kind it will soon corrupt and be rotten. But both the one and the other is full of prickles euen to the very leaues. The seed lies in certain cods or husks, wherewith curriers vse to dresse their leather in stead of galls. The floure this thorne beareth is beautifull, whereof folke make faire garlands and chaplets; profitable also besides and good for many medicines. Out of the bark of this tree there comes a gum likewise. But the chiefest commoditie and profit that it yeeldeth is this, Cut it down when you please, it wil be a big tree againe within three yerres. It groweth

groweth plentifully about Thebes in Egypt, among Oakes, Oliues, & Peach trees, for the space of 300 stadia from Nilus: where the whole tract is all woods and forestes, and nathelesse well watered with fountains and springs among.

CHAP. X.

¶ Of the Egyptian Plum tree, and other trees about Memphis.

IN those quarters groweth likewise the Egyptian Plum tree, not vnlike to the thorn of *Acacia* next before described: and this brings forth a fruit as big as a Medler, which neuer is ripe before mid-winter, when the daies be at shortest. The tree is alwaies greene, and sheds not the leaues all the yeare long. Within the fruit aforesaid there is a big stone; but the substance otherwise and body thereof is naturally so good, and so pleteous withall, that the inhabitants make their hauest of it. When they haue gathered it, they clesne it, stampe it, make it vp into balls and lumps, which they preferue and keepe. The country about Memphis in times past was all woody and full of forestes, wherein grew so mighty big trees, that 3 men were not able to fathom them about. But among the rest there was one by it selfe most wonderful, not for any strange fruit that it bare, nor yet for any singular vse and employment; but in regard of an accident obserued in it, and a special qualitie that it had. For the tree (torsooth) outwardly resembled a thorn, but the leaues are made directly like feathers. Let a man shake the boughs neuer so little, shed they will and fall incontinently, but soon after there spring vp new in their steads.

CHAP. XI.

¶ Sundry sorts of Gum. Also of the Cane Papyrus.

THe best gum in all mens iudgement is that which comes of the Egyptian thorne *Acacia*, hauing veins within of checker work, or trailed like wormes, of colour greenish, & cleere withall, without any pieces of the bark intermingled among, and sticking to the teeth as a man cheweth it. A pound thereof is commonly sold at Rome for three deniers. The gumme that issueth from the bitter Almond trees and Cherry trees is not so good: but the wort of all is that which the Plum tree yeeldeth. There runneth likewise out of vines a certaine gum that is passing good for the bleache, scabs, and scalls in little children. And otherwhiles ye shall find some in Olive trees, and that cureth the tooth-ache. Moreouer, the Elme growing vpon *Corycus*, a mountain in Cilicia, and the Iuniper there, haue a gum, but good for nothing. As for that of the Elme it breeds gnats there. Moreouer, of *Sarcocolla* [a tree so called] there distilleth a gum of that name, which Painters and Physitions both haue great vse of. Like it is to *Manna Thuris*, which is the powder of Incense: and therefore the white is better than the red. Sold it is at the same price that the other aboue named. And thus much concerning the trees growing vpon mountains and plains.

Now albeit we are not entred yet into the treatise of those plants and shrubs which grow either in marsh grounds or by riuers sides; yet before we depart out of Egypt we must not forget the plant *Papyrus*, but describe the nature thereof, considering, that all ciuilitie of this our life, the memoriall and immortalitie also of men after death, consisteth specially in paper which is made thereof. *M. Varro* writes, that the first inuention of making paper was deuised vpon the conquest of Egypt, atchieued by *Alexander the Great*, at what time as he founded the city. *Alexandria* in Egypt, where such paper was first made. For before that time there was no use at all (saith he) of paper, but men vsed to write in Date tree leaues first, and afterwards in the dibes and banks of certain trees. Then in proceesse of time they began to register publique records in rolls and sheets of lead: and soon after priuate persons set downe their owne affaires in linnen books, or els in tables couered with wax. For we read in *Homer*, that before the war of *Troy* vnder tables were vsed. And at the very time when he wrote, Egypt was not all contiaint & firr land, as now it is. For, as he saith, all the *Papyrus* whereof paper is made, grew in that branch of arm of Nilus, which answereth onely to the tract or territorie within the iurisdiction *Sebennytis*: but afterward that part also was laid to Egypt, by the shelles and banks made with the inundation of the said riuer. For, from the Island *Pharos*, which now ioineth close vnto *Alexandria*,

folded and enwrapped round, and those they call Panthering, [*i. Panther or Luzerne tables.*] There be againe, whereof the worke in wainscot resembleth the waues of the sea: and the better grace they haue, and be more esteemed, if they make a shew of the eyes appearing in Peacocks tailed. Next in account and request to these abouenamed, be those that are frilled with small spots standing thicke, as if many graines were gathered together, which they call threupon (of some resemblance of little bees or flies) *Apiata*, as if they were speckled & filed with their dung. But be the worke and graine of the wood what it will, the color makes all. Here at Rome we set most store by that colour which is like to mead or honied wine, shining and glittering in the veins of the wood. After which considerations, men regard much the breadth & largenes of the whole plank, standing of one entire peece which makes the table. Some take a great pleasure to see in one Citron board many of those faults which be incident to trees, to wit, the Lignum, for so they call the simple, plain, and bare wood and timber without any branched or curled graine at all, without a shining iustre and glittering glosse, without worke to be seen in any order digested, or at the most (if any be) representing the leaues of a Plane tree. Againe, the resemblance either of the vein or color of a kind of Oke wood called *Ilex*. Moreover, the ribs and chinks which timber is subject vnto, by reason principally of wind and Suns heat: or else hairie streakes that be like to such cliffs and creuisses. Afterwards men were delighted with a kind of Lamprey veine trauesing and running ouer a black crosse way: and with an outward skin or coat marked with speckes or knottie knurs, like to Poppie heads: and generally with a color all ouer, comming neere to black, or at leastwise bespotted with sundrie colors. The Barbarians for to season the wood of this Citron tree, vse to burie the green boards or planks thereof within the ground, and besmeare them all ouer with wax. But the artificers and workmen do put them for 7 daies within heaps of corne, and stay 7 daies more ere they be wrought: & a wonder it is incredible, how much of the weight the wood loses by this means. Moreover, of late daies we haue found the experience by shipwracks, that this timber also wil by nothing in the world be sooner dried nor hardened to last a long time without corruption, than by seawater. Howbeit, to maintaine these tables best, and to cause them for to shine bright, the way is to rub them with a drie hand, especially after that a man is newly come out of the baines or hot house. Neither catch they any harme or staine, if wine be spilt thereupon: so as it should seeme they were naturally made for wine. To conclude, a tree this is seruing for the ornaments of this life, and the trim furniture of our house, few or none like to it: and therefore me thinks I do not amisse to continue the discourse thereof somewhat longer than ordinary.

CHAP. XVI.

¶ Of the tree *Thya*, what it is.

WELL knowne vnto *Homer* was this tree, which in Greeke is named *oſm*, but some call it *Thya*: for among other daintie odors and sweet woods, he reports, That dame *Circæ* (whom he would haue to be reputed as a goddesse) burnt of this *Thyon*. And therefore much deceived are they, who vnderstand by that word *Thyon*, perfumes and odoriferous spice, considering that in one and the very same verse, the Poet maketh mention of the Cedar and Larch tree together with *Thyon*, whereby it appeareth plaine, that he spake of trees onely. *Theophrastus*, who after the daies of *Alexander* the Great, was the first that wrote the historie of those acts which happened about the 440 years from the foundation of Rome, gaue great honour euen then to this Tree, and reported, That all carpenters worke of temples in old time, was made of the same, as of a timber euertlasting, and which in rouses would continue without all putrefaction and corruption whatsoeuer. Moreover, he writeth, That the wood of the root is so curled and frilled, as none more; and that of no timber besides are more curious peeces of works made, nor of greater price. Ouer and besides, he saith, That the fairest and goodliest trees of this kind, doe grow about the temple of *Iupiter Hammon*: and some of them also within the country *Cyrenæica* toward the inland parts. But all this while not a word of the fore said costly tables speaks he in his whole history: and verily before that of *Cicero*s, there is no record in writers of any such tables: whereby it appeareth, that they be come vp but of late daies. Another tree there is likewise of that name, bearing an apple or fruit, which some cannot abide for the strong fauor and bitterness withall, others again like and loue it as well. This tree also beautifieth and setteth out the house, but I purpose not to bestow many more words thereof.

CHAP.

CHAP. XVII.

¶ Of the tree *Lotos*.

IN the same coast of Africk which regards Italy there growes *Lotos*, which they call *Celtis*. A notable tree it is and of speciall marke: found also here among vs now in Italy, but together with the soile it hath changed the nature. The fairest and goodliest of them be about the *Syrtes* and the *Nasamones*: they be as big and tall as Pearre trees, howsoever *Nepos Cornelius* saith they are but little and low. The leaues be thicke cut and indented: otherwise they are like to those of the *Ilex* or Holme tree. Many forts there be of the *Lote* tree, and those for the most part according to their diuers and several fruits. Howbeit ordinarily the fruit is as big as a bean, and of yellow colour as *Saffron*; yet before it is full ripe it changeth into sundry colors like as grapes do. It growes thicke among the branches of the tree in manner of myrtle berries, and not like to the cherries in Italy: and in those plants aboue named the meat thereof is so sweet and pleasant, that it hath giuen the name both to a nation and countrey, in so much as the people be called *Lotophagi*: and withall, so welcome be all strangers thither, and so well contented with their entertainment, that they forget their owne native soile, for the loue they haue to this fruit when they haue once taken to it. By report, whoe eats thereof is free from the diseases of the belly. This fruit is counted the better which hath no kernell within: for there is another kind wherein the said kernell seems as hard as a bone. Moreover, out of this fruit there is prest a wine like to *Mede*, which the aboue named *Nepos* saith will not last above ten daies: who reporteth besides, that the inhabitants do stamp the berries thereof with wheat or frumentie into a paste, and so put it vp in great barrels or such like vessels for the prouision of their food. Moreover, we haue heard say that whole armies passing to and fro through Africke, haue fed thereof and had no other meat: the wood is blacke of colour, and much sought for it is to make pipes and sifes: of the root whereof shafts of daggers and kniues be made, besides other pretty deuises of small vse. Thus much as touching the nature of the *Lote* tree in those parts: for there is an herb also of that name [called *Melilote*.] As for the Egyptian *Lotos* it is a plant bearing a stalk, and growes in the marshes of Egypt: for when the waters of *Nilus* are fallen which drencht the countrey, this plant comes vp in the flat and waterie leuell along the riuer, with a stem like to the [Egyptian] bean, with leaues thrust close and thicke together, howbeit shorter and lesse than those of the bean: in the top of which stalk it bears fruit in manner of an head, for cuts and chamfers and euery thing els like those of Poppy: within which be contained certain grains or seeds resembling Millet. The inhabitants of that countrey do pile together in heaps those heads, and to let them putrifie: afterwards they separate them, wash them faire, and when they be dry, stamp and mold them, and thereof make their bread. A strange and wonderful thing it is that is reported besides, namely, That when the Sun goes down, those heads close vp and be covered with leaues, and remaine shut vntill the morning, at what time they open againe: and thus continue this course vntill they be ripe, and that the floure which is white doth fall off of selfe.

CHAP. XVIII.

¶ Of the very stalk, scape or stem, and root of *Lotos*.

IT is said moreover as touching this Egyptian *Lotos*, That in *Euphrates* the very head of the stalk together with the floure, vntill the evening to be plunged & drowned vnder the water vntill midnight, and so deep to settle toward the bottom, that a man with his hand cannot reach thereto, nor find any part of it: but after that time it begins to rise by little and little, and by Sun-rising appeares aboue water and opens the floure, and still mounteth higher and higher a good height from the water. This *Lotos* hath a root as big as a Quince, covered with a black rinde or barke much like to the huske of a Chestnut. The substance within is white and delectable to eat, but more pleasant being either sodden in water, or roasted vnder embers, than raw: and Hogs will feed fat with nothing better, than with the pills and parings of this root.

CHAP.

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CHAP. XXI.

¶ Of *Paliurus*, the *Pomegranate*, and the *floure of the Pomegranat*.

THe region of Cyrenaica in Africk makes more account of their *Paliurus* than of *Lotus*: for the *Paliurus* shoots forth more twigs and branches, and hath a redder fruit than the *Lotus*: besides, the fruit and the kernell be eaten apart; and in truth pleasant it is of it selfe alone, but more pleasant with wine; yea, and the iuice thereof giueth a better tast to wine if it be put into it. The inland parts of Africk, as far as to the *Garamants* and the deserts, be wel planted with *Date* trees faire and great, bearing goodly and pleasant dates, and those especialy in that quarter of *Barbary* which lieth about the temple of *Iupiter Hammon*. But the territory of *Carthage* challengeth to it selfe the *Punicke* apple: some call it the *Pomegranat*, & they haue made feuerall kinds thereof, calling that *Appyrion*, which hath no woody or hard kernell within: and indeed these *pomegranats* are naturally more white, the graines within more pleasant, and diuided with membranes and pellicles between, nothing so bitter as the other: for in both sorts they be framed and fashioned within like to hony combs. As for those *pomegranats* which haue such kernells or stones, there be fise kinds of them, to wit, sweet, soure, temperat between both, stypctick or austere, and tastful of wine. But the *pomegranats* of *Samos* and *Egypt* haue this difference one from another, That some haue red floures on the head, and are therefore called *Erythrocoma*: others are white, and such they name *Leucocoma*. The rind of soure *pomegranats* is better for tanners and curriers to dresse their leather with, than of the rest. The floure is called *Balistum*, both medicinable and also good for to dyt cloth: and hereof cometh the colour of *Punicus* [i. a light red, or a bay] taking the name of the apple *Punicke*, or *Pomegranat*.

CHAP. XX.

¶ Of the *Shrubs in Asia and Greece*.

IN Asia & Greece there grow certain shrubs, to wit, *Epipactis*, which some call *Elleborine*, with small leaues, which being taken in drink are good against poyson, like as the leaues of *Erice* [i. Heath or Lings] with the stinging of serpents.

CHAP. XXI.

¶ Of *Thimelaa* or *Chamelaa*, *Tragacanth*: of *Tragium* or *Scorpio*, Also of *Myrice*, *Brya*, and *Galla*.

THe shrub or bush which beares the graine *Gnidium*, that some call *Linum*, is after some writers named *Thymelaa*, according to others *Chamelaa*: there be that call it *Pyrosachne*: some again giue it the name of *Cneston*, others of *Cneoros*. This plant howsoever it be named resembleth the wild *Oliue*, but that the leaues be narrower and gummy to the teeth, if a man bite them: for height and biggnesse answerable to the myrtle: the seed thereof is for colour and fashion like to the grain of wheat, and serueth only for physicke.

As touching the plant *Tragium*, it is to be found in the Isle *Candy* onely. It hath a resemblance of the *Terebinth*, like as the seed also, which, by report, is most excellent and effectfull to heale wounds made by darts and arrowes. The same Isle hath the bush *Tragacanth* growing in it, the root whereof is like to that of *Bedegnar*: and the same *Tragacanth* is much preferred before that which grows either in *Media* or *Achaia*. A pound of *Tragacanth* is worth 30 deniers Roman. As for the plant *Tragium* or *Scorpio*, it grows likewise in *Asia*. A kind of bramble or briar it is without any leaues, bearing fruit of berries much like to red grapes, whereof there is good vse in physicke.

Toucing *Myrice*, which others call *Tamarix*, and *Achaia* *Brya* the wilde; Italy brings it forth: this speciall propertie it hath, that the same kind thereof only, namely that which grows in gardens, beareth fruit like galls. In *Syria* & *Egypt* this groweth plenteously, and the wood thereof we call *Vnhappy*: but the more vnluckie and vnfortunate be those of *Greece*: for there groweth *Ostrya*, named also *Ostrya*, a solitary tree about watery and moist rocks, hauing bark

and

A and branches like to the *Ash*, but *Peare-tree* leaues, saue that they be somewhat longer & thicker, with long cuts or lines wrinkled and riuiled thoroughout: and the seed in forme and color is like to barley. The wood of it is hard and strong, and some say if any peece thereof be brought into an house where a woman is in trauaile of child-birth, she shall haue difficult labour, and hardly be deliuered: and whosoever lyeth sicke there, shall die a miserable death.

CHAP. XXII.

¶ Of *Eunymus* or the *Spindle tree of Adrachne*, *Congyria*, and *Thapsia*.

IN the Island *Lesbos*, there groweth a tree named *Eunymus*, no better nor more lucky than *Ostrya* before said. Much unlike it is not the *Pomegranat* tree. As for the leafe that it beares, it is of a middle size between that of the *Pomegranat* and the *Bay*; otherwise for shape and softnesse, it resembles that of the *Pomegranat*: the floure is whiter; the smell and tast whereof is pestiferous and menaces present death: it beares coods like to *Sesama*, within which be grains or seeds foure square and thick, but deadly vnto all creatures that eat them. The leafe also is as venomous as the graine, yet otherwise hiles there ensues thereof a fluxe and gurrie of the belly, which saues their life, or else there were no way but one.

Alexander Cornelius called that tree *Eone*, whereof the famous ship *Argo* was made; and like it was (by his saying) to the *Oke* that carries *Misseito*, the timber whereof neither water will putrifie, nor fire consume no more than the *Misseito* it selfe. But so far as euer I could learn, no man knew that tree but himselfe.

As for the tree *Adrachne*, all the Greeks in manner take *Porcellaine* for it; whereas indeed *Porcellaine* is an hearb, called in Greeke *Andrachne*, so as they differ in one letter but *Adrachne* is a tree of the wild Forrests growing vpon mountaines, and neuer in the plaines beneath, resembling the *Arbut* or *Strawberrie* tree, saue that the leaues be lesse, and neuer fade nor fall. And for the bark, rough and rugged indeed it is not, but a man would say it were frozen and all an yce round about, to vnpleasant it is to the eye.

Like in leafe to *Adrachne*, is the tree *Congyria*, but otherwise it is lesse and lower. This propertie it hath, To lose the fruit wholly, together with the soft downe that it beareth, which they call *Pappusa*, a qualitie that no other tree hath, beside it. Like to *Adrachne* also is *Apharce*, and beares fruit twice in one yeare, as well as it. The former is ripe, when the grape begins to bud and bloom; the latter, in the beginning of winter: but what manner of fruit this should be, I haue not found written.

As touching the *Ferula*, it will not be amisse to speake thereof among forrain plants, yea and to range it among trees: for (as hereafter we will distinguish in the diuision of trees) some plants are of this nature, To slow al the wood they haue, where the bark should be; that is to say, without forth: and where the heart of the wood ought to be, they haue nought but a light and spongyous pith, as the *Elder*, or else nothing at all, as *Canes* and *Reeds*. But to come to our *Ferula* above named, it grows in hot countries beyond-sea, with a stalk or stem full of knotty joints.

Two kinds be knowne of them: for that which the Greeks call *Marthex*, groweth tall, but *Nartecia* is alwayes low. The leaues that put forth at the joints, be euer biggest toward the ground: this plant otherwise is of the nature of *Dill*, and the fruit is not unlike. There is not a plant in the world lighter than it for the bigne: sleek being case therefore to weld and carrie the stem thereof, as old men in stead of staves, to rest vpon. The seed of this *Ferula* or *Fennell-giant*, some haue called *Thapsia*, but herein they be deceived, for that *Thapsia* doubtlesse is a kind of *Ferula* by it selfe, leaues like *Fennel*, with an hollow stalk, and neuer exceeds in height the length of a walking staffe: the seed is like to that of the *Ferula*, and the root white cut in, there issues forth milke, stampe it, on shall see it yeld plenty of iuice. Neither is the bark or the root rejected and cast aside, although both in the milke, and the iuice, be very poisons: for surely the root is hurtfull to them that dig it vp, and if neuer so little of the aire thereof breath vpon them (so venomous it is) their bodies will bolne and swell, their faces will be all ouerunn with a wild fire: to prevent which mischises, they are forced to anoint their bodies with a cerot. Howbeit as dangerous as they be, Physicians make vse thereof in the cure of many inward diseases, so they be wel corrected and tempered with other safe medicines. In like maner they say, that the iuice

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of Thapfia is singular good for the shedding and falling of the haire, also against the blacke & blow marks remaining after stripes: as if Nature furnished not Physicians sufficiently with other wholsom remedies, but that needs they must haue recourse to such poisonous and mischievous medicines. But this is the cast of them all, to pretend such colourable excuses, for their handling of poisons: and so impudent and shamelesse are some besides, that they bask not to auow the vse of them, bearing vs in hand, that Physick cannot stand without poison. The Thapfia in Affricke is the strongest of all others. Some vse it to flit or cut the stem about haruest, and in the very root make an hollow trough to receiue the iuice that runs downe, and when it is dried, they take it away. Others againe do bruise and stamp in a mortar, both leafe, stalke, and root, and when the iuice that is pressed there-from, is thoroughly dried in the Sun, they reduce the same into certain Trochisques. *Nero Cesar* the Emperour in the beginning of his Empire, gaue great credit to Thapfia: for vsing (as he did) to be a night-walker, and to make many ryots and much misrule in the darke, he met otherwhiles with those that would so beat him, as that he carried away the marks black and blew in his face: but (as he was subtil & desirous to auoid the speech of the people) an ointment he had made of Thapfia, Frankincense, and Waxe, wherewith hee would anoint his face, and by the next morning come abroad with a cleare skin, and no such marks to be seene; to the great astonishment of all that saw him. To conclude, the Ferula maketh the best matches to keep fire, by all mens confession: and those in Ægypt excell the rest, for that purpose.

CHAP. XXIII.

¶ Of *Capparis*, or *Cynobatos*, or *Opheostaphyle*: and of *Sari*.

Likewise in Ægypt growes *Capparis*, a shrub of a harder and more woody substance: well knowne for the seed and fruit that it carries, commonly eaten with meats, and for the most part the Capres and the stalke are plucked and gathered together. The outlandish Capres (not growing in Ægypt) we must take good heed of and beware: for those of Arabia be pestilentiall and venomous: they of Affricke be hurtfull to the gums, and principally the Marmarica are enemies to the matrice, and breed ventrosities. The Apulian Capres cause vomit, and make lubricitie both of stomack and belly. Some call the shrub *Cynobatos*: others *Opheostaphyle*. Moreouer, there is a plant of shrubs kind, called *Sari*, it growes along Nilus, almost two cubits high, it beareth an inch in thicknesse, and hath leaues like to Papyr-reed, and men do chew and eat it after the same manner. As touching the root, it is singular good for Smiths cole to burne in their forges, so hard it is and durable.

CHAP. XXIIII.

¶ Of the Royall thorn of Babylon: and of *Cytisus*.

I May not ouer-passe that plant, which about Babylon is sowed vpon Thornes only: for otherwise it knowes not how to liue no more than Mistletoe, but on trees: howbeit this plant that I speake of, is sowed vpon that Thorne alone called the Royall Thorne. And a strange thing it is of this plant, that it springs and grows the very same day that it is set or sowed. Now the seasonable time of sowing it, is at the very rising of the Dog-star: and notwithstanding the Suns heat, right quickly ouerspreads it the tree or shrub, on which it is cast. The Babylonians vse to aromatize their wine therewith; and for that purpose are they so careful to sow it. But the foresaid Thorne tree groweth also about the long walls of Athens [reaching from the tower to the haueu Pyraeum.]

Moreouer, a shrub there is, called *Cytisus*, highly commended and wondrous much praised by *Aristomachus* the Athenian, for feeding of sheep, as also for fattening of swine, when it is dried and he promiseth and assureth, That an acre of land sowed therewith, although it be none of the best soile; but of a meane and ordinarie rent, will yeeld yearly [communibus annis] 2000 Sesterces to the master. As great profit commeth thereby, as of the pulse like Vetches, called *Ervum*: but sooner will a beast be satisfied therewith, and a very little thereof will serue to fat the same: in so much as if horses or any such labouring cattell may meet with that prouender, they will not care for barley: neither is there any other grasse or fodders, that yeeldeth more or better milke,

A milke than it: but that which passeth all, the pasturage of *Cytisus*, preferueth sheep, goats, and such like cattell, sound and safe from all diseases whatsoeuer.ouer and besides, if a nourie want milke, *Aristomachus* prescribes her to take *Cytisus* dry, and seeth it in water, and so to drink it in wine, wherby not onely her milke will come againe in great plenty, but the babe that sucketh thereof will be the stronger and taller. He giueth it also to hens and pullein whiles it is green; or steeped and wet if it chance to be dry. *Democritus* and *Aristomachus* both do promise and assure vs, that Bees will neuer miscarry nor faile, if they may meet with *Cytisus* to feed vpon. And yet there is not a thing of lesse charge to maintaine than it. Sowne it is commonly in the spring with barley, I mean the seed thereof, as they mean to sow Leekes or Porret feed: onely they set plants and slips thereof from the stalke, in Autumne before mid-winter. If the seed be sowne, it ought to be steeped and moistned before: yea, and if there fall no store of raine after it is in the ground, it had need to be watered. As for the plants when they be a cubit long, are replanted in a trench a foot deepe. Otherwhiles the tender quicker-fets are planted about the Equinoxes, to wit, in mid-March and mid-September. In three yeares they come to their full growth. They vse to cut it downe in the Spring-Equinox, when it hath done flourishing: a worke that a very lad or old woman may do, euen such as can skill of nothing besides. This *Cytisus* is in outward hew white: and in one word, if a man would portray the likenes thereof, it resembleth for all the world a shrub of Trifolice or Clauer-grasse, with narrower leaues. Being thus gathered, it is euer giuen to beasts once in three daies. And in Winter, that which is dried ought to be wet before they haue it. Ten pound of it is a sufficient foddering for an horse: and for other small cattell according to the proportion. But by the way this is not to be omitted, that it is good to set garlicke and sow onions feed between the rewes and ranks of *Cytisus* where it groweth, and they will thrive more plentifully. This shrub was first discovered and knowne in the Island *Cythus*, and from thence translated into all the other Cyclades: and soon after brought to all the cities of Greece; whereupon followed great increase of milke, & plenty of cheefe. I maruel therefore very much that it is so season and rare in Italy: and a plant it is that feareth neither heate nor cold, no iniury of haile, nor offence by snow; and as *Hymenius* saith, it is not afraid so much as of the enemy; the reason is, because the wood thereof is nothing beautiful to the eye.

CHAP. XXV.

¶ Of shrubs and trees growing in our Mediterranean sea, in the red sea, and in the Indian sea.

E Ven the very sea affordeth shrubs and trees: but those of the Mediterranean sea be far lesse than of other seas; for the red sea and all the Levant Ocean is full of woods. That which the Greeks call *scum*, hath no other name in any language. As for *Alga*, is a word appropriate rather to weeds or sea-herbs, called *Reik*: but this *Phycos* is a very shrub, bearing broad leaues of a green colour, which some call *Pracon*, others *Zoster*. A second kind there is of *Phycos*, with an hairy leafe like to Fennell, and groweth vpon rocks. As for the former called *Zoster*, it is found among the shelles and shallow waters not far from the shore: both the one and the other appeare in the Spring, and be gone in Autumne. That of this kind which groweth in Candy about rocks, is much vsed of dyers for the purple color: and namely on the North part of that Island, and among sponges, for that is most commendable for this purpose. A third sort there is like vnto the grasse called *Catch*, or *Dem-de-chien*, hauing a root full of ioynts, and a stalk likewise in manner of a reed.

Another shrub there is in that sea called *Bryon*, with leaues like Lettice, saue onely they be more wrinkled and crumpled together: but this growes more inward and farther into the sea. Mary in the deep groweth both *Fir* and *Oke* to the height of a cubit. Among these branches, the Cockles and Muskles, and such like shell fishes do settle and sticke vnto them. As for that kind of sea-Oke, some say it is of good vse to dye wooll withall: as also that it beareth Mast or Acorns in the deep: the knowledge of all which we come vnto by those that diue into the bottom of the sea, and such as haue suffered shipwracke and escaped. Moreouer, by report, there be other exceeding great trees, and namely about *Sycione*. As for the sea vine it groweth euerie where: but the fig tree there is without leaues, & hath a red bark. There be also date trees found

in the sea, but as little as shrubs. Without *Hercules* pillars, or the streight of Gebraltar, there are shrubs to be seen, bearing leaues resembling leek blades: and others leaved like to the bay tree, or to the herbe Thyme: and both kinds being cast vp a land turne into the pumish stone. But in the East parts it is a wonderous matter to thinke, that so soon as euer a man is past Coprus, he shall find nothing to grow in all the wilde nesse, but only a kind of thorne or thistle, called the thirty or dry thorne, and the same but here and there in very few places: whereas in the red sea whole woods do liue, and namely of Baies and Oliues bearing their berries: also when it raineth, certaine Multhromes, which no sooner be caught with the Suns heat, but they turne into the pumish stone. As touching the shrubs there growing, they be commonly three cubits high, and those so full of sea dogs and curres, that a man shall hardly looke out of the ship in safety, for that many times they will take hold of the very ores and assaile them. The fouldiers of *Alexander* the Great who sailed into India made report, That the branches and leaues of the sea trees, so long as they were vnder the water looked green, but when they be taken forth, presently dried with the heate of the Sun, and became salt. Also, that about the shore they found stony rushes and reeds, like vnto naturall rushes indeed. Moreover, in the deep sea they light on certain little trees branched and full of boughes, in colour of an Ox horne, but the head or top of them was red: handle them in your hand they were as brittle as glasse: put them into the fire they would be red hot like iron: quench them again, they returned to their former colour. In the same tract there be some tides so high, that the sea ouerfloweth and couereth the Woods growing within the Islands, although there be trees in them taller than the highest Planes or Poplars. And those trees beare leaues like Lawrell, and floures for smel and colour resembling the Violet. Their berries be like to Oliues, and those of a pleasant and sweet fauor, which they bring forth in the Autumne: and their leaues neuer shed but continue all the yeare long. The lower sort of these trees the flood couereth all and whole: but the greatest beare vp their heads about the sea, whereunto the mariners do fasten and tie their vessels at a high water: but when it is ebbe, at the very root. Moreover, by their saying, they saw other trees in the same sea, with leaues euer green vpon them, carying a fruit like to Lupines. King *Iuba* reports, That about the Islands of the Troglodites, there groweth a shrub within the sea, called *Isidos Plocamos*, [*i. i. s. haire*] resembling coral, and void of leaues: cut a branch of it from the stock, it becomes hard, changeth colour, and is black: if it fall it is so tender that it will breake like glasse. He speaks moreover of another called *Charito-blepharon*, which is of great force in amarcious matters to procure loue: and thereof women (quoth he) make them carkanets and pendant ornaments to hang about their necks. To conclude, he affirms that this shrub hath a certain intelligence when a man would take hold of it, and therefore waxeth as hard as an horne, inso much as it is able to turne the edge of a knife or bill, that vnneth or hardly it may be cut: but in case it be intrapped and drawne vp with cords without any edge toole, it presently turneth to be a stone.



THE

A



B THE FOVRTEENTH BOOK OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIVS
SECVNDVS.

Containing the Treatise of Trees bearing Fruit.

The Proeme.

C **T**Hus far forth haue we discoursed of all forreine and strange trees in a manner, such I meane as know not how to liue in any other places, nor where they naturally first did grow, and which willingly go not into other countries, nor can abide their soile or aire. Goodleaues may I now haue to write of Plants and Trees common to all lands, and namely, to ours of Italy, which may seeme to be the very Hort-yard and naturall garden that bare them all. This onely would I aduertise the Readers and Learners to remember, that for this present we purpose to describe their natures and vertues onely, leauing out the manner of husbandrie that belongeth vnto them: albeit in their tending and keeping appeareth the greatest part of their properties, and of Natures workes. And verily, I cannot chuse but maruell still and neuer giue ouer, how it comes to passe, that the remembrance, yea, and the verie names of some trees which ancient Writers haue deliuered in their bookes, should be quite gone and abolished. For who would not thinke, that our life should ere this haue gained much by the Maiestie of the Roman Empire, haue discovered all things by the meanes of the commerce we haue had with the vniuersall world, by the traffick, negotiation, and societie I say that we haue entered into during the blessed time of peace which we haue enjoyed? considering that by such trade and intercourse, all things heretofore vnknewne, might haue come to light. And yet for all this, few or none (believe me) there are who haue attained to the knowledge of many matters which the old writers in times past haue taught and put in writing. Whereby we may easily see, that our ancestors were either far more carefull and industrious, or in their industrie more happie and fortunate. Considering withall, that about two hundred yeares past *Hesiodus* (who liued in the very infancy of Learning and good letters) began his worke of Agriculture, and set downe rules and precepts for husbandmen to follow. After whose good example, many others hauing travelled and taken like paines, yet haue passed now to greater labour. For by this means we are not onely to search into the best inuentions of later writers, but also to those of ancient time which are forgotten and couered with obscurity, through the supine negligence and generall idleness of all mankind. And what reasons may a man alledge of this drowynesse, that that which hath lulled the world asleepe? the cause in good faith of all, is this: and no other. Wee are ready to forgoe all good customes of old, and to embrace novelities and change of fashions: mens minds now, daies are enuied and occupied about new fangles, and their thoughts be rolling; they wander and roue at random; their heads be euer running; and no arts and professions are now set by and in request, but such as bring pence into our purses. Heretofore whilest Kings and Potentates contained themselves within the Dominion of their owne Nations, and were not so ambitious as now they bee, no maruell if their wits and spirits kept still at home: and so for want of wealth and riches of Fortune, were forced to employ and exercise the gifts of their minde: in such sort as an infinite number of Princes were honoured and renowned for their singular knowledge and learning. Yea, they were more braue in port, and carriad a goodlier shew in the World for their skill in Liberall Sciences, than others with all their pomp or riches: being fully perswaded and assured, that the way to attaine vnto immortallitie and everlasting Fame, was by literature and not by

by great possessions and large seignories. And therefore as learning was much honoured and rewarded in those daies, so arts & sciences tending to the common good of this life daily increased. But afterwards when the way was once made to enlarge their territories further in the world, when princes and states began to make conquests and grow rich and mighty, the posterity felt the smart and losse thereby. Then began men to chuse a Senator for his wealth, to make a judge for his riches, and the election of a civill magistrate and martiall Captain, to have an eye and regard only to goods, and substance, to land and lining: when riches and revenues were the chiefe and onely ornaments that made men seeme wise, just, politicke, and valiant. Since time that childlike estate was a point looked into, and advanced men into high place of authoritie and power, procuring them many favorites in hope of succession, since time I say that every man arrived and reached at the readiest means of greatest lucre and gain, setting their whole mind, and repulsing their full content and joy in laying land to land, and heaping together possessions, downe went the most precious things of this life, and lost their reputation: all those liberal arts which took their name of liberty and freedom (the fouraine good in this world which were meet for princes, nobles, gentlemen and persons of great state) forwent that prerogative, and fell a contrarie way, yea, and ran quite to wracke and ruine: so as in stead of covetise, flattery, and servitude be the onely waies to arise and thrive by, whiles some practise it one way, some another, by flattering, admiring, courting, crouching, and adoring: and all to gather good and get money. This is the onely way that they shoot at, this is the end and accomplishment of all their wishes, prayers, and desires. In so much, as we may perceive every where, how men of high spirit and great conceits are given rather to honor the virtues and imperfections of others, than to make the best of their owne virtues and commendable parts. And therefore we may full truly say, that life indeed is dead, voluptuousnesse and Pleasure alone is all, yea and beginneth to beare all the sway. Never thelesse, for all these enormities and hindrances, give over will not I to search into those things that be perished and venter for so often, how small and base fewer some of them be, no more than I was affrighted in that regard, from the treatise and discourse of living creatures. Notwithstanding that I see Virgil (a most excellent Poet) for that cause only forbore to write of gardens and hort, yea, because he would not enter into such petty matters: and of those so important things that be handled, he gathered only the principall flowers, and put them downe in writing. Who alsest that he hath made mention of no more than 15 sorts of grapes, three kind of Olives, and as many of Peares, and sitting of the Citrons and Limons, but he said a word of any apples, yet in this one thing happy and fortunate hee was, For that his worke is highly esteemed, and no imputation of negligence charged upon him. But where shall we begin this treatise of ours? What defereth the chiefe and principall place, but the vine? in which respect Italy hath the name for the very sovereignty of Vine-yards: in so much, that therein alone, if there were nothing els, it may well seeme to surpass all other lands, even those that bring forth odouriferous spices and aromaticall drugs. And yet to say a truth, there is no smell so pleasant, whatsoeuer, that out-goeth Vines when they be in their fresh and flourishing time.

CHAP. I.

Of Vines, their nature and manner of bearing.



Vines in old time were by good reason for their bignesse reckoned among trees. For in Populonia, a citie of Tuscan, we see a statue of Iupiter made of the wood of one entire Vine, and yet continued it hath a world of yeares vncorrupt, and without worme. Likewise at Massiles there is a great standing cup or boll to be seene of Vine-wood. At Metapontum there stood a temple of Iane, bearing upon pillars of Vine wood. And even at this day there is a ladder or paire of staires up to the temple of Diana in Ephesus, framed of one Vine-tree, brought (by report) out of the Island Cypres, for there indeed vines grow to an exceeding bignesse. And to speake a truth, there is no wood more durable and lasting than is the vine. Howbeit, for my part I would thinke that these singular pieces of worke before-named, were made of wild and savage Vines: for that these our tame and gentle vines here planted among vs, are by cutting and pruning every yeare kept downe: so as all their whole strength is either drawne without-forth into branches, or els downward into the root for to put out new shoots euer fresh out of the ground: and regard is only had of the fruit and iuice that they do yeeld diuers waies, according to the temperature of the aire & climat, or the nature of the soile wherein they be planted. In the countrey of Campaine about Capua, they be set at the roots of Poplars, and (as it were) wedded

A vnto them: and so being suffered to wind and claife about them as their husbands, yea, & with their wanton armes or tendrils to climbe aloft, and with their joints to run vp their boughes, they reach vp to their head, yea, and ouertop them: in so much as the grape-gatherer in time of Vintage, puts in a claufe in the covenants of his bargain when he is hired, that in case his foot should faile him, and he breake his neck, his master who lets him a worke should giue order for his funerall fire and tombe at his owne proper cost and charges. And in truth Vines will grow infinitely: and vnpoppable it is to part them, or rather to pluck them from the trees which they be ioined and coupled vnto. Valerianus Cornelius making mention of many properties and singularities of a vine, thought this among the rest worthe of speciall note and remembrance, that one onely stocke of a vine was sufficient to compasse and inuiron round about a good ferme house or country messuage, with the branches & pliable shoots that it did put forth. At Rome there is one vine growing within the cloistures of the Portches and galleries built by the Emperresse Livia, which running and trailing vpon an open frame of railes, couereth and shadoweth the ouert allies made for to walke in: and the same Vine yeeldeth one yeare with another a dozen Amphores of good new wine yearly. An ordinarie thing it is, that Vines will surmount any Elms where soeuer, be they neuer so tall and lofty. It is reported, that Cynae the embassador of K. Pyrrhus, wondering at the vines of Aricia, for that they grew and mounted so high; would needs taste of the wine that came of their grapes: & finding it to be hard and tart, merrily scoffed and said, That by good right and justice they had done well, to hang the mother that bare such vnplesant wine vpon so high a gibbet. Beyond the riuier Po in Italy, there is a tree growing which the peasants there call Rambotinus, & by another name * Opulus; it puts forth great armes and boughes, and those spread abroad and beare a round compasse; howbeit, the vines that be planted at the root of these trees, do fill and cover the laid boughes: for yee shall haue the very old crooked branches of the Vine (bare as they be and naked of leaues) to wind about the armes, and cawle in manner of a serpent or dragon along the broader and flatter base of the boughes, and then the new shoots, top-twigs, and tendrils, will diuide themselves to the vtmost branches and shoots of the tree, that they will lodge and clog herewithall. These vines again grow sometime no taller than the ordinary height of a man of middle stature, and being supported and vnderpropped with stakes and forks, cleaue and cling thick together, and in this order fill whole vineyards. Others also there be, which with their excessive creeping vpon frames, with their ouergrowne branches, and some artificiall help of the masters hand, spread so far every way, that they take vp wide and large courts, ouerspreading not only the sides, but the very middle thereof. See what sundry sorts of vines euen Italy alone is able to afford! But in some provinces without Italy, yee shall see a vine stand of it selfe without any prop or stay at all, gathering and drawing in her boughs and branches together: thus indeed the growth but short, howbeit so close couched and trussed round, that the thickeesse makes amends for: all. And yet otherwhiles in some coasts the winds are so big and boisterous, that they will not suffer them thus to grow vpright; as namely in Affricke, and Languedoe, the prouince of Narbon Vines being thus debarred to run vp in height, resting vpon their owne joints and branches, and euer like to those that be laid along whiles they are a trimming, by deluding about their roots, and pruning their superfluous branches, traile and creepe too and fro along the ground, as weeds and herbes; and all the way as they spread, suck the humor of the earth into their grapes: by which means, no maruell it is, if in the inland parts of Affricke there be found some of those grapes bigger than pretty babes. And in no countrie are the grapes of a thicker skin than those of Affricke, wherupon it may well be, that they took the name * Duracina (i. hauing hard skins.) For infinite sorts there be of grapes, according to the difference obserued in their quantity and bignesse, in their colour, taste, stones, or kernels: and yet more fill, in regard of the diuers wines made of them. In one place they are of a fresh and bright purple, in another, of a glittering, incarnate, and rosate colour: and yet shall haue them of a faire and lively Greene. As for the white and black grapes, they be common every where. The grapes Bumastili haue their name, for that they be so swelling and round, like strutting paps or dugs. The Date-grapes Daetylai, are long, both grape and kernel, fashioned in manner of fingers. Moreover, Nature seems to take her pleasure and make good sport in some kind of them; where ye shall find among them some that be exceeding great, others again that be as small, howbeit pleasant they are, and as sweet as the rest: and such be called Leptorrhag vs. Some last all winter long, being knit in bunches together, & so hangd aloft

* Quasi duracina.

arch-wife in manner of a vault: with others they make no more adoe, but put them vp presently as they come from the Vine, into earthen pots, whiles they be fresh & in their vigor, and afterwards they are bestowed, well lapped ouer with their leaves, in other greater vessels ouer them; and for to keep them better, they be stopp close with kernels heaped and piled vpon, sweating round about, to condite and preserve them in their naturall heat. Others they suffer to be dried in the smoke of smiths forges, whereby they get the very tast of infused wine, so ordered in the smoke. And in truth, *Tiberius Caesar* the Emperor gaue especial credit & name by his example to such grapes dried in the furnaces of Africk. For before his time, the Rhetian grapes & those that came out of the territory of Verona, were ordinarily serued vp to the table first, for the very best. As for the Raisins called *Passa*, they took that name in Latine of their patience to endure their drying & confiture. Some grapes there be that are condite in Must or new wine, and so they drinke their owne liquor wherein they lie soaking, without any other seething. Others againe are boiled in Must aboute, untill they lose their owne verdure, and become sweet and pleasant. Moreover, yee shall see old grapes hang still vpon the Vine their mother, untill new come: but within glasses, that a man may see them easily through: howbeit, to make them to last and continue in their full strength, as well those which be preferred in barrels, tuns, and such like vessels asore said, they vse the helpe of pitch or tarre, which they poure vpon the stalks that the cluster hangs to, and wherewith they stop close the mouth of the said glasse. It is not long since that there was a deuse found, that wine of it selfe (as it came naturally from the grape growing vpon the vine) should haue a smack and fent of pitch. And surely this kind of * Pitch wine, brought the territory about Vienna into great name: reputation: & before that this vine was known, those of Auern, Burgundy, and the Helutij, were in no request at all. But these deuse as touching wines & wines, were not in the daies of the Poet *Virgil*, who died about 90 yeres past. But behold what I haue to say more of the Vine: the vine wand is now entred into the camp, and by it our armies are ranged into battalions: nay, vpon the direction thereof depends the main estate of our soueraigne Empire: for the Centurion hath the honour to carry in his hand a Vine-rod: the good guidance and ordering whereof aduanceth after long time the centeniers (for a good reward of their valorous and faithfull seruice) from the leading of inferior bands, to the captainship of that regiment and chiefe place in the army, vnto which the maine standard of the *Aegle* is committed: yea, and more than that, the Vine wand chastiseth the trespasses and lighter offences of the souldiers, who take it for no dishonor nor disgrace to be thus punished at their Centurions hand. Ouer and besides, the planting of Vineyards hath taught martiall men how to approach the wals of their enemies, to giue an assault vnder a frame deuised for the purpose, which therupon took the name of Vine. Lastly, for medicinall vertues in phisick, the Vine is so profitable to mans health, that the vse of it alone is a sufficient remedy for the distemperature of mans body, caused by wine it selfe.

CHAP. II.

¶ Of the diuers kinds of vines.

Democritus was the onely Philosopher euer known, who made profession to reduce all the sorts and kinds of vines to a certaine number, and indeed he vaunted and made his boast that he had the knowledge of all things that were in Greece. All others besides himselfe and those comming neerer to the truth (as that appeare more evidently by the variety of wines) resolutely haue set downe, that there be in infinit sorts of Vine-trees. Looke not therefore at my hands, that I should write of them all, but onely of the principall: for that in truth there bee in manner as many and as sundry kinds of them, as are of grounds. Wherefore I will content my selfe, and thinke it sufficient to shew those that be singular and most renowned among them, or such as haue some secret propriety worth admiration. And first to begin with the Aminean Vines, all the world giueth them the chiefe praise and greatest name, as wel for their grapes, of so lasting and durable a nature, as for the wine made thereof, which in all places continues long in vigor, & is euer the better for the age. And hereof there be five sundry sorts. Of which, the kindly Vines named Germane, haue both lesse grapes and grains within, but they burgen and bloom better than others: and after the floure is gon, they can abide both rain and tempest: but the second kind (which is the greater) is not so hardy: howbeit, lesse subiect to wind and weather

Ather when they be planted to run vp a tree, rather than to creepe vpon a frame. A third sort are called Gemellæ, for that their grapes grow double like twins. & they be very harsh and in taste vntoothsome, howbeit their vertue and strength is singular. The smaller sort of these take harm by the South wind: but all other winds nourish them, as we may see in the mount Veluuius, and the little hills of Surrentum: for in all other parts of Italy, yee shall neuer finde them but wedded to trees, and growing vpon them. As for the first kind of these Aminean vines, they be called Lanata, so freeze they are with a kind of down or cotton, in so much as we need not wonder any more at the Seres or Indians for their cotton and silken trees. The first kind of these Aminean grapes come soonest to their ripenesse and perfection, and most quickly do they rot & putrefie. Next to these Aminean vines, those of Nomentum are in most account: and for that their wood is red, some haue called them Rubellæ. These grapes yeeld no great plenty of wine, but in stead thereof their stones and kernels, and other refuse remaining, grow to an exceeding big cake: howbeit, this property they haue. The frost they will indure passing well, lesse harme they take also by raine than drought, and chriue better in cold than heat: and therefore in cold and moist grounds they excell and haue no fellow. Of these vines, they are more plentifull which beare grapes with smaller stones, and leaues with lesse cuts and iags indented. As touching the Muscadell vines, Apianæ, they tooke that name of bees, which are so much delighted in them and desirous to fettle and feed of them. Of two sorts they are: and both carry cotton & down. Howbeit, this difference is between them, that the grapes of the one will be sooner ripe than the other, and yet there is neither of them both but usefully enough. These Muscadell grapes like wel and loue cold countries: and yet none sooner rot than they, if shewers take them. The muscadell wines are at the first sweet: but with age become harsh and hard, yea, and red withal. And to conclude, there is not a grape that ioies more to hang vpon the vine, than it doth. Thus much of the very floure of Vines, and the principall grapes that be familiar and proper vnto our country of Italy, as their naturall soile.

The rest be strangers come out of Chios or Thafos. As for the Greeke grapes of Corinth, they be not in goodnes inferior to the Aminean aforesaid. They haue a very tender stone within, and the grape it selfe is so small, that vlesse the foile be exceeding far and battle, there is no profit in planting and tending such vines. The quick-sets of the vine Eugenia were sent vnto vs from the Taurominitane hills in Sicily, together with their syname pretending anoble & gentlerace. Howbeit, they are neuer in their kind with vs, but only in the Alban country: for if you transplant them, they proue very bastards and changelings presently. And in faith, some vines there be that take such an affection and loue to a place, that all their goodnesse and excellency they will leaue there behind them, and neuer passe into another quarter whole and entire as they be in their owne nature. Which evidently is to be seen in the Rhetian vine, & that of Savoy and Dauphnie, of which in the chapter before we said, that it gaue the taste of pitch to the wine made thereof: for these Vines at home in those countries are much renowned for the said taste: but elsewhere if they be transplanted, they loose it whole, and of no such thing may a man acknowledge in them. Howbeit, plentifull such are, and for default of goodnesse, they make amends & recompence in abundance of wine that they yeeld. As for the vine Eugenia, it takes well in hot grounds. The Rhetian likes better in a temperat soile. The Allobrogian Vine of Sauoy, and Dauphnie delights most in cold quarters: the frost it is that ripens her grapes, and commonly they are of colour black. Of all the grapes aboue rehearsed, the wines that be made the longer they be kept, the more they change colour, and in the end become white, yea, though they came of blacke grapes, and were of a deep colour at first. Now for all other grapes whatsoever, they are reckoned but base in comparison of the former. And yet this is to be noted and obserued, that the temperature of the aire may be such, and the soile so good, that both the grapes will endure long, and the wine beare the age very well. As for example, the Vine Fecenia, and likewise Bitonica, that bloometh with it, which beare grapes with few stones within: their floures neuer miscarry, for they euer preuent and come so timely, that they be able to withstand both winde and weather. Howbeit, they do better in cold places than in hotin moist also, than in dry. And to say a truth, there is not a vine more fruitful, & yeelding such store of grapes growing so thick together in clusters, but of all things it may not away with variable and inconstant weather: let the season be staied and fetled, it matters not when whether it be hot or cold, for wel it will abide the one & the other alone, hold it neuer so long. The lesler of this kind is held for the better.

Howbeit

Howbeit, in chusing of a fit soile for this vine, it is much ado to please and content it: in a fat ground it soone rots; in a light and lean, it will not grow at all: every choise it is therefore, dainty, and nice, in seeking a middle temper betweene, and therefore it taketh a great liking to the Sabine hills, and there it lonest to be. The grapes that it bears, be not so beautiful to the eye, but pleasant to the tooth: if you make not the more halt to take them presently when they be ripe, they will fall off, although they be not rotten. This vine puts forth large and hard leaues, which defend the grapes well against haile-stones.

Now there are besides certain notable grapes of a middle colour between black and purple, and they alter their hue oftentimes, whereupon some haue named them Varians: and yet the blacker they be, the more they: they beare grapes but each other yeare, that is to say, this yeare in great plenty, the next yeare very little: howbeit, their wine is the better when they yeeld fewer grapes. Also there be a kinds of vines called Pretias, differing one from the other in the bignesse of the stones within the grape: full of wood, and branches they are both: their grapes are very good to be preferred in earthen pots: and leaues they be like to Smallach: they of Dynhachium do highly praise the Roial vine Basilica, which the Spaniards call Cocolobis. The grapes grow but thin upon this plant: they can well abide all South winds, and hot weather: they trouble and hurt the head, if a man eat much of them. In Spaine they make 2 kinds of them; the one hauing a long stone or grain within, the other a round: these be the last grapes that are gathered in time of vintage. The sweeter grape that the Cocolobis bears, the better is it thought: howbeit that which was hard and tart at the first, will turne to be pleasant with keeping, and that which was sweeter, will become harsh with age: and then they resemble in tast, the Albane wine; and men say, there is an excellent drinke made thereof, to help diseases and infirmities of the bladder. As touching the wine Albulis, it bears most grapes in the tops of trees, but Vifula is more fruitfull beneath toward the root: and therefore if they be set both vnder one and the same tree, a man shall see the diuersitie of their nature, and how they will flourish and enrich that tree from the head to the foot: There is a kind of blacke grape named Inerticula, as a man would say, dull and harmlesse; but they that so-called it, might more iustly haue named it The sober grape: the wine made thereof is very commendable when it is old, howbeit nothing hurtfull: for neuer makes it any man drunke, and this property hath it alone by it selfe. As for other vines, their fruitfullnesse doth commend them; and namely above all, that which is called Heluenaca; whereof be two kinds, the greater, which some name The long; and the smaller called Arca: not so plentyfull it is as the former, but surely the wine thereof goes downe the throat more merily. It differs from the other in the perfect and exquisite roundnesse of the leaue, as it were drawn by compasse: but both the one and the other is very slender, and therefore of necessitie they must be underpropped with forks, for otherwise they will not beare their owne burden, so fruitfull they be. They delight greatly to grow neare the sea side, where they may haue the vapors of the sea to breath upon them: and indeed their very grapes haue a sent and smell of a brackish dew. There is not avine can worse brooke Italy. Her grapes are small, they hang thin and not euen upon her: and the wine made thereof, will not last above one Summer: and yet on the other side there is not a vine that liketh better in an hungry and lean ground. *Gracinas* (whereof the wise compiled his worke out of *Cornelius Celsus* in manner word for word) is of this opinion: That this vine could loue Italy well enough, and that of the owne Nature it mislikes not the Countrey; but the cause why it thriveth no better there, is the want of skil and knowledge to order and husband it as it ought to be, for that men strue to ouercharge it with wood, and load it with too many branches: and were it not that the goodnesse of a fat and rich soile maintained it still, beginning to faint and decay, the fruitfullnesse thereof were enough to kill it. This vine (by report) is never blasted: a singular gift verily of Nature, if it be true, That any plant or tree should be so exempt from the iurisdiction (as it were) of the Heavens, that they had no power to doe it harme. The Vine Spionia, which some call Spinea, feareth no extremities of heate: her grapes prosper well in Autumne and much abundance of rain: This is the only grape that is nourished with foggie mists, and therefore it likes no place well but the territorie of Ravenna. The vine Venicula (which is counted one of the best for kindly blooming & shedding the flowers, and for grapes most meet to be preferred and kept in pots) the Campanians rather name Circulus; others Stacula: and they of Tarracina call it Numisiana: and as they say, the grape thereof hath no singularity nor vertue in it self, but only according to the soile where

A it groweth: howbeit those that grow about Surrentum, haue the most strength, and are excellent to be preferred in vessels; I mean, as far as vp to the hill Vesuvius: for there also is the vine Murgentina, the best of all those that come out of Sicily, which some call Pompeiana, of Pompeia, a town within the kingdome of Naples: & being got once into Latium, it beares grapes abundantly: like as the vine Horconia in Campaine, yeeldeth plenty of grapes with the best, but good they are for nothing save only to be eaten at the table. As for the grape Marica, it will last and endure a long time; it feareth neither winde nor tempest, nor any blast of planet: blacke it is, and hath black stones: howbeit the wine that it maketh, waxes red with age, namely, if it be long kept.

B

CHAP. III.

Of the diuers kinds likewise of Vines, according to the properties of the places and regions where they grow.

Hitherto we haue treated of the sundry sorts of vines in general: now wil we write of them according to the nature of the places and regions, which are proper and familiar vnto them; or, as they be mingled one with another, by transplanting or grafting. And first and foremost, the vine Tudernis, also Florentia (bearing the name of the city Florence) are peculiar to the Tuscans: but about Arctium, there is no talke both for plenty and goodnesse, but of the Talpana, Etesiacia, and Confemina. The Talpana grape is blacke as the Mouldwarpe, whereof it taketh the name, but yet doth it yeeld a white wine. The Etesiacia vine (so called of the wines Etesiae) is a deceitfull plant, and often misleadeth and faulteth; but the more grapes it beareth, the better wine it yeeldeth and more commendable: many this is strange and wonderful in it. In the mids of this fruitfullnesse of hers, she giueth ouer suddenly and dieth. The vine Confemina, bringeth blacke grapes: the wine will not last, but the grapes will keepe and continue passing long: the vintage thereof is fiftene daies after all other: it beareth ordinarily her full burden, but the fruit is only good for meat to be eaten, and not for wine to be drunke. The leaues of this vine (in manner of the wilde vine Labrusca) before they fall, become as red as blood. This property happeneth to some others besides; but take it for a certaine token of the worst vines. The vine and grape Irtiola, is proper vnto Vmbria, to the territorie of the Meuenates, and the Picene countrey: like as that which they call Pumula, to the Amierne region. They haue among them also another kinde, named Bannanica: and although it oftentimes doth not take, yet they loue the plant and cherish it. There is a grape which they call the Burrough or Burgeois grape, after the name of the burrough town Pompeij; and yet there is more plenty of them about the city Clusium: the Tiburtins also, named their grapes after their town Tybur; yet of late daies they haue found another sort, which of the resemblance of olives, is called the Oliue grape: and in truth, this is the last grape of any account, to this day known to haue bin found out. The Sabins and Laurentines only are acquainted with the grape Vinaciola: for wel I wot, that the vines Gaurana came first out of the territorie of Falerij, and thereupon were named Falerens: but transplant them from thence whither soeuer you will, they wil very quickly degenerat in all places, and proue bastard. Moreover, some haue made a feual kinde by it self of the Tarentine vine, which brings forth an exceeding sweet grape. As for the grapes called Capnia, Bucconiatia, & Tarrupia, there is no vintage of them in the vineyards of the hills about Thurinum, before the cold frost. As for the citizens of Pisa, they set great store by the grapes Pharia: like as Modena by those called Prusina; which are very black stone & al: yet the wine thereof with 4 yeeres will turn to a paller and whitish colour. A strange thing it is which men report of a certaine grape, that euermore will turne with the Sunne: and thereupon it is called Streptos: also that we in Italy are delighted with the French grapes: and they in France beyond the Alpes, are as much in loue with ours in the Picene countrey. *Virgil* hath made mention of other grapes, namely, Thasie, Marcotides, and Lager, besides many other outlandish plants, not at this day to be found throughout all Italy: howbeit there be yet many vines of good mark & wel accepted of, not for any wine that they yeeld, but only for their grapes which they carry to wir, Ambrosiaca, and Duracina, which may be kept hanging still upon the vine, without any vessel to inclose them: so durable be they and hardy, against cold, heat, wind, and raine, or any weather whatsoeuer. As for the vine Orthampelos, it needs neither tree to climb on, nor

forkes to support it, but is able to maintain and uphold it selfe vpright. But the *Dactylides* (so called for that they beare not wood aboue a finger thicke) cannot so do: for they must be shored and vnderpropped. Of all vines, the *Columbines* yield most gleaning, for that the gatherers leaue behind them greatest store of small grapes: and so do the purple grapes, named also *Bimammia* (as one would say, with two teats or biggs) more than the rest; seeing that they beare not small grapes, but put forth new great ones indeed, after the other be gathered and gone. In like manner, the vine *Tripedanea*, which took that name of the measure of 3 foot. Semblably the vine *Scirpula*, the grapes whereof seem as if they were Raisins of the sun, dried already. Moreover in the maritime Alps toward the sea-side, there is a kind of Rhetian vine, but far inferior to that other aboue-mentioned and so much commended for the relish of pitch that it giueth to the wine made of her grapes: for these about the Alps be little and small, and albeit they beare grapes thicke, yet the wine thereof comes far short of the other, and is more degenerate, howbeit the skin of the grapes is of all other the thinnest, hauing but one kernel within, which they call *Giganton*, and the same very small; and a man shall not find a bunch, without one or two passing great grapes aboue the rest: there is also a kind of black *Aminean* grape, which some name *Syriaca*: likewise the grape of Spain, which of the base and common kinds carries the greatest credit, and is most commended. As touching both vines and grapes that run and traile vpon frames, there be those which are called *Escaris*, good only for to eat, and namely those which haue grains or stones like to *Ivie* berries, as well white as black. Grapes resembling great dugs, named therupon *Bumassi*, both black and white, are carried vpon frames in like sort. But at this while we haue not spoken of the *Aegyptian* and *Rhodian* grapes, ne yet of the *Ounce* grapes, whereof every one weighs a good ounce, and therupon tooke that name. Item, the grape *Pucina*, the blackest of all others: the *Stephanitis* also, where in Nature hath seemed to disport her selfe, for the leaues run among the grapes in manner of a garland plaited with them. Moreover, the market-grapes called *Forenses*, they grow and are ripe with the soonest, vendible at the very first sight, and sold with the best, and most easie to be carried from market to market. But contrariwise, the ash-coloured grape *Cinerea*, the silk-russet grape *Ravuscula*, the ashe-hued grape *Afinica*, please not the eye, but are presently reiected: and yet the Fox-tailed grape *Alopecis*, (for that it resembles Rainards taile) is not so displeasing nor so much discommended as the former. About a cape or creft of the hill *Ida*, which they call *Phalacra*, there is a vine named *Alexandrina*, small of growth, and puts forth branches of a cubit in length: the grapes be black, as big as beans, the pepin or kernell within, soft, tender, and exceeding small; the bunches are crooked, full of grapes, passing sweet; and finally the leaues little, round, and not cut or jagged at all. Within these seven yeres last past, about *Alba Eluia*, a city in *Languedock* or the prouince of *Narbon*, there was found a vine, which in one day both floured and shed her floures: by which meane most secured it was from all dangers of the weather. They call it *Narbonica*, or the vine of *Languedock*: and now it is commonly planted all that prouince ouer, and every man desireth to store his vineyard therewith.

CHAP. IIIII.

¶ Notable considerations about the husbandrie and ordering of Vineyards.

That noble and worthy *Cato*, the first of that name, renowned among other dignities for his honorable triumph, and the incorrupt administration of his Censorship, and yet more famous and renowned to posterity for his singular knowledge and learning: and namely for the good precepts and ordinances tending to all vertues and commendable parts, which he left in memory for the people of Rome: & principally touching agriculture (as he was by the common voice and generall accord of that age wherein he liued reputed for an excellent husbandman, and one who in that profession had neither peere nor second that came neere vnto him.) This *Cato* (I say) hath in his workes made mention but of a few kinds of vines: and yet some of them already be growne out of knowledge, so as their verie names are quite forgotten. Yet neuerthelesse his opinion and judgement would be set downe in particular, as it may be gathered out of his whole treatise: to the end that we might both know in every kind of vine which were of most account in his daies (to wit, in the 600 yere after the foundation of Rome, about the

A the time that *Carthage* and *Corinth* were forced and wron, when he departed this life: and also learn how much we haue profited and proceeded in good husbandry and agriculture, from his death vnto this present day; namely for the space of 230 yeres. As concerning vines and grapes therefore, thus much hath *Cato* deliuered in writing, and in this manner following. All places or grounds (quoth he) exposed to the Sun-shine, and which in other regards shall be found good for to plant vineyards in, see they be employed for the lesse *Aminean*, for both the *Eugenian* vines, and the smaller *Helueta*. Item; in every tract that is more grosse, thicke, and mistie, looke that you fit: the greater *Aminean* or the *Burgentine*: the *Apician* also, and the *Lucane* Vine. All other vines, and the common mingled sort especially, will agree well enough with any ground. The right keeping of grapes, is in a smallish wine of the second running. The grapes *Duracina*, and the greater *Amineans*, are good to be hanged, or else dried before a blake smithes forge, and so they may be well preserved and good for Raisins of the Sun. Note what the precepts of *Cato* be; neither are there any of this argument more ancient, left vnto vs written in the Latine tongue, Whereby we may see, that we liue not long after the very first rudiments and beginnings of knowledge in these matters. [But by the way, the *Amineans* last named, *Vitis* calleth *Scantians*.] And in very truth, how there be euen in this our age, who haue left any rules in forme of Art, as touching the absolute skill in this behalfe. Yet such as they be, and how few fouer, we must not leaue them behinde, but so much the rather take them with vs, to the end it may be knowne, what reward & profit they meet with, who trauelled in this point of husbandry: reward, I say, and profit, which in every thing is all in all.

C To begin therefore with *Acilius Sthenelus* [or *Stelenus*,] (a mean commoner of Rome, descended from the race of *Libertines* or *Slaves* newly enfranchised) he attained to the highest glory and greatest name of all others: for hauing in the whole world not aboue 60 acres of land lying all in vineyards within the territory of *Nomentum*, he plaied the good husband so well therein, that he sold them again at the price of 400000 *Sesterces*. There went a great bruit and fame likewise of one *Perillus Aegialus*, in his time a man but of base condition by birth, and no better than the former, (namely, come of the stocke of freed-men) who by his labor & husbandry, greatly enriched a domain or liuing at *Literum* in *Campane*: and the more renowned he was by occasion of the fauour of so many men affectionate vnto *Africanus*, whose very place of exile he held in his hands and occupied so well: for vnto *Scipio*, the abovesaid *Literum*, appointed. But the greatest voice and speech of men was of *Rhemmius Palamon* (who otherwise by profession was a famous and renowned Grammarian) for that he by the means and helpe of the foresaid *Sthenelus*, bought a ferme within thre twenty yeres for 600000 *Sesterces* in the same territorie of *Nomentum*, about ten miles distant from Rome, lying somewhat out of the high way. Now is it well knowne farre and neare, of what price and account all such fermes are, and how cheape such ware is lying so neere to the city side: but amongst the rest, this of *Palamons* in that place was esteemed most cheap and lowest prised, in this regard especially, That he had purchased those lands, which through the carelesse and bad husbandry of the former owners, lay neglected and fore-let, & were not of themselves thought to be of the best soile, chosen and picked from among the worst. But being entered once vpon those grounds as his owne liuelode and possession, he set in hand to husband and manure them, not so much of any good mind and affection that he had to improve and better any thing that he held, but vpon a vaile glory of his own at the first, whereunto he was wonderfully giuen, for he makes fallows of his vine-plots anew, and delueth them all ouer again, as he had seen *Sthenelus* to do with his before: but what with digging, stirring, and meddling therewith, following the good example and husbandry of *Sthenelus*, hee brought his vineyards to so good a passe within one eight yeres, that the fruit of one yeres vintage was held at 400000 *Sesterces*, and yielded so much rent to the Lord: a wonderfull and miraculous thing, that a ground should be so much improved in so small a time! And in very truth, it was strange to see what numbers of people would run thither, only to see the huge and mighty heaps of grapes gathered in those vineyards of his: and illiude neighbors about him, whose grounds yielded no such increase, attributed all to his deepe learning, and that he went to it by his book, & had some hidden speculation aboue other men; objecting against him, that he practised Art Magicke, and the blacke Science. But last of all, *Annas Seneca*, esteemed in those daies a singular clerke, and a mighty great man (whose ouermuch Learning and exceeding power cost him his ouerthrowing in the end) one who had good skill and

judgement in the world, and vfed least of all others to esteeme toies and vanities, brought this ferm into a greater name and credit: for so far in loue was he of this possession, that hee bought out *Palamon*, and was not ashamed to let him go away with the pricke and praise for good husbandry, and to remoue him into other parts where he might shew the like cunning; and in one word, paid for these foresaid vineyards of his fourfold as much as they cost, not about ten yeres before this good husbandry was bestowed vpon them. Certes, great pity it is, that the like industry was not shewed and imploied in the territories about the hills *Cecubus*, & *Setinus*, where (no doubt) it would haue well quit all the cost, considering that many a time afterwards, euery acre of vineyard there, yielded seuen Culei, that is to say, 140 Amphores of new wine one yere with another. But lest any man should thinke, that wee in these daies haue surpassed our ancestors in diligence, as touching good husbandrie; know he, that the aboue named *Cato* hath left in writing, How of an acre of vineyard there hath arisen ordinarily * ten Culei of wine by the yere. Certainly these be effectuall examples and pregnant proofes, that the hardy and adventurous voiaiges by sea, are not more aduantageous; y ne yet the commodities and merchandise, and namely Pearls, which be fet as far as the red sea and the Indian Ocean, are more gainefull to the merchant, than a good ferm and homestead in the country, well tilled and carefully husbanded.

As touching the wines in old time, *Homer* writes, that the Maronean wine made of the grapes growing vpon the sea coasts of *Africk*, was the best, & most excellent in his daies. But my meaning is not to ground vpon fabulous tales & variable reports, as touching the excellency or antiquitie of wine. True it is, that *Ariflaus* was the first, who in that very nation mingled hony with wine, which must needs be a passing sweet and pleasant liquor, made of two natures so singular as they be of themselves. And yet to come againe to the forsaide Maronean wine, the same *Homer* saith, That to one part thereof, there would be but 20 parts of water: and even at this day, that kind of wine continues in the said land of the same force, and the strength thereof will not be conquered nor allaid. For *Mutianus* who had bin thrice consul of Rome, & one of those that latest wrote of this matter, found by experience (being himselfe personally in that tract) that euery sextar or quart of that wine, would beare 8 of water: who reports moreover, that the wine is of colour blacke, of a fragrant sweet smell, and by age comes to be fat and vicious. Moreover, the Prannian wine (which the same *Homer* hath so highly commended) continueth yet in credit and holds the name still: it comes from a vineyard in the country about *Smyrna*, neere to the temple of *Cybele* the mother of the gods. As for other wines, no one kind apart excelled other.

One yere therewas, when all wines proued passing good; to wit, when *L. Opimius* was Consul, at what time as *C. Gracchus* a Tribune of the Commons (praising to sow sedition within the city among the common people) was slaine: for then such feasonable weather happened, and so fauorable for ill fruit, that they called it (*Coctura*) as a man would say, the ripening time; so beneficiall was the Sun to the earth: and this fell out in the yere after the natiuitie and foundation of the city of Rome, 634.

Moreover, there be some wines so durable, that they haue beene knowne to last two hundred yeres; and are come now by this time to the qualitie and consistence of a rough, sharpe, and austere kind of hony: and this is the nature of all when they bee old: neither are they portable alone by themselves, vlesse the water be predominant; so tart they are of the lees, and so musty withall, that they are bitter againe. Howbeit a certaine mixture thereto is of them in a very small quantity with other wines, that giues a pretie commendable tast vnto them. Suppose now that according to the price of wine in those daies of *Opimius*, euery Amphore were set but at an hundred Sesterces, yet after the vsurie of six in the hundred yearly (which is the ordinary proportion and a reasonable interest among citizens, for the principall their lieth dead and dormant in stock) by the hundred and sixtieth yere after the said Amphor was bought (which fell out in the time that *C. Caligula Caesar* the son of *Germanicus* was Emperor) no maruell if an ounce in measure of the same wine (to wit, the twelfth part of a Sextarius) cost * so many Sesterces: for as we haue shewed by a notable example, when we did set downe the life of *Pomponius Secundus* the Poet, and the feast that he made to the sayd Prince *Caligula*, therewas not a * Cyathus of that wine drawne, but so much was paid for it. Loe what a deale of money lieth in these wine-cellar, for keeping of wine! And in very truth, there is nothing more gainfull nor growth to a better

A better reckoning than it, for twenty yeres space after it is laid vp: neither is there greater losse againe by any thing, if ye passe that terme; by reason that the price will not grow and arise accordingly: for seldom hath it bin knowne to this day (and neuer but at some exceffiuue riot and superfluous expence of wine) that an Amphore hath bene sold for a thousand Sesterces. True it is indeed, that they of Vienna only haue made better reckoning of their wines, and sold them deerer; I meane those that giue a taste of pitch (the feuerall kinds whereof wee haue deliuered before); but they are thought so to do among themselves only, and for the loue of their country, that it might haue the names of wines, so deere and costly. To conclude, this wine of Vienna, is reputed colder than the rest; when the question is of cold drinke, and that the body is to be cooled.

CHAP. V.

Of the Nature of Wine.

THE nature and property of wine, is to heat the bowels within, if it be drunke; and to coolle the exterior parts, if it be applied outwardly. And here it shall not be amisse to rehearse in this very place, that which *Androcydes* (the noble, sage, and wise Philosopher) wrote vnto *K. Alexander* the Great, for to correct and reforme his intemperate drinking of wine, whereto he was very prone and ouermuch giuen. My good Lord (saith he) remember when you take your wine, that you drinke the very blood of the earth: *Hemlock* (you know) is poison to man, quen so is wine to Hemlock. Now if that Prince had bin so wise as to haue obeyed these precepts of his, certes, he could neuer haue killed his best friends as he did, in his fits of drunkenness. In sum, this may be truly said of wine, that being taken soberly and in measure, nothing is more profitable to the strength of the body; but contrariwise, there is not a thing more dangerous and pernicious, than the immoderate drinking thereof.

CHAP. VI.

Of kindly Wines made of the best Grapes.

WHO doubteth, that some Wines be made more pleasant and acceptable than others? nay out of the very same vat ye shall haue wines not alike in goodnesse, but that some go before their brethren, pressed though they be at one time, and from the same kinde of grape: which may be long either of the vessell wherinto they be filled, or of some accidental occasion; and therefore as touching the excellency of wine, let euery man be his own taster and iudge. The Emperesse *Lulia Augusta* would commonly say, That she beheld to the Puttine wine for liuing as she did 82 yeres: for she neuer vfed to drinke any other. This wine came of the grape that grew along the Adriaticke sea, or Venice gulfie, vpon a stony and raggie hill, not far from the source or spring of the riuier *Timavus*, nourished with the vapors breathed from the sea, and many Amphores there were not drawne thereof at a vintage: and by the iudgement of all men, there is not a wine more medicinable than it is. I would thinke verily therefore, that the wine *Pythanon* (which the Greekes so highly praise) is the very same; for it cometh from the coasts of the Adriaticke sea. The Emperor *Augustus Caesar* preferred the *Setine* wine before all others; and after him in manner, all the Emperors his successors, for the ordinary experience they found thereby, That lightly the liquor of that wine would not hinder digestion nor breed raw humors in the stomack; and this wine cometh of the grape about the towne *Forum Appij*. Before that time, the wine *Cæcubum* was in best account; and the vines which yielded it, grew to the Poplars in the marsh grounds within the tract of *Amycle*. But now is that Wine cleane gone, as well through the negligence of the peasants of that country, as the freightes of the place: and so much the rather, by reason of the ditch or trench which *Nero* caused to be made navigable, beginning at the lake or gulfie *Baianus*, and reaching as far as to *Ostia*. In the second degree of excellency, are ranged the wines of the *Falerne* territorie, and principally that which came from the vineyards *Fauftian*: and this excellency it grew vnto by passing good order and careful husbandry. Howbeit this wine also in these daies beginneth to grow out of name and request, whilst men loue rather to haue plenty from their vines, than otherwise lay for the goodnesse thereof. Now these *Falerne* vineyards, begin at the *Campaine* bridge on the left hand: as men go to the city-colony erected by *Sylla*, and lately laid to *Capua*, & vnder the iurisdiction thereof.

therof. But the Fauſtian vineyards lie about 4 miles from a village neere Cedia, which village G
is from Sinueſſa fix miles diſtant. And to ſay a truth, this Fauſtian wine is inferior to none in
reputation: for piercing and quicke it is, that it will burne of a light flame; a propertie that you
ſhall not ſee in any other wine. Three ſorts there be of theſe Falerne wines: the firſt be hard and
harſh; the ſecond ſweet and pleaſant; the third, thin and ſmall. But ſome haue diſtinguiſhed
them in this wiſe: thoſe that come from the top of the hills, be called Gaurane wines; from the
mids, Fauſtian; and laſt of all from the bottom and foot thereof, the Falerne. But by the way
this would not be forgotten, That the grapes whereof be made theſe wines ſo ſingular and ex-
cellent, are nothing pleaſant to the taſt for to be eaten. As touching the Albane wines from a-
bout Alba neere the city of Rome, they reach to the third ranke in goodneſſe, for a certain va-
rietic they haue in their taſt: ſweetiſh they be, and yet otherwiſes they haue an vnrpe & harſh
reliſh of the wood, & taſt like the hedge-wine. In like manner the wines of Surrentum, & name-
ly thoſe of grapes growing only in vineyards, are excellent good for weak perſons that be new-
ly recovered of ſickneſſe, ſo ſmall they are, and whoſe ſome withal. And in truth, *Tyberius Caſar*
was wont to ſay, That the Phyſicians had laid their heads together, and agreed to giue the Sur-
rentine wine ſo great a name; for otherwiſe it was no better than a very mild and pleaſant vine-
gar: and *C. Caligula* (his ſucceſſor in the Empire) ſaid to ſay of it, That for a wine that had loſt
the heart and was a going, it was very good. The Maſſike wines, which come from the Gaurane
hills looking toward Puteoli and Bajæ, come nothing behind the reſt, but ſtrive to match them
euery way. For as touching the Statane vineyards, that confine and border vpon the Falerne,
their wines doubtleſſe are now come to be the principall and chiefe of all the reſt: whereby it is
evidently ſeen, that euery territory and vine-plot hath their times and ſeaſons, like as all other
things in the world, one while riſe and another while fall. For in times paſt the Calene wines
made of the grapes growing hard by Rome, were wont to go before all others: as alſo the Fun-
dane vines had their time, as well thoſe that are planted in vineyards, as they which runne vpon
trees: like as thoſe of the other ſide, neere alſo to the city of Rome, & nameſly from Veliternum
and Priuernum. For as touching the wine of Signia, it is held for a medicine only; and by rea-
ſon of an aſtringent verdure that it hath, it is excellent good to ſtay the flux of the belly. In the
fourth place of this race of vines, *Julius Caſar* (late Emperor of famous memory) hath ranged,
(for to ſerue the publick and ſolemne feaſts of the city) the Mamertine wines, from about Meſ-
ſana in Sicily: for he was the firſt (as appears by his letters miſſiue) that gaue credit and autho-
rity vnto them. And of thoſe, the Potulane wines (ſo called of them who firſt planted the vines
whereof they came) are moſt commended, and nameſly thoſe that are vpon the next coaſt of Ita-
ly. Within the ſame Sicily, the Taurominitane vines are highly eſteemed, inſomuch, as many
times they go for Meſſana wine, and are ſo ſold by whole potles. Now for all other wines from
about the coaſt of the Tuſcane ſea Northward, good reckoning is made of the Prætorian and
ſuch as come from Ancone: alſo of the Palmeſian wines, which haply tooke that name, for that
the firſt plant of that vine came from a palme or Date tree. But in the midland parts of Italie
within the firme land, good regard there is of the Ceſenarian and Mecænanian wines. Within
the territory of Verona, the Rhetian wine carrieth the price: which *Virgil* ranged next after the
Falerne wines. Anon you come to the wines Adriane, and thoſe that grow far within the tract
of the Venice gulfe. Now from the nether ſea about Lions, ye haue the Latinienſian, the Gra-
uiſcane, and the Statonian wines. Throughout all Tuſcane, the wines about Luna beare the
name like as thoſe of Genes, for Liguria. Betweene the Pyrenean hills and the Alpes, Maſſiles
hath the commendation for wines of a double taſte: for the vines there, do yeeld a certain thick
and groſſe wine, which they call Succoſum, [i. full of iuice and liquor] good to ſeaſon other
wines, and to giue them a pretty taſt. When ye are paſſed once into France or Gaule, the wine of
Beterre is in chiefe requeſt. As for the reſt within Languedoc and the Prouince of Narbon,
I am not able to aouach any thing for certainty, ſuch a brewing and ſophiſtication of them
they make, what with ſmelling, perfuming, and colouring them: and would God they put not
in ſome herbes and drugs among, that be not good for mans body. For certaine it is that they
commonly buy Aloe rogiue the wine both another taſt and alſo a counterfeit color. Moreover
in the farther and more remote coaſts of Italy toward the Auſonian ſea, there be wines which
are not without their praiſe and commendation, and nameſly thoſe of Tarentum, Seruitium,
and Conſentia: likewiſe of Tempia, Bauia, and Lucania: howbeit the Thurine wine goeth be-
fore

A For them all. As for the wines of Lagaria, which be made of the grapes not farre from Gri-
nitum, there goes a right great name of them, by reaſon that *Meſſala* diſſed ordinarily to drink
thereof, and thereby was ſuppoſed to preferue his health ſo well. Of late daies there be certain
wines in Campaine growne into credit (like as they haue gotten new names) by good ordering
and husbandrie, or by chance, I know not whether; nameſly, thoſe of Tribellia, foure miles from
Naples, of Caulium neare to Capua, and laſt of all, the Trebulaine wines within their own ter-
ritorie: for before time they were euer counted no better than common wines for euery man
to drink, no more than the Triſolines, from whence they vaunt of their deſcent. As for the wine
of Pompeii, a towne in the kingdome of Naples, neither it nor the vine whereof it cometh;
will laſt about ten yerres at the moſt: after which tearme, the elder they both be, the worſe they
B are. Beſides, they are found by experience to cauſe the head-ach, inſomuch, as if a man drinke
thereof ouer night, he ſhall be ſure not to haue his head in good time vntill noone the morrow
after. By which examples aboue rehearſed, it is plaine in my conceit, that the goodneſſe of the
wine ſtandeth much vpon the ſoile and the climate, and not in the grape: ſo as a needleſſe and
endleſſe matter it is to reduce all kind of wines to a certaine number, conſidering that one and
the ſelfe ſame Vine planted in diuerſe places, hath ſundry operations, and maketh varietie
of wines. Now as concerning the wines of Spaine, the Lalerane vineyards are much ſpoken of for
the plentie and abundance of wine that they yeeld: but thoſe of Tarracon, Arragon, and Lau-
rone, are much praiſed and renowned for the fine and neat wines which they make. As for the
wines that come out of the Iſlands, and nameſly, the Baleares, they are comparable to the very
beſt in Italie.

C I am not ignorant, that moſt men who ſhall read this Treatiſe, will thinke that I haue omit-
ted and ouerpaſſed many wines: for euery man likes his own, and as ones fancie leadeth, ſo goes
the voice and the cry, and there runs the Hare away. It is reported, that one of *Auguſtus Caſar*
freed men (reputed for the fineſt taſter that he had about his court, and who knew beſt what
would content his palat, and pleaſe his tooth) vpon a time when he taſted the wine that was
would content his board, at what time as he made a feaſt, ſaid to one of the gueſts at the table,
That the ſaid new wine indeed had a new and ſtrange taſt, and was none of the beſt, and thoſe
that were in name, howbeit (quoth he) this is for the Emperors cup, and willingly will he drinke
of no other, notwithstanding it be but a homely wine made hereby in the countrey, and not far
D fetched. And now for a ſmall conſeſion of this matter, I cannot denie but that there be other
wines which deſerue to be numbred among thoſe that are right good and commendable;
howbeit, ſuffice it ſhall to haue written of theſe, which by the common opinion and conſent of
the world are held for the better.

CHAP. VII.

Of Wines beyond ſea.

I remaineth now to ſpeake of outlandiſh Wines beyond the ſea. Firſt and formeſt therefore
next to thoſe wines renowned by the Poets *Homer*, and whereof we haue written before, beſt
E eſteemed alwaies were the wines of the Iſlands Thafos and Chios: and nameſly that of Chios
which they call Arnum or Aruſium. *Eraſſiſtratus* the moſt famous Phyſician of his time, mat-
ched with theſe the Lesbian wine, and his authoritie gaue credit vnto it and this was much a-
bout the fix hundred yearre after the foundation of Rome. But in theſe daies there is no wine
that of Clazomene, euer ſince that they began to put thereto leſſe ſea-water for to ſeaſon it, than
their cuſtome was. As for the wine of Lesbos, it hath a ſent and reliſh of the ſalt water natu-
ly of it ſelfe. Neither is the wine that comes from the hill Tmolus in any regard, as a wine to be
drinke alone, but it ſerues as a ſweet cut to mingle with other wines that be hard: for thereby
their Greene verdure will ſeeme more mild and pleaſant, yea, and withall to haue their ripeage
for no ſooner is it tempered therewith, but they taſt preſently elder than they be. Next to theſe
F in goodnes, follow in their courſe the wines of Sycone, Cypres, Telmeſſus, Tripolis, Berytus,
Tyrys, and Sebennys. As for this wine laſt rehearſed, it is made in Ægypt, a countrey much re-
nowned for three kinds of grapes there, to wit, Thafia, Æthalos, and Peuce. Next in price & ac-
count be theſe following, the Hippodamian, the Myſtick, Cantharite, & the Gnidian wine
of the firſt running and vnpreſſed, alſo that of Caraceæ, a meane, a region ſo called, for that it ſee-
meth

mett all burnt; of Petra, and Mycones. As for the wine *Mefogates*, it is knowne to make head-
ach: neither is the wine of Ephesus wholesome and healthfull, because it is sophistate with a
kind of cuittall foden, called *Defuturum*, and sea-water. As for the wine of *Apamea*, by report
it comes very neare to a kind of Mede, and will very well agree withall, like as *Pratutum* in *Ly-
taly*. For otherwise, this is the property in generall of all sweet wines, that they will not well for-
together, & be good still. Touching the wine *Protagum*, it is now grown out of remembrance;
and yet the Physicians of *Afculapides* his sect and schoole, gaue praise vnto it next the Italian
wines. The learned Physician *Apollodorus*, in his treatise that he compiled of good wines, which
he recommended vnto King *Ptolemeus* for to drinke, as meet for the health of his person, (for
default of Italian wines then vnknew) highly praised the wines in *Pontus*, & principally that
which is called *Naspercentis* next to it the *Oreotik*; the *Oenates*, that of *Leucadia*, of *Am-
bracia*, and (which he preferreth aboue all the rest) the wine of *Peparethus*; and yet he said, that
there went the lesse name and opinion of it, because after sixe yeares it loseth the strength and
pleasant tast that it had.

CHAP. VIII.

¶ Seven kinds of salt wine.

Thus far forth haue we discoursed of the very floure of good wines, according to the regi-
ons where naturally they come of the grape. Now are we to treat of wines compounded.

And first among such wines is that, which they call *Bixon* (an inuention of the Greeks)
which aboue all others is most esteemed and great reason, for deuided it was for the cure of ma-
ny maladies, as we shall shew hereafter in our treatise of Physick. The making whereof is in this
manner: Take grapes gathered somewhat before they be ripe: let them lie to drie and parch in
the hot Sunne for three daies, and be turned duly thrise a day: vpon the fourth day presse them
forth for wine, put the liquor vp in barrells, and so let it worke in the Sun. Howbeit, hereto they
put a good quantity of salt sea-water. But this deuise was learn'd first of a false theuifish knaue
who hauing robbed his maister and drunk vp a good deale of his wine, filled vp the vessel again
and made iust measure with sea-water. Wherewith if it be ordered in this sort, is called *Leuco-
ehrum* by the Greekes: but in other nations the like wine so made is named *Tchthalasfomenon*.
As for *Thalassites*, it is a kind of wine so called, for that the vessels when the wine is new run-
ned, be cast into the sea, and there let to remaine for a time, by which means the wine will soon
seeme old and readie to be drunke. Furthermore, *Cato* also here among vs hath shewed the way
how to make the Greekeish Wine *Coum*, of our owne Italian Wine: but aboue all he hath set
down an expresse rule, to let it first take the maturitie and perfection 4 yeares in the Sun. As for
the wine of *Rhodes*, it is much like to that of *Coos*, But the Phorinean wine is more salt than
the wine of the Isle *Coos*. Finally, all transmarine or beyond-sea wines are thought in seven or
fix yeares at the least, to come vnto their middle age.

CHAP. IX.

¶ Fourteen sorts of sweet wines.

Alwaies the sweeter that they be in tast, the lesse fragrant & odoriferous they be the thinner
and smaller that they be, the more euer they smell to the nose. Of wines there be four
principal colours, white, yellow, red, and blacke. As for *Plythium* and *Melamplythium*,
they be certaine kinds of quinquinau, a generall tast apart by themselves, not resembling wine
indeed. And for *Cicibelites* made in *Galatia*, it tastes alwaies like new wine: so doth *Halyntium*
in *Sicily*. For as touching *Syrium*, which some call *Hepsema*, & we in Latine *Sapa*, [i. Cuit]
it is a mee artificiall thing, the deuise of mans wit, and no worke of Nature: namely, when new
wine is foddren away a third part: for when it boiles to the halfe, we then call it *Desrutum*. And
in very deed, all these be inuentions to sophisticate and counterfeite honie, But those before-
named retain the naturall tast of the grape, and the foile whereof they doe consist. Next to these
cuyt wines of *Candie*, those of *Cilicia*, *Affrick*, *Italy*, and the prouinces confronting therupon,
are held for the best. Certain it is, That they be made of one grape, which the Greekes call *Stri-
ca*, and we *Apiana*, [i. the Muscadell] and of another named *Scirpula*: the which haue bene suf-
fered

fered a long time to hang in the Sunne vntill the Vine vntill they be scorched and parched: or
else on the vapor of scalding oile. Some there be that make them of any sweet grapes whatso-
euer, so that they be let to concoct before in the Sun, vntill they be white and drie, so farre forth,
as little lesse than half of their weight be consumed: which done, they stamp them and so gently
presse them. Then looke how much liquor they haue pressed forth, so much put water they
put to the cake that is pressed, that thereof they may haue a cuit of a second running. But they
that be more curious & take vpon them to make a daintier cuit, dry the grapes in manner afore-
said, but they take forth the stones and graines within: they strip them also from the fteeles and
railes that they hung by: and so after they be well drenched and infused in some excellent wine
vntill they be swelled and plumped, they presse them. And certainly this fashion is simply the
best of all others. Put to the cake thereof, water as before, and after the same manner yee shall
haue a cuit of a second sort. Now there is a kind of wine which the Greekes call *Aigleuces*, that
is to say, alwaies sweet like new wine, of a middle nature between the common simple wine and
the sweet: and this cometh not vnto it by kind, but by heed taken in the boiling; for it is not
suffered to seeth and worke, and this is the term, whereby is signified the alteration of new Must
into wine. To hinder therefore that it worke not, (as naturally it will) they haue no sooner tunned
or filled it out of the Vat, but immediately they douse the vessels full of new Must in the water,
and let them there continue till mid-December be past, and that the weather be settled to frost
and cold, and likewise the time expired of the working within the said vessels. Moreover, there
is another kind of wine naturally sweet, which in Prouance and Languedoc is called *Dulce*, [i.
sweet] & namely, in the territorie of the Vocontians. For this purpose they let the grapes hang
a long while vpon the Vine, but first they wring the fteele that the bunch hangs to. Some make
incision into the very Vine branch, as far as to the pith and marrow within (to diuert the moi-
sture that feeds the grape); others lay the clusters a drying vpon tile-houses: and all this is done
with the grapes of the Vine *Heluenaca*. There be that range in a ranke of these sweet wines,
that which they call *Diaeyton*. For which effect, they drie the grapes against the Sun (howbeit
in a place well enclosed) for 7 daies together, vpon hardles, 7 foot likewise from the ground: in
the night (season they faue them from all dewes, and so on the eighth day they tread them in the
wine presse: and thus they draw forth a wine of an excellent fauor and tast both. A kind of these
sweet wines, is that which they name *Melicitres*, [in manner of a Braget, Meade, or Metheglin.]
D Howbeit, different it is from the mead or honied wine which the Latines call *Mulsium*, made
of old wine that is hard, and a little honie: whereas the foresaid *Melicitres* consists of 5 gallons
of new tart wine still in the verdure, whereto is added one gallon of honie, and a * cyath of salt,
and so boiled all together. But I must not forget to place among these sundry kinds of drinke,
the liquor *Protoprum*, for so some call new wine running it self from the grapes, before they be
troden and pressed. But to haue this good, and so to serue the turne, so soon as it is put vp into
proper vessels for the purpose, it must be suffered to worke: and afterwards to reboile and worke
again for fortie daies space the Summer following, euen from the very beginning of the dog
daies, and so forwards

CHAP. X.

¶ Of weak and second Wines, three kinds.

The second wines, which the Greekes call *Deuteria*, *Cato* and we Romans name *Lora* can-
not properly and truly be called Wines, being made of the skins and seeds of grapes steeped
in water: howbeit, reckoned they are among course household wines for the hines and
meinie to drinke. And three kinds there be of them. For sometime to the tenth part of the new
wine that hath bene pressed out, they put the like quantity of water, and suffer the foresaid re-
sidue of the grapes to soke therein a day and a night which done, they presse it forth againe. A se-
cond sort there is, which the Greekes were wont to make in this manner: They take a third part
of water in proportion of the wine that was pressed forth, and after a second pressing, they seeth
it to the waiking of the third part. The third is that which is pressed out of the wine lees, and
this *Cato* calls *Phocatum*, [i. Wine of lees.] But none of these wines or drinks will endure aboue
one yeare.

CHAP.

CHAP. XI.

¶ *What neat wines began of late to be in request in Italie.*

IN this treatise of wines I cannot omit this obseruation: That whereas all the good wines properly so called and known in the whole world, may be reduced in fourscore kinds or thereabouts; two parts of three in this number, may well be counted wines of Italie which in this regard farre surpasseth all other nations. And hereupon ariseth another thing more deeply to be noted, That these good wines were not so ripe nor in such credit from the beginning, as now they be.

CHAP. XII.

¶ *Observations touching wine.*

TO say a truth, Wines began to grow in reputation at Rome, about sixe hundred yeares after the foundation thereof, and not before. For king *Romulus* vsed milk when he sacrificed to the gods, and not wine: as may appeare by the cerimoniall constitutions by him ordained, as touching religion; which euen at this day be in force, and are obserued. And king *Numa* his succesor made this law Posthumia in his later daies, *Let no man besprinkle the funerall fire with wine.* Which edict no man doubteth, but he published and enacted in regard of the great want and scarcity of wine in those daies. Also by the same Act he expressly did prohibit to offer in sacrifice to the gods, any wine comming of a Vine-plant that had not bene cut and pruned: intending by this deuise and pretence of religion, to enforce men to prune their Vines, who otherwise would set their minds on husbandrie only and plowing ground for corne, and be slow enough in hazingd themselves for to climbe trees, whereunto Vines were planted. *M. Varro* writeth, That *Atzenius* the king of Tuscanie aided the Rutilians of Ardea in their warres against the Latines, for no other hire and wage but the wine and the vines which then were in the territorie of Latium.

CHAP. XIII.

¶ *Of the ancient vsage of wine: and the wines in old time.*

IN ancient time, women at Rome were not permitted to drink any wine. We read moreover in the Chronicles, That *Egnatius Mecenius* killed his owne wife with a cudgell, for that hee tooke her drinking wine out of a tun; and yet he was cleared by *Romulus*, and acquit of the murder. *Fabius Pictor* in his Annales reports, That a certaine Romane dame, a woman of good worship, was by her owne kinsfolke famished and pined to death, for opening a cupbord, wherein the keis of the wine-sellar lay. And *Cato* doth record, that hereupon arose the manner and custome, That kinsfolke should kisse women when they met them, to know by their breath whether they smelled of Temetum: for so they vsed in those daies to tearme Wine: and thereof drunkenesse was called in Latine Temulentia, *Cn. Domitius* (a iudge in Rome) in the like case pronounced sentence judicially against a woman defendant, in this forme, *That it seemed she had drunke more wine without her husbands knowledge, than was needfull for the preservation of her health,* and therefore afterward definitively, That she should lose the benefit of her dowrie. Certes, the Romanes for a long time made great spare of wine. *L. Papyrius* lord General of the Romane armie, when he was at the point to joyne battell with the Samnites, made no other vow, but this, That he would offer vnto *Iupiter* a little cup or goblet of wine, in case he achieved the victorie and woon the field.ouer and besides, we find in histories, that among donatiues and presents, certaine sextars or quarts of milke haue bene many times giuen, but neuer any of wine. The same *Cato* abouenamed, after his voiage into Spain (from whence he returned with a notable victorie, and in a triumphant manner) in a solemne speech that hee made vnto the people, protested in these words and said, *No other wine I haue drunke since I went, than the very marriages haue.* How farre vnlike was he to men in these daies, who sitting at the table, haue their cup of strong wine by themselves, and giue vnto their guests, for the most part, other small wines to drinke: or if they suffer them to drinke all one and of the best at the beginning of the feast, they will

A will be sure to change and to serue them with worse soon after. In old time, the best wines vsed at feasts were aromatized and spiced with sweet Myrrh, as appeares in the Comedie of *Plautus*, entituled *Perla*. And yet it should seeme there, that sweet Calamus was to be added besides. And hereupon it commeth, that some haue thought, how our forefathers in times past tooke most delight in such spiced cups and Ippocras wines. But *Fabius Dorsetus* the Poet sufficiently declarerh and decideth this point in these verses, when he saith,

Mittebam vinum pulchrum, Myrrhinum.

I sent neat wine,
Which might Myrrhine.

B And againe in his Comedie *Acharistio*:

Panem & Polentam, vinum Myrrhinum.

Both bread and grewell I did present,
And Myrrhine wine of pleasant sent.

I see moreover, that *Scaevola*, *Laelius*, and *Atreus Capito* were of the same mind. For in the Comedie of *Plautus* entituled *Pseudolus*, thus it is written:

*Quod si opus esset dulce promat
Indidem, equid habet? (Char.) Rogas?
Myrrhinum, passum, Deffutum, mella.*

Of dulcet wine if there be need,
What hope is there from thence to speed?
Char. Why aske you that? he furnish'd is
With Myrrhin, Cuits, and Meade ywis.

By which a man may see evidently, that Myrrhina was not onely counted a wine, but reckoned also among the sweet and delicate wines.

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CHAP. XIII.

¶ *Of wine store-houses: and of Opimian wine.*

That there were wine sellars at Rome, and that they vsed there to tun vp Wine in the 633 yeare after the foundation thereof, appeareth plaine by a good prooffe of the Opimian wine: and euen in those daies Italy knew her owne good, and what it was to maintaine vineyards. Howbeit, as yet were not those wines in credit, which now are so ripe and in so great account. And therefore it is, that all the wines of that time bear the only name of that one Consul, and be called Opimian. And thus afterwards also in proceesse of time, the wines that came from beyond the seas for a long space, were in much request, euen vntil our grandfathers daies: E yea, and after that, the Falern wines were in name and called for, as may appeare by that Verse of the Comical Poet;

Quinque Thasij vini inde depromam, Falerni bina.

To measures fise of Thacian wine,
I will draw twain of Falerne fise.

In the 675 yeare after the foundation of Rome, *Pub. Licinius Crassus*, and *L. Titius Caesar*, Censors for the time being, published an Edict, and proclaimed, *That no man should sell any Greek Wine, or Aminean, but after eight Asses the Amphor or Quadantam.* For these be the verie expresse words of the said Edict. Now was Greeke Wine of so great price and estimation, that a man was but allowed one draught thereof at a meale, were the cheare neuer so great, and the feast right sumptuous. But what wines were in request ordinarily at the board, *M. Varro* doth shew in these words: *L. Lucullus* (quoth hee) while he was a boy, neuer saw at his fathers board

Greeke

Greekewine serued vp but once at a meale, how good fouer the fare was otherwife. Howbeit, G himselfe when he returned out of Asia, in a congarie or largeffe that he gaue vnto the people, made a dole and distribution of more than an hundred thousand measures of gallons apiece. C. *Sentius*, whom of late daies we saw Pretor of Rome, testified, that he neuer saw any wine of Chios brought into his house, before the Physitian prescribed and set it down for the *Cardiaca passio*, or the trembling of the heart, whereto he was subiect. But contrariwise *Hortensius* when hee died left about ten thousand barrells full of that Wine vnto his heire. And thus much out of *M. Varro*.

CHAP. XV.

¶ Of *Casars* bonitie and liberalitie in Wine.

BVt what should we say of *C. Julius Casar* Dictator? In that solemne feast of his which hee made at his triumph, did not he distribute among his guests Falernie wines by whole barrells, and Greek wine of Chios by the rundlets? After his returne out of Spain with victorie and triumph, he likewise gave away a largeffe of wine as well Chian as Falern. But at the royall dinner which he made when he entered vpon his third Consulship, he caused all the Hall to be serued thoroughout with Falern, Chian, Lesbian, and Mamertine wines: which was the first time that euer any man saw the seruice of 4. feuerall wines at one feast. Now in farther proces of time, and namely about 700. years after Rome cities foundation, all other Wines began to beare a name and come in request.

CHAP. XVI.

¶ Of Artificiall or made Wines.

CONsidering all that hath bin written, I nothing marvel at such an infinite number of compound and artificiall wines deuised in old time, all for the vse of Physick, wherof we will now treat in more ample manner. To begin therefore with wine-Verjuice, called *Omphacium*, how it should be made, for perfumes and odoriferous ointments, we haue shewed in the former booke. As for the wine named *Oenanthinum*, it is made of *Labrusca*, that is to say, the wild Vine, in this wise: Take two pound of the floures of the wild vine aforesaid, let the same be steeped in a measure of new wine containing about 12 * gallons, for the space of 30. dayes, and then be changed out of that vessell into another. Moreover, the root and grapes of the sayd wild Vine are good for curriers to dresse their leather. The same grapes a little after they haue done blooming are taken to be a singular remedie for to coole those that be troubled with hot and ardent diseases, for naturally they be, as men thinke, exceeding cold: and indeed many of these grapes die in the hot time of Summer before the rest which are called *Solitiales*: but all of them neuer come to full and perfect ripeness. Now if you would keep Pulletin from pecking grapes, take these of the wild Vine before they be thoroughly ripe, mingle and seeth them with their meat: for this will take away all their appetite that way, and breed a loathing after all grapes.

To come now vnto the artificiall wines before named: the first of them, namely that which they call *Adynamon* [i. without strength] is made of very wine in this sort: Take of new white wine 20. Sextars [i. quarts:] of water halfe as much: let them boile together vntill the measure of water before said be consumed. Some take of sea water ten Sextars, of raine water the same: and when they be mingled together, suffer them to worke in the hot Sun for the space of fortie daies. This drinke they vse to giue vnto patients, for such maladies as they searewine would be hurtfull to. A second made wine there is called *Millet Wine*, after this sort: Take of Millet seed that is ripe, huske, head, and all, a pound and a quarter, put it into two gallons of Must, or new wine: after that it hath lien there infused seuen moneths, let the liquor run from it into another vessell, and keepe it for your vse. As touching the wines of *Lotus*, as well the tree and shrub, as the herbe, we haue shewed sufficiently how they ought to be made. Moreover, there be many wines made of sundry fruits, which we will write of hereafter more at large: with a supplement and addition of such interpretations only as be necessarie. And in the first place commeth the date wine, which the Parthians, Indians, and all the Nations of the East in general

A nerall do ordinarily vse. A Modius or pecke of ripe and sweet dates, which they call *Chideæ*, they let lie to steep in 3 gallons of water, and so presse for a liquor for the Date wine. Also the Fig-wine *Sycites*, of the fig which some call *Palmyprimum* (as a man would say, Dates fellows, or next to Dates) others *Catorchites*, is made after the same fashion. But if a man list not to haue it so sweet, in stead of water they vse to put so much of the stones, skins, & seeds of grapes. Of the Fig of Cyprus there is an excellent Vinegre made, yea and abetter than it of the Alexandrine Figs, to wit, growing vpon the *Sycamore*. Likewise a wine is made of the fruit in Syria called *Silique*; as also of peares and all kind of apples. As for the wine of *Pomegranates*, the Greeks name it *Rhoites*: besides the fruit of the Cornel or wild Cherry tree, *Medlars*, *Ser-uices*, dry *Mulberries*, and *Pine-nuts*, doe yeeld feuerall sorts of wine. As for those pine nuts, they must lie steeped in new wines, before the wine be pressed out of them. The rest all be pleasant enough of themselves, and will serue alone for to make wines. The manner of making *Myrtle* wine, according to the receipt and prescription of *Cato*, we will declare soon hereafter. For the Greeks haue another way of their owne, to wit, when they haue foddin in white Must or new wine the tender branches of the *Myrtle*, together with the leaves, and then stamped the same, they put a pound thereof in three gallons more of Must, and cause it to boile vntill such time, as the third part of the wine be consumed. Now that which is made after the same manner of the wild *Myrtle* berries, they call *Myrtidanum*; and this will colour and staine ones hands blacke.

Furthermore, the herbs of the garden do afford vs many wines, namely *Radish*, *Sperage*, *Savory*, & *Majoran*, *Origan*, *Smallach* seed, *Southernwood*, wild *Mints*, *Rue*, *Nep*, or *Calaminth*, running *Thyne*, or *Horehound*. To make these wines, take of the herbes abovesaid two handfulls, and when they be stamped, put them into a little barrell of new Wine containing twelue or thirteen gallons, together with a wine quart of Cuit foddin to the thirds, and a pint of sea-water. But for the wine of *Navevs*, you must take eleuen drams of them, and two quarts of new wine, and so put them together in manner aforesaid. In like sort also the wine *Sculliticum* is made of the root of *Scilla*, or the sea Onion.

To proceed vnto wine made of floures, you haue first and formost wine *Rosat*, after this manner: Take the weight of 40. deniers [i. six ounces] of Rose leaues well stamped, put them into a linnen cloth, together with a little weight, that they may settle downward, & not flote aloft; let them hang thus in 20. Sextars [i. three gallons] and two wine quarts of Must; keep the vessell close stopp'd in any case for 3. moneths, then open it and strain the said floures vnto the liquor. In like manner is there a wine made of the *Celtick Spikenard*, as also of the *Nard sauge*. I find also, that they vse to make a kind of spiced wine or *Ipoeras*, not for sweet perfumes and ointments only, but also for to drinke. At first (as I haue shewed) they made these aromatical wines with myrrh only, but soone after they added thereto *Nard Celrick*, sweet *Calamus*, and *Aspalathus*, either slicing these drugs, or putting them by gobbets into new Must or some dulcet wine. Some aromatise their wine with *Calamus*, *Squinanth*, *Coffus*, *Spikenard*, *Amomum*, *Casia*, *Cinamon*, *Saffron*, *Dates*, and *Azara-bacca*, put thereto in like manner by gobbets. Others take *Spikenard* and *Malabathrum*, of each halfe a pound to two gallons of new wine. Much after the same manner we spice our wines now adades also, but that we adde pepper and hony thereto: to which some call *Condite*, others *Pepper wines*. Moreover, there is deuised a Wine called *Nectarites*, made of *Elecampane*, named by some *Helenium*, of others *Medica*, *Symphyton*, *Idaea*, *Orestion*; and there be also that term this herb *Nectarea*. Now the order of it is to take of the root forty drams, to six Sextars of Must or new wine, and hang it in a cloth together with a weight in manner abovesaid. Moreover, there be wines made of other herbs, to wit, of wormwood, in this sort: Take of *Ponticke Wormwood* one pound, seeth it in forty Sextars [about six gallons and a halfe] of new Wine, vntill a third part be consumed: or without boiling, put certain handfulls or bunches thereof into a vessell of Wine, and so let it lie infused. After the same sort is *Hyssop* wine made, to wit of three ounces (which is a quarter of a pound) of *Cilician Hyssop* cast whole as it is into two gallons of Must, and so let them worke together: or else stamp the *Hyssop*, and so put it into wine. But both these wines are made another manner of way, namely by sowing or setting wormwood & *Hyssop* at the very root of the Vine-plant: for so *Cato* teacheth vs to make *Elleboore* wine, of blacke *Elleboore* or Beare-foot growing at the Vine root. And in like manner also is made the *Scammonite* wine. A wonderfull nature and

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propertie these vines haue, to draw and sucke into them the very taste of other herbs and plants that are set neere vnto them: for euen so all the grapes about Padua haue a relish of the Willows and Osiers that grow there in the marsh grounds. Thus the men of Thafos do plant and sowe either Ellebore, or wild Cucumbers, or els Scammonia about their Vines, to make thereof their diuelliſh wine Pthorium, so called, because it causes a sleep, and procures vntimely birth. Of more herbs besides there be other wines made, the vertues of which herbs we will set downe elsewhere in place conuenient: and namely of Stoechos, the root of Gentian, of Tragoragium, of Dictamum, of Astarabacca, of Daucus, or yellow Carot, Saue, Panace, Acorus, or Galan-gal, Conyza, or Cunilago, Thyme, Mandragoras, and Squinanth. More such wines there were yet, which the Greeks called Scyzinum, Itæomel, and Leitispagites; but as they be growne now out of vs, so the manner of making is unknown.

As touching wines made of trees & shrubs, their maner was to seeth the berries of the green wood of both the Cedars, the Cypres, the Bay, Uniuer, Terebinth, Pine, Calamus, and Lentisk, in new wine. In like maner, the very substance of Chamclaea, Chamæpithys, and Germander. Last of all, the floures also of the said plants serue to make wines, namely, by putting into a gallon of new wine in the vat, the weight of ten deniers or drams of the floures.

CHAP. XVII.

¶ Of Hydromel and Oxymel, [i. Honyed water, and Honyed vineger.]

There is a wine called Hydromel, made of water and hony onely: but to haue it the better, some do prescribe rain water, and the same kept five yeares for that purpose. Others who are more wise and skillfull herein, do take raine water newly fallen, and presently seethe it vntill a third part be boiled away: then they put thereto a third part also of old hony in proportion to it; and so let them stand together in the Sun for forty daies together, from the rising of the Dog-star. Others, after they haue remained thus mingled and incorporate together ten daies, put it vp & reserue it close stopp'd, for their vse; and this is called Hydromel, which being come to some age hath the very tast of wine, & no place affords better than Phrygia.

Moreouer, Vineger was wont to be tempered with hony, [See how curious men haue bin to try conclusions in euery thing!] which they called Oxymel; and that in this manner: *Recipe*, of hony ten pounds or pints; of old vineger five pints; of sea salt one pound; of rain water five Sextares [i. a gallon within one quart:] boile them all together at a soft fire, vntill they haue had ten plawes or walmes: which done, poure them out of one vessell into another, and so let the liquor stand and settle a long time vntill it be stale. All these wines & compositions thus brued, *Themison* (an Author highly renowned) hath condemned and forbidden expressely to be vsed. And to say a very truth, it seems that the vse of them was neuer but in case of necessity: vnlesse a man would beleue and say, that Ipcoras, spiced wines, & those that be compounded of ointments, are Natures work; or that she brought forth plants and trees to no other end, but that men should drink them down the throat. Howbeit, the knowledge surely of such experiments be pleasant and delectable vnto men of great wit and high conceit, whose noble spirits cannot be at rest, but euer inuientue and searching into all secrets. Now to conclude this point, certain it is and past all question, that none of all these compositions, vnles it be those which come to their perfection by age and long time, will last one yeare full out, nay most of them will not keep good one moneth to an end.

CHAP. XVIII.

¶ Certaine strange and wonderfull sorts of wine.

Wine also hath prodigious and miraculous effects: for, by report, in Arabia there is a wine made, which being drunk will cause barren women to beare children; and contrariwise driue men into madnes. But in Achaia principally about Carynia, the wine makes women fall into vntimely trauell: nay if a woman great with childe do eat but the verie grapes, they will slip the fruit of their wombe before their time: and yet both grape and wine differ not in tast from others. They that drinke the wine coming from the cape Trezen, ate thought vnable for generation. It is reported, that the Thassians do make two kinds of wine of contrarie

A contrarie operations; the one procures sleep, the other causeth watching. Among them there is a vine called Theriace, the grape whereof, as also the wine, cureth the flings and biting of serpents, as it were a most especiall Treacle. As for the vine Libanios, it carrieth the odour and smell of Frankincense, and therefore is vsed in sacrifices to the gods. But contrariwise another named Apendios is vtterly condemned for that purpose, and no wine thereof is employed at thealtar; they say also that no fowle will touch the grapes thereof. There is a kind of grape in Egypt which they call Thafia, exceeding sweet it is, and looseth the belly. But contrariwise there be in Lycia that binde as much and cause coſtliueneſſe. The grapes Eebolides in Egypt if they be eaten, cause women with child to be deliuered before their time. Some wines there be that as they lie in the very cellar will turn and proue soure about the rising of the Dog-star; but afterward will recouer their verdure and become quick and fresh again. In like maner there be wines which vpon the sea will change: howbeit the agitation thereof causeth those Wines which endure it to the end to seem twice as old as they be indeed.

CHAP. XIX.

¶ What Wines they be that may not be vsed in sacrifices: and what waies there are to sophisticate new wines.

Forasmuch as our life stands much vpon religion and diuine seruice, wee are to vnderstand, That it is held vnlawfull to offer vnto the gods before sacrifice, the Wine of any vine that hath not bin cut and pruned; or that hath bin smitten or blasted with lightning, or standing neere to a jebbit or tree whereon a man hath hanged dead; or the grapes whereof haue bin troden by men whose legs or feet haue been wounded; neither is that wine allowable for this purpose, which hath bin pressed and run from the refuse of grape stones and skins once bruised and crushed in the presse, or last of all, if the grapes haue bin filed by any ordure dung fallen from above thereupon. Moreouer, Greeke Wines are reiected from this holy vse because they haue water in them. Furthermore, the vine it self is holden good to be eaten, namely, when the burgens and tendrils be first foddren, and afterwards preserued and kept in vineger, brine, or pickle.ouer and besides, it were very meet and conuenient to speake also concerning the manner of preparing and ordering of wine, seeing that the Greeks haue trauailed in that point severally, and reduced the rules belonging thereto, into the form of an Art; and namely, *Ephraimius*, *Aristomachus*, *Coniades*, & *Hicesias*, are therein great professors. The Africans vse to mitigate and allay the tartnesse of their wines with plaſtre, yea and in some parts of their country with lime. The Greeks contrariwise do fortifie and quicken them with clay, with powder of marble, with salt or sea water: and in some places of Italy they vse to the same effect, the shauings and scrapings of stone-pitch. Also it is an ordinary thing in Italy and the provinces thereto confining, for to condite their new wines & to season them with roſin: yea and in some places they mingle therewith the lees of other old wine or vinegre. Oftentimes also they make siber-sauces of it selfe without any other mixture; namely, when they boile new wine sufficiently to the proportion of the strength, vntill the hardnesse do euaporate, and that it wax mild and sweet: but being thus ordered, it will not last, they say, about one yeare. In some countries they vse to seeth their new wine to the consumption of a third part, and make it Cuit, with which they are wont to delay the sharpnes and strength of other wines, & make them pleasant. But both in this kind of wine and in all other, the vessels ought to be prepared for the purpose, & seasoned with pitch: the treatise of which we will put off vnto the next booke, where we purpose to treat thereof, and the manner of making it.

CHAP. XX.

¶ Of diuers kinds of Pitch and Rosins: the manner of the seasoning and confection of new Wines. Also of Vineger and salt.

Among trees that yeeld from them a liquid substance, some there be in the East countries, and others in Europ, which ingender Pitch and Rosin. Asia likewise between both, hath of either side it some such trees. As for the East, the Terebinths put out Turpentine, the best and cleereſt Rosin of all others: next to them, the Lentiskes also haue their Rosin, which they

they call Mastick. After which, the Cipres brings forth a third rosin, but it is of a most sharpe and biting taste. All these trees (I say) carry rosin only, and the same thin and liquid: but the Cedar sendeth forth a thick substance, and good to make pitch & tar. As for the rosin or gum Arabick, it is white in colour, strong of smell, yntoward and troublefome to him that shall boile it. That of Iury is harder, yea, and of a stronger sauer than Turpentine. The Siriack gum smell-eth the hony of Athens. The Cyprian excelleth all others: of a fleshy substance it is, & like in colour to hony. The Colophonian is deeper of colour, and reddish: beat it to powder in a mortar it prouch white: but it carrieth a strong smell with it, which is the reason that the perfumers and makers of ointments haue no use thereof. As for that which the pitch trees of Asia doe yeeld, it is passing white, and the Greeks call it Spagas. All rosins generally will dissolue in oile. Some think verily, that Potters clay will likewise doe the same. But I am abashed & ashamed to report, how in these daies the same pitch wherof we speake, should be in so great account as it is, for making of pitch plaisters, to fetch off the haire of mens bodies, & all to make them more smooth and effeminate. Howbeit, the manner of seasoning new Must therewith (that when it is perfect wine, it may smell of pitch, and bite at the tongues end) is to bestrew it with the powder of pitch at the first working, the heate wherof is commonly past and gone in nine daies. And some think that the wine will be the stronger, if the raw and green floure of the Rosin, as it issueth fresh out of the tree, be put therein, for it will quicken a small and weak wine. Now this mixture and medicine of wine [called Crapula] made thus of rosin, hath contrary effects: for if the wine be over-heady and strong, it allaieth & mortifieth the hurtful force thereof: but if it be too weak, or drink dead & flat, it requieth againe, and giueth it a strong taste. In Liguria and principally along the Po, they vse to season their wines, and bring them all to their feuerall perfections in this manner. If the wine when it is new be mighty and strong, they put in the more of this medicine or confection called Crapula: if it be mild and small, then the lesse goes into it: and keeping this gage with their hand, they make both good. Some would haue one wine brued with another, the weaker with the stronger, and so (forsooth) there must needs arise a good temperature of both together: and verily there is not a thing in the world againe which hath in the nature thereof so great variety.

In some countries, if new wine worke of it selfe a second time, it is thought to be a fault and means to corrupt it: and indeed vpon such a chance & vnhappy accident, it loseth the verdure and quick tast: wherupon it gets the name of Vappa, and is clean turned to dead or souerein which regard alse we giue a man that name by way of scorne and reproch, calling him Vappa, when he is heartlesse, void of reason and vnderstanding. If it were vineger indeed it were another matter: for surely though wine degenerate into it by way of corruption and putrefaction, yet a vertue and force it hath good for many speciall vses, and without which it were not possible to liue so delicately at our table as we do. Moreover, the world is so much giuen to keepe a bruining, tempering, and medicining of wines, that in some places they sophisticate them with ashes, as it were with plaister: in other, they fortifie, recouer, and make them againe by such deuises as are before specified. But to this purpose they take the ashes to chule, of vine cuttings, or of the oke wood, before any other. And forsooth if there be occasion to occupie sea water for this purpose, they prescribe them to fetch it far from land in the deep sea, & kept also from mid-March or the Spring Equinox, or at leastwise from mid-Iune, or summer Sunne-head, and drawn in the night, & when the North wind blowes: but if it be got nere the time of vintage, then it ought to be wel boyled before it will serue the turn. As for the pitch in Italy, that of Brutium or Calabria is reputed for the best, to trim those vessels which are to keepe wine. There is made of the rosin of the tree Picca (as also in Spain there comes from the wild Pines) a certain pitch which is the very worst; for the rosin of those trees is bitter, dry, & of a strong sauer. The difference and sundry kinds of pitch, as also the manner of making the same, we will declare in the booke next following, in the treatise of wild and sauage trees. The faults and imperfections of pitch, ouer and besides those euen now rehearsed (to wit, bitternes, drynes, & strong sent) are known by the founnesse, stinking smoke, and the vduation thereof. But ye shall know good pitch by these experiments, if the pieces broken from it do shine, if between the teeth it relent and be clammy like glew, and haue a pleasant sharpnes and foure tast withall of the vineger. In Asia the pitch is thought best which comes of the trees in mount Ida. The Greeks esteem the trees of the hill Pieria chief for this purpose: and Virgil commends that of Narycia before all.

But

A But to returne againe to our brewing and sophistication of wines, they that would seeme to be cunninger, or at leastwise more curious than their fellows, do mingle therewith blacke Mastick, which is engendred in Pontus, and is like to Bitumen, and thereto adde the root of Iris or the floure de luce, and oile. For this is found by experience, That if the vessels be serued with wax, the wines therein will not hold, but turne foure quickly. Moreover, we daily see, that better it is to put vp wine into those vessels, wherin vineger hath been kept afore, than into such as had dulcet or honied wine. Cato sets downe a receipt to trim and concinnare wine (for that is the very tearme which he vses) in this manner: Take of lie ashes foddren with cuit boyled to the halfe, one fortieth part, temper it with a pound and a halfe of pennitoyall, or salt, and otherwhises with marble braied & beaten into powder among. He makes mention also of brimstone, but rosin he names with the last. But aboue all he wills to refresh and renew the wine when it now begins to come to maturity and perfection, with new wine which he calls Tortum, and I take it, that he means that which ran last out of the wine-press: which he prescribeth also to be put vnto new wines for to get them a fresher color, as the very tincture of wine: and so it will be also of a more fattie substance, and goe down more glib and merrily. See, see, how many deuises of medicines and slubber sauces the poore wine is forced to endure, and all to please our palat, our eye, and other senses: and yet ywis we marue that it is so hurtfull to our bodies. Well, would you haue an experiment to know when wine is going, or enclining to be dead and foure: dip therein a thin plate of lead, if it change color, take it for a signe, that it is in the way of decaying. Of all liquors, wine hath this propertie to vine, to pal, & into change in vineger. But a thousand medicines it doth afford, and books of Physick are full thereof. Moreover, wine lees being dried, will serue as a match to keep fire: and without any other fell to feed it, ye shall haue it burne and flame of it selfe. The ashes thereof is of the nature of Nitre, and hath the same vertues: and in this regard somewhat more, for that it is found to be more fattie and vntuous.

CHAP. XXI.

of wine-cellars.

Now when wine is made and tunned vp in manner afore said, there is as great difference and diuersitie in the bestowing of it in cellars. They of Piemont about the Alpes, doe put vp their wines in wooden barrels, bound well with hoopes, for warmth: and moreover, if the winter be very cold, they make fires in their cellars or butteries, to keep them for being frozen. I will tell you a strange wonder, yet true and to be verified, not by hearesay but plain eiesight. There were seen vpon a time whole heaps & huge lumps of wine congealed into ice, by occasion that the hoopes of the hog-heads burst that contained the wine: and this was held for a prodigious token. For indeed wine of it owne nature will not congeale and freeze, only it will lose the strength, and become apalled in extremity of cold. In warmer climates and more temperat, they fill their wines into great stands and steanes of earth, which they set into the ground, either ouer the head all whole, or else by halfe, deeper or shallower, according to the situation & temperature of the region. Likewise they giue the wine open aire in some places: whereas in other they keep it close within house in tauerne and cellars. And thereto belong these and such like rules. First, that one side of the wine-cellar, or at leastwise the windows, ought to stand open to the North, or to the East in any wise, where the Sunne riseth at the time of the Equinoxiall. Item, that there be no muckhills nor priues neere: no roors of trees, nor any thing of a strong and stinking sauer: for that wine is of this nature, to draw any smell very quickly into it: and aboue all, Fig trees (as well the wild as the tame) be hurtfull to wine-cellars. Item, as touching the order of placing the wine-vessels, they ought to stand a pretty distance one from another: for fear of contagion, for that wine is alwaies most apt to catch infection very soon. Moreover, it matters much of what proportion and fashion the pipes, tubs, and such vessels be made. Those with great bellies and wide mouths, are not so good. Also they must be nealed with pitch, presently vpon the rising of the dog-star: afterwards doused and washed all ouer either in the sea or else salt water, then to bee seasoned and strewed with vine ashes or cley, and being scoured, they ought to sweeten them with a perfume of Myrrhe, which were good to be done also to the very cellars oftentimes. Furthermore, if the wines be weak and smal, they had need to be kept in tubs and hog-heads, let downe within the ground: but the strong and mighty wines may lie aboue

ground in the open aire. Prouided alway, that wine vessels be neuer filled top full: but the void part that is left, and stands about the wine, would be thoroughly dight with thick wine made of withered grapes, or foddren wine to the halfe, and saffron mingled withall, yea, and old pitch, together with cuit. Thus also ought the lids and bunges of the vessels to be ordered, with an addition besides of mastick and pitch. In the deep of Winter they must not be vnstopped and opened in any case, vnlesse the weather be faire and cleare: Neither when the wind is Southerly, or the Moon in the full. This also is to be noted, that the floure or mantel which the wine casts vp to the top, is good when it is white, if it be red, it is a very bad signe, vnlesse the wine it selfe be of that color. Moreouer, if the vessels be hote, or the lids do sweate, it is no good signe. Note also, that the wine which soone begins to mantle and cast vp a floure incontinently, or to yeeld another smell than the own, wil not continue long good. As for the cuit, whether they be foddren to the half or the thirds, they ought to be boiled & made when the skie is without a Moon, that is to say, in the change, and vpon no day else. Moreouer, the decoction must be in leads, and not in coppers, with walnuts, among to receiue all the smoke, which otherwise might infect the cuit. In Campaine they let their best wines lie abroad in vessells, euen in the open aire, to take the Sun, the Moone, raine, and wind, and all weathers that come: and this is thought to bee best for them.

CHAP. XXII.

Of auoiding Drunkennesse.

If a man marke and consider well the course of our life, we are in nothing more busie and curious, nor take greater paines, than about wine: as if Nature had not giuen to man the liquor of water, which of all others is the most whollom drink, and wherwith all other creatures are wel contented. But we thinking it not sufficient to take wine our selues, giue it also to our Horses, Mules, and labouring beasts, and force them against Nature to drink it. Besides, such paines, so much labor, so great cost and charges we are at, to haue it, such delight and pleasure we take in it, that many of vs think, they are borne to nothing else, & can skill of no other contentment in this life: notwithstanding, when all is don, it transports & carries away the right wit & mind of man, it causes fury and rage, and induces, nay, it casts headlong as many as are giuen thereto, into a thousand vices and misdemeanors. And yet forsooth, to the end that we might take the more cups, and poure it downe the throat more lustily, we let it run thorough a strainer, for to abate and gield (as it were) the force thereof: yea, and other deuises there be to whet our appetite thereto, and cause vs to quaffe more freely. Nay, to draw on their drinke, men are not afraid to make poisons, whiles some take hemlocke before they sit downe, because they must drinke perforce then, or els die for it, others, the powder of the * pumist stone, & such like stuff, which I am ashamed to rehearse and teach those that be ignorant of such leaudnesse. And yet wee see these that be stoutest and most redoubted drinkers, euen those that take themselves most secure of danger, to lie sweating so long in the baines and brothel-houses for to concoct their surfeit of wine, that otherwhiles they are carried forth dead for their labour. Ye shall haue some of them again when they haue been in the hot house, not to stay so long as they may recouer their beds, no not so much as to put on their shirts: but presently in the place, all naked as they are, puffing & laboring still for wind, catch vp great cans and huge tankards of wine (to shew what lustie and valiant champions they be) set them one after another to their mouth, pour the wine downe the throat without more ado, that they might cast it vp againe, and so rake more in the place, vomiting or reuomiting twice or thrice together that which they haue drunke, and still make quarrell to the pot as if they had been borne into this world for no other end but to spill and mar good wine: or, as if there were no way els to spend and wast the fame, but thorow mans body. And to this purpose, were taken vp at Rome these forreine exercises, of vaulting and dancing the Morisk, from hence came the tumbling of wraistlers in the dust and mire together, for this, they shew their broad breasts, beare vp their heads, and carrie their neckes far backe. In all which gestures, what do they els but professe that they seek means to procure thirst and take occasion to drink? But come now to their pots that they vse to quaffe and drink out of: are there not grauen in them faire pourtrais think you of adulteries? as if drunkennesse it self were not sufficient to kindle the heart of lust, to prick the flesh, and to teach them wantonnes. Thus is wine drunke out of libidinous cups: and more than that, he that can quaffe best and play the

A drunkard most, shall haue the greatest reward. But what shall we say to those (would a man think it?) that hire one to eat also as much as he can drinke, and vpon that condition couenant to yeeld him the price for his wine drinking, and not otherwise. Ye shall haue another that will inioine himselfe to drinke euery denier that he hath won at dice. Now when they are come to that once and be thoroughly whittled, then shall yee haue them cast their wanton eyes vpon mens wines, then fall they to court faire dames and ladies, and openly bewray their folly euen before their jealous and storne husbands: then (I say) the secrets of the heart are opened and layed abroad. Some ye shall haue in the mids of their cups, make their wils, euen at the very board as they sit: others againe cast out bloudy and deadly speeches at random, and cannot hold but blurt out those words which afterwards they eat againe with the (words point: for thus many a man by a lauius tongue in his wine, hath come by his death and had his throat cut. And verily the world is now growne to this passe, That whatsoever a man faith in his cups, it is held for sooth: as if Truth were the daughter of Wine. But say they escape these dangers: certes speed they neuer so well, the best of them all neuer seeth the Sun-rising, so drowfie and sleepey they are in bed e uery morning, neither liue they to bee old men, but die in the strength of their youth. Hence comes it, that some of them looke pale, with a paire of flaggie blabd-cheekes; others haue bleared and fore eyes: and there be of them that shake fowith their hands, that they cannot hold a full cup, but shed and poure it downe the floore. Generally they all dreame fearfully (which is the very beginning of their hell in this life) or els haue restless nights: & finally, if they chance to sleep (for a due guerdon and reward of their drunkennesse) they are deluded with imaginary conceits of Venus delights, defiled with filthy and abominable pollutions: and thus both sleeping and waking they sin with pleasure. Well, what becomes of them the morrow after? they belch foure, their breath stinketh of the barrell, and telleth them what they did ouer night: otherwise they forget what either they did or said, they remember no more, than if their memory were utterly extinct and dead. And yet our iolly drunkards giue out and say, That they alone inioy this life, and rob other men of it. But who seeth not, that ordinarily they lose not onely the yesterday past, but the morrow to come? In the time of *Tiberius Claudius* the Emperor, about 40 years since, certaine out-landish Physitians and Monte-banks, who would seem to set themselves out by some strange nouelties of their own, & to get a name, brought vp at Rome a new deuise and order, to drinke fasting, and prescribed folk to take a good hearty draught of wine before meat, and to lay that foundation of their dinner. Of all nations, the Parthians would haue the glory for this goodly vertue of wine-bibbing: and among the Greeks, *Alciades* indeed defered the best game for this worthy feat. But here with vs at Rome *Noellius Torquatus* a Milanais, wan the name from all Romans & Italians both. This Lombard had gone through all honourable degrees of dignity in Rome, he had bin Pretor, and attained to the place of a Proconsull. In all these offices of state he wooon no great name: but for drinking in the presence of *Tiberius*, three gallons of wine at one draught and before he tooke his breath againe, he was dubbed knight by the synamme of *Triconius*, as one would say. * The three gallon knight: and the Emperor, stricke with, and cruell otherwise though he was, now in his old age (for in his youth-fall daies he was giuen ouermuch to drinking of wine) would delight to behold this renowned and worthy knight, with great wonder and admiration. For the like rare gift and commendable qualitie, men think verily that *C. Pifo* first rise, and afterwards was aduanced to the Prouostship of the city of Rome, by the said *Tiberius*, & namely, for that in his court being now emperor, he fat 2 daies and 7 nights drinking continually, and neuer stirred foot from the board. And verily *Drusus Caesar* (by report) in nothing more resembled his father *Tiberius*, than in taking his drinke. But to return again to noble *Torquatus*, herein confitted his excellency. That he did it according to art (for this you must take withall, there is an art of Drinking, grounded vpon certain rules and precepts. *Torquatus* (I say) drank he neuer so much, was not known at any time to falter in his tongue, neuer ealed himself by vomiting, neuer let it goe the other way vnder board: how late (sooner he sat vp at the wine ouer night, he would be sure to relieue the morning watch & sentine) He drunke most of any man at one entire draught before the pot went from his head: and for smaller draughts besides, he went before all other in number; his wine he neuer tooke while the cup was at his mouth, but iustly obserued the rule of drinking with one breath; he was not known to spit for all this: & to conclude, he would not leaue in the cup, so much as would dash against the paucement, & make the least sound to bee heard: a special point and precise law

* not the three gallon knight: Whereupon he was called *Tiberius Torquatus* for *Tiberius* Nero.

to prevent the deceit of those that drinke for a wager. A singular glory no doubt in him, and a rare felicity. *Tergilla* challenged *M. Cicero* the younger, son to that *M. Cicero* the famous Orator, and reproched him to his face, that ordinarily he drunk 2 gallons at once: and that one time above the rest when he was drunke, he flung a pot at *M. Agrippa* his head. And truly this is one of the fruits and feats of drunkenness. But blame not young *Cicero*, if in this point yet he desired to surmount him that slew his father, *M. Antonius* I mean; for he before that time strained himselfe, and strove to win the best game in this feat, making profession thereof, as may appear by a booke that he compiled and set forth with this title, *Of his owne drunkenness*: wherein hee was not ashamed to avow and justifie his excess and enormities that way: and thereby approoved (as I take it) under pretence and colour of his drunkenness, all those outrages of his, all those miseries and calamities that he brought vpon the whole world. This treatise he vomited and H spued out a little before the battell of *Actium*, wherein he was defeated: whereby it may appeare very plainly, that as he was drunken before with the blood of citizens, so still hee was the more blood-thirsty. For this is a property that necessarily followeth this vice. That the more a man drinketh, the more he may, and is alwaies dry. And herein spake to good purpose a certain Embassadour of the Scythians, saying, That the Parthians the more they drunke, the thirstier they were.

As touching the nations in the West part of the world, they have their drinks also by themselves made of *corn steeped in water, whereof they will drinke to the vntterance, and be drunk: and namely in Spaine and France, where the manner of making the same is all one, howsoever I they haue *diuers names: and in Spaine they haue devised means that these drinks (Ale or Beer) will abide age, & continue stale. In Egypt likewise they haue inuented such kind of drinks made of corn: so that no part or corner of the world there is, but drunkenness reigneth. And verily these liquors howsoever they be named, they vse to drinke entire as they bee, and made of the very strength of Malt: neuer delaying the same with water, as we do wines. But it may be sayd, That Nature hath endowed & enriched those countries with abundance of corn, and therefore they may wel do it. Oh how industrious we are to maintain our vices! There is a deuise found, (would euer any man haue thought it?) how water also should make men drunke. Two liquors there be, most pleasing and acceptable to mens bodies, wine within, & oil without. Both proceed from two speciall trees, howbeit, of the twaine, Oil is necessary, and Wine may be better K spared. And verily, men haue not bin idle in the making of good oil: howbeit, they haue bene more addicted and giuen to make Wines for drinke, as may appear by this, that reckoning but the generall kinds thereof, a man may find 195 sorts of wine: but if a man would subdiuide and distribute those heads into their branches, he should meet almost with twice as many: but of Oyles there bee not so many kinds by farre. Whereof we purpose to treat in the booke next following.



THE

THE FIFTEENTH BOOK OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS

SECVNDVS.

CHAP. I.

¶ The natures of trees that beare Fruit.

- A** Here were no oliue trees grow in Italy, but vpon the coast side, and that within 40 miles of the sea, about the 440 yere after the foundation of the city of Rome; if it be true that *Theophrastus* saith, who was one of the most famous and renowned Authors among the Greeks. *Pencstella* writeth moreover, and affirmeth, that during the reign of *Tarquintus Priscus* (which was much about the 183 yere from the foundation of the city of Rome) there were no Oliue trees at all to be found, either in Italy, Spaine, or Africke: whereas now at this day they are scene all Italy ouer, yea and be come as far as the regions beyond the Alps, euen into the mids and very heart of France and Spaine. Indeed, in the yere after the foundation of Rome 505 (which was when *Appius Claudius*, the nephew of that great *Appius Claudius* surnamed the Blind, and *L. Iunius* were Consuls together) a pound of the oil was sold for twelue Ases: and not long after (namely, in the 680 yere) *M. Seius* the son of *Lucius* (one of the *Ædiles Curule* for the time being) brought downe the market so well, that a man might haue bought ten pound for one As; and at that price he serued the people of Rome throughout all that yere. Lesse cause therefore **D** a man hath to maruell hereat, who knoweth how not past 22 yeares after that (namely when *C. Pompeius* was the fourth time Consul) Italy was able to furnish other nations and prouinces with oil of Oliues. *Hesiodus* also (who was especially addicted to the study of husbandry, and of all things thought it most necessarie to be taught and published for the good of mankind) wrote thus much concerning the Oliue, That neuer a man was knowne to that day for to haue gathered the fruit of that Oliue tree, which himselfe had planted: so late of growth were those trees in his time, and so slowly came they forward. But now adates they come vp of kernels and stones set in plots of ground for the purpose: and being transplanted againe, they beare Oliues the second yere after. *Fabianus* saith, That Oliues loue not to grow either in the coldest or the hottest grounds.
- E** *Virgil* hath set downe 3 kind of Oliues, to wit, Orchita [i.e. the great round Oliues:] Radij, [i.e. the long Oliues:] and those which are called Pausia. He saith moreover, That the Oliue trees require no tending or dressing at all, and need neither the hooke to be pruned, nor the rake and harrow to be moulded, ne yet the spade to be digged about. Doubtlesse, the goodnesse of the soile, and the temperature of the climat especially, are very requisite and much materiall alone, without further helpe: howbeit they vse to be cut and pruned, yea, they loue also to be scraped, polished, and clenfed between where the branches grow ouer-thicke, euen as well as vines, and at the same season.
- F** The time of gathering Oliues ensueth presently vpon the vintage of grapes; but greater industry and skil is required to the making and tempering of good oile, than about new wine: for ye shall haue one and the self same kind of oliue to yeeld a different iuice, and diuers oiles: first and foremost, of the Greene oliue and altogether vnrripe, there is drawne the Oile oliue; which hath of all other the best verdure, and in tast excelleth the rest: and of this oile, the first running that commeth from the presse, is most commended: and so by degrees better or worse, as the oile

oile is drawn before or after, out of the presse: or, according to a late inuention, by treading them with mens feet in little panniers, and vpon hardles made of small and fine oziars. This is a rule. The riper that the oliue is, the fatter will the oile be, and more plentifull; but nothing so pleasant in tast. And then fore the best season to gather Oliues, both for goodnesse and abundance of oile, is when they begin to shew blacke. And such half-ripe Oliues we in Latine call *Drupæ*, and the Greekes *Drypetæ*. To conclude, it skilleth very much whether the berries be ripe vpon the tree, or mellow within their presse: also whether the tree be watered, that is to say, the oliues hanging thereupon be drenched and refreshed with sprinkling water, or haue no other moisture than their owne, and that which they receiue by dewes and raine from heauen.

CHAP. II.

¶ Of oyle.

Oile. Oliue commeth to haue a rank and vnplesant tast if it be old kept and stale, contrary to the nature of wine, which is the better for age. And the longest time that oile will continue good, is but one yere. Wherein surely if a man would well consider, he may obserue the great prouidence of Nature. For seeing that wines are made to seruice for intemperance and drunkennesse, there is not that necessitie to drinke much thereof, and to spend them out of hand: and more than so, the daintie tast that they haue when they be stale, induceth men to lay them vp and keep them long. But contrariwise, he would not haue vs make such spare of oile: and therefore by reason of the generall vse and need thereof, the hath made it vulgar and common to all.

As touching this benefit and gift of Nature bestowed vpon mankind, Italy of all other nations in the world carrieth the name for the goodnesse thereof: but principally the territory or countie of Venetrum, and namely, that quarter lying toward Licinia, which yeelds the oile called *Licinianum*: whereupon there be no oliues comparable to them of Licinia, both for to seruice the perfumers, in regard of the pleasant smell which that oile doth giue, so appropriat vnto their ointments: as also to furnish the kitchen and the table (as they say that be fine toothed, & haue a delicate taste): which is the cause (I say) that this oile carrieth the only name. And yet these oliues of Licinia haue this priuiledge besides, that birds loue not to come neere them. Next to these Licinian oliues, the question is between them of Iulia & Batica, whether of them should go away with the price for their goodnesse: and hard it is to say, which is the better of the two. A third degree there is vnder these twoboue named, namely, of the Oliues that come from all other prouinces, setting aside the fertile soile of that tract in Africke, which yeeldeth so great increase of corn. For it should seeme that Nature hath set it apart for graine onely, seeing it so fruitfull that way: and hath not so much enuied it the benefit of wine and oile, which the hath denied those parts, as thought it sufficient that they might glory, and haue the name for their harvests. As for other points belonging to oliues, men haue erred and bin deceived very much: neither is there in any part concerning our life, to be found more confusion, than is therein as we will shew and declare hereafter.

CHAP. III.

¶ The nature of the Oliue berries: also of yong Oliue Plants.

This fruit called the Oliue, consists of a stone or kernell, of oile, a fleshy substance, and the lees or dregs: now by these lees (called in Latine *Amurca*) I mean the bitter liquor of the grounds that the oile yeelds. It comes of abundance of water: and therefore as in time of drought there is least thereof, so in a rainy and watery constitution, you shall haue store and plenty. As for the proper iuice of the oliue, it is their oile; and the chiefe is that which comes of those that are vnpripe, like as we haue shewed before, when we treated of *Ompharium*, or the Oliue verjuice. This oile substance doth increase and augment within the Oliue vntill rising of the star *Arcturus*, to wit, 16 daies before the Calends of October; after which time, their stones and carmous matter about them do rather thriue. But marke, when there follows a glut of raine and wet weather presently vpon a dry season, the oile in them doth corrupt and turn all (well neare) into the lees aboue said, which may easily be perceived by the colour: for it causeth

A seth the Oliue berrie to looke blacke. And therefore when this blacknesse begins to appeare, it is a sign that they haue fomwhat (although very little) of the lees; but before that, they had non at all. And herein men are foolishly deuced taking this marke for the beginning of their ripenesse: which blacke hew indeed is a signe of their corruption, and betokens that then they are in the way to be stark naught. They erre also in this, that they suppose an Oliue the more grown it is in carnositie, to be the fuller of oile: whereas in very truth, all the good iuice in them is conuerted then into the grosse and corpulent substance thereof, and thereby also the stone and kernell come to be big and massive: which is the cause, that they had need of watering at that time, most of all. Which being done by great paine and labour of man, or happening through raine and plenty of thowers, vntill it infuse a drie season & faire weather to extenuate that grosse substance into which the Oliue had turned the foresaid iuice and humor, all the oile is consumed and lost. For it is heat & nothing els (as *Theophrastus* saith) which ingendreth oile: & therefore both about the presse at first, & also in the very garners where Oliues be laid after, they vse to keep good fires, by that means to draw the more oile forth. A third default there is in oile, and that comes of too much sparing and niggardise: for some men there are, who being loth to be at cost to pluck and gather Oliues from the tree, wait still and looke that they should fall of themselves. And such folke as would seeme yet to keepe a meane herein, namely, to take some paines and be at a little cost, beat and pell them downe with perches and poles: whereby they do offer wrong to the poore trees, yea, and hinder themselves not a little the yere following, when they shall find how much it is out of their way, thus to break their boughes and branches.

C Whereupon the law in old time prouided well for this inconuenience, by an expresse inhibition to all gatherers of Oliues, in these words, *Non man so hardie as to break, strike, and beat the Oliue tree*. But they that go most warily and gently to worke, stand vnder the tree, and with some canes shake the boughes and branches therewith, or lightly smite them: but in no case let driue and lay at them either with full down-right or croffe-blowes. And yet as heedfull as they be in so doing, this good they get by striking and knapping off the yong shootes and sprigs which should beare the next yere, that they haue the trees car fruit but once in two yeres for it. The like hapneth also, if a man stay till they fall of themselves: for by sticking on the tree beyond their due time, they rob the oliues to come after, of all their nutriment wherewith they should be fed, and detain the place likewise where they should come forth and grow. An euident prooffe herof is this, That oliues vntill they be gathered before the ordinary & yearly western winds do blow, they gather heart again vpon the tree, & wil not so easily fall as before. Men vse therefore to gather the *Pausian* Oliues first after Autumne, which are fullest of carnosity, not so much by nature, as by misgouernment and disorder: soone after, the round *Orchide*, which haue plenty of oile, & then the oliues *Radix*; and these, forasmuch as they be most tender, and soonest overcome with abundance of the lees (which we called before *Amurca*) are thereby forced to fall. Howbeit, such oliues as be thick skinned and hard; rough also and admitting no wet & raine (by which means they are the least of all others) wil abide on the tree till March: and namely, the Licinian Oliues, the *Cominian*, *Contian*, & *Sergian*, which the *Sabins* call *caial*: all which change not colour & looke black before the foresaid Western wind blowes, that is, about the 6 day before the Ides of February; for by that time folk think they begin to ripen. Now for as much as the best & most approued oile is made of them, it seems that reason also being conformable to this defect of theirs, justifies, & aproues the same in the end. And this is commonly receiued and held among them, that cold winters breed scarcity and dearth: but full maturity brings plenty, namely when they haue leisure to ripen on the tree: howbeit this goodnesse is not occasioned by the rime, but by the nature rather of those kind of oliues, which be long ere they turn into the foresaid dregs *Amurca*. Men are also as much deuced in this, that when Oliues be gathered, they keep them vpon boarded floors in fellars and garners, & wil not presse them before they haue sweeted, whereas, in truth, the longer they lie, the lesse oile they yeeld, & the more dregs of lees. For by this means the ordinary proportion they say is, to presse out of euery Modius of Oliues, not about 6 pound of oile. But no man makes any reckoning of the lees, how much it increaseth in measure day by day, in one & the very same kind of Oliues, the longer that they be kept ere they be pressed. In one word, it is a common error felted euery where, that men do think the abundance of oile is to be esteemed according to the bignes of the oliues: considering that the plenty of oile consists not in the greatnes of the fruit as may appeare by those that

of some are called Roiall, of others Majorina, and Phaulia, which every man knoweth, are the biggest and fairest Oliues to see to, & yet otherwise have least oil in them of any others. Likewise in Ægypt the oliues are most fleshy & full of pulp, howbeit, least oleous. As for the country Decapolis of Syria, the oliues indeed be very small there, & no bigger than Capers: yet commended they are for their carnosity. And for that cause, the oliues from the parts beyond sea are preferred before the Italian, for goodnesse of meat, and as better to be eaten, yet those of Italy yeeld more oil. And euen within Italy, the Picene and Sidicine oliues surpass the rest. For in truth, these are first collected and seasoned with salt: or els (as all others) prepared & condite either with lees of oil, or wine cut. Some oliues there be, which they suffer to swim alone as they be, in their owne oil, without any help and addition of other things; and such be called Colymbades. And the same they vse otherwhiles to bruise and cleane from their stones, and then confect them with green herbs, which haue some pleasant & commendable taste. Others there are, which being otherwise very green and vnripe, are presently brought to maturity, and made mellow, by lying infused and foking in hot scalding water. And a wonder it is to see, how Oliues wil drinke in a sweet liquor, and how by that means they may be made toothsome, yea, and to carry the taste of any thing that a man would haue them. Among oliues there be also that are of colour purple, like to those grapes which change colour when they begin to ripen. Moreover, besides the above named sorts of oliues, there be some named Superbe [i. proud.] Also there are Oliues to be found, which being dried by themselves onely, are passing sweet, yea, and more delicate than raisins: many there are very season, and yet such are in Africke and about the city Emerita in Portugall.

As touching the very oil it self, the way to preserve it from being overfat and thick, is with salt. If the barke of an Olive tree be slit and cut, it will receive the rellice and smell of any medicinal spice, and the oil thereof will seem aromatized: otherwise pleasant in taste it is not, like as wine is: neither is there such difference in so many kinds of oliues as there is in wine: for surely we cannot at the most observe about three degrees in the goodnesse of oiles, namely, according to the first, second, and third running out of the presse. Finally, the thinner that oil is, and the more subtil, the finer and daintier is the smell thereof: and yet the same same sent, in the very best of them all, continueth but a small time.

CHAP. III.

¶ The nature of Oile Olive.

The property of oil is to warm the body, and to defend it against the iniuries of cold: and yet a souveraine thing it is to coole and mitigate the hot distemperature of the head. The Greekes, whom wee may count the very fathers and fosters of all vices, haue peruered the true and right vse thereof, to serue for all exesse and superfluitie, euen as far as to the common anointing of their wraistlers with it, in their publick place of exercise. Known it is for certain, that the gouernors and wardens of those places, haue sold the oil that hath bene scraped from the bodies of the said wraistlers for 80 Sesterces at a time.

But the stately maiesty of Rome contrariwise hath done so great honour to the Olive tree, that euery yere in Iuly, when the Ides come, they were wont to crowne their men of armes and gentlemen marching by their troups and squadrons in solemn wise, with chaplets of olive, yea and the manner was of captains likewise to enter ouant in petty triumphes into Rome, adorned with Olive coronets. The Athenians also honoured their conquerors with Olive garlands. But generally the Greekes did set out their victors at the games of Olympia, with branches of the wild-olive.

CHAP. V.

¶ The manner how to order Oliues.

Now will I report the precepts and rules set down by Cato, as touching oliues. His opinion is, that the greater long Olive Radius of Salernum, the big Orchites, the Pausia, the Sergiana, Cominiana, and the Albicera, should be planted in hot and fat grounds. He adds moreover (as hee was a man of singular dexterity and prudent spirit) which of them in the neigh-

A neighbour territories and places adjoining, were taken for the best. As for the Licinian Oliues, he saith, They would be planted in a weely and cold hungry ground: for if it be a fat soile and a hot, the oil will be corrupt and naught, and the very tree it self will in short time be killed with ouermuch fertility and bearing too great a burden. Moreover, they will put forth a red kind of mosse, which eateth and consumeth the tree. To conclude, his mind is, that Olive hort-yards should be exposed to the sun, yet so, as they regard the West wind also in any case, for otherwise he commendeth them not.

CHAP. VI.

¶ How to keep Oliues, and the way to make oile of them.

Cato alloweth of no other means to keep and preserve Oliues (and specially the great ones, made like cullions, named thereupon Orchita, and the Pausia) but either in brine and pickle when they are Greene, or else among Lentisk branches when they are bruised and broken. The best oil is made (saith he) of the greenest and sourest oliues. Moreover, so soon as euer they be salt, they must be gathered from off the ground; and if they be fouled and berained with the earth, they ought to be washed clean, and then laid to dry three daies at the most. Now if it fall out to be weather disposed vnto frost, they should be pressed at 4 daies end. He giueth order also to bestrew and sprinkle them with salt: saying moreover, that if they be kept in boarded sollors or garners, the oil will be both lesse in quantitie, & worse withal. So it will be also, if it be let lie long in the lees, or together with the cake and grounds, when they be bruised and beaten: for this is the very fleshy and grosse substance of the Oliues, which cannot chuse but breed filthy dregs. And therefore he ordaineth, that oftentimes in a day it should be poured out of one vessell into another, & so by setting clarified from the grounds, & then to put it vp afterwards into pans and panchions of earth, or els into vessels or kinnels of lead, for brasse metall wil mar oil. All this should be done within close presses and rooms, and those kept shut, where no aire or wind may come in, that they might be as warm and hot as stoues. He forbids also to cut any wood or fuel there, to maintain fire; for that the fire made of their stoues and kennels, is most kindly of any other. To the end also that the grounds & lees should be liquified and turn into oile, euen to the very last drop, the oil should be let run out of those vessels or kinnels as foresaid into a vat or cistern; for which purpose the vessels are often to be clenfed, & the ozier paniers to be scoured with a sponge, that the oile might stand most pure & clear. But afterward came up the deuise to wash oliues first in hot water, & then immediately to put them whole as they are, into the presse, for by that means they squeeze forth lees & all: and then anon to bruise and crush them in a mil, & so presse them in the end. Moreover, it is not thought good to presse the second time about 100 Modij, which is the full proportion of one pressure, & it is called *Factus*. That which after the mil comes first, is named the floure of the oil, or the Mere-gout. Lastly, to presse 300 Modij, is thought to be foure mens work ordinarily in one night and a day.

CHAP. VII.

¶ Of Oile Artificiall

IN Cato his time there was no artificiall Oiles, I meane, no other but that of the Olive; and therefore I suppose it was, that he made no mention thereof: but now adies there be many kinds. First will we treat of those that are made of trees, and principally before all the rest, of the oile of the wild olive: thin it is, and much more bitter than that of the other gentle & true Olive, but good for medicines onely.

Very like to it, is that which is made of Chamelra, an herb or shrub growing in stony places to the height of a span & no more, with leaues and berries resembling those of the wild olive. The next is that which commeth of Cicio, or Ricinus, [i. Palma Christi] a plant which groweth plentifully in Ægypt, which some call Croto, others Trixis or wild Sesam; but long it hath not been there. In Spaine likewise this Ricinus is found of late to rise suddenly to the height of an Olive tree, bearing the stalk of Ferula or Fennel-Geant, clad with leaues of the vine, and replenished with seed resembling the graines or kernels of small and slender grapes, and of a pale colour withall: we in Latine call it Ricinus, of the resemblance that the seed hath to a tickle,

which is a vermin that annoies sheepe. For to gather an oile thereof, the manner is to seeth the seeds in water; the oile will swim aloft, and so it is scummed off. But in Egypt (where there is abundance thereof) they neuer use any fire or water about it, only they corn it well with salt, and then presse out the oile, which is very fullsome and naught to be eaten, good only for lamps.

The oile of Almonds, which some call Metopium, is made of the bitter Almonds, drid stamped, and reduced into a masse or lumps, which being sprinkled and foked with water, and then beaten againe in a mortar, is put into a presse or mill, and the oile drawne therout.

There is an oile made also of the Bay, together with the oile of ripe oliues ready to drop from the tree. Some take the Bay berries only, and therout presse oile de-Baies: others vse the leaues and nothing els; and there be againe, who with the leaues take also the rind of the Bay berries; yea and put thereto Storax Calamita, and other sweet odors. Now for this purpose, the Laurell with broad leaues growing wild, and bearing blacke berries, is the best.

Like vnto this oile, is that which they make of the blacke Myrtle, and the broad leaved kind thereof is the better: the berries of it ought to lie infused first in hot water, and afterwards to be boiled. Some seeth the tenderest leaues that it hath in Oile-Oliue, and then presse them forth. Others put the leaues first in the oile, & then let them stand conserved in the sun, and there take their ripening.

After the same manner is the oile made of the garden Myrtle; but that of the wilde which hath the smaller seed is the better: and this Myrtle some call Oxymyrine, others Chamemyrsine; and some againe name it for the smallnesse, * Acaron, for short it is and full of little branches.

Moreover, there be oiles made of the Citron and Cypress trees: likewise of wall nuts which they call Carynon: also the fruit of the Cedar, named Cedrelaron.

Semblably of the graine called Gnidium, to wit, the seed of Chamelæa and Thymelæa, well elenfed and stamped. In like manner of the Lentisk. As for the oile Cyprinum, how it should be made of the Egyptian nut and of Ben for to serue perfumers, hath bin shewed before. The Indians (by report) do make of Chest-nuts, of Sefame seed, & Rice. The people Ichthyophagi as they liue by eating fish only, so they make oile of fishes. And in case of necessity, other wildes men vse to draw an oile out of the berries of a Plane tree also, being steeped in water and salt, which serues for lamp oile. Yet and there is an oile made of the wild vine Oenanthæ, as we haue said already in the treatise of Ointments.

As touching the oile which the Greeks call Gleucinum, it is made with new wine and oile-olue, boiled at a soft fire. Others there be that let the wine consume all into oile, and without any fire at all, do compass the vessell wherein this composition is made, with the cake and the refuse of grapes when they be pressed, and couer it all ouer for the space of 22 daies, so as twice a day they be all mixed thoroughly together. Some there be who put thereto not only Majoram, but also the most precious and exquisite odors that they can meet withal: and our common fencing-halls, and places of publick exercises be perfumed with these sweet oiles, and do smell of them; but such they be as are the cheapest of all other.

Ouer and besides, there is made an oile of Aspalathus, sweet Calamus, Balme, Iris or Flou-de-lis, Cardumome or grains of Paradise, Melilot, French Nard, Panace, Marjoram, Elecampane, and the root of Cinamon, taking all these and letting them lie infused in oile, and so pressing out the iuice thereof. So is oile Rosat made of Roses: the oile of Squinanth of the sweet rush, which is most like to the Oile Rosat. Likewise of Henbane, Lupines, and the Daffadill: the Egyptians get great store of oile out of Raddish seed, or the grasse called Gramen (which is Dent-de-chien or Quich-grasse) and this oile they call Chortion. After the same manner the Sefame seed doth yeeld an oile, as also the Nettle, which in Greeke they call Cnecion, or rather Cnidium. As for the oile of Lillies, it is made in some places, where they feare not to let it stand abroad in the aire infused to take both Sun and Moon-shine; yea and frosty weather.

They that inhabit between Cappadocia and Galatia, do compound a certain oile of herbes growing among them, which is a foueraigne remedy for sinewes either wounded or otherwise grieved, and they call it Selgiticum: it is much in effect like to that oile which is made in Italie of Gums, by the people Eguini.

Now for the oile of Pitch, which they call Picinum, it is made of the vapors and smoke that arise from Pitch whiles it boileth, and receiued in fleeces of wooll spread ouer the pots mouth wherein

A wherein the said Pitch is foddren: which fleeces afterwards are well wrung, and the oile is pressed out thereof. The best oile is that which cometh from the Brutian or Calabrian pitch: the same is most fat of all others, and fullest of Rosin. The colour of the oile is reddish.

Vpon the coasts and maritime parts of Syria, there is an oile engendereth of it selfe, which the Greeks call Elaomeli: a fatty and greasie substance it is, thicker than honey, and thinner than Rosin, of a sweet tast, issuing out of trees, and is onely medicinable and good in Physicke.

As touching old oile, it serues in right good stead for sundry sorts of maladies. It is thought also very singular for to preferue luory from putrefaction, for this is certaine, that the image of SATVRNE at Rome is full of oile-olue all within.

CHAP. VIII.

¶ Of the lees or dregs of Oile-olue, called Amurca.

Cato hath highly commended above all, the lees of Oile-olue: for he would haue the barrels, hogheads, and other vessels which hold oile, to be therewith besmeared, that they should not drinke vp the oile. He denied also, that the threshing floors should be wrought and tempered with oile lees, that they might not chawne & gape, nor no Ants breed within the chinks and cranies thereof. Moreover, he thinks it very good that the mortar, plaister, and parget used about the wals of corn barns, as also their floors, should be well sprinkled and tempered with the said lees; yea, and the presses and wardrobes where apparell is kept, ought to be rubbed therewith to keep out mothes, worms, spiders, and such vermine that do hurt to clothes. He affirmeth besides, that is good against certain disteases of four-footed beasts, as also to preferue trees, yea and excellent for inward vicers of a mans body, but especially those of the mouth. Being foddren, it is singular good (as he saith) for to annoint and make gentle and supple all bridle reins, leather thongs, shoes, and axletrees of carts and wagons; likewise to keepe all vessels of brasse from rust, and also to giue them a bright and pleasant colour: moreover, all the wooden implements of an house generally throughout, and vessels made of earth and clay, wherein one would keep dry figs in their verdure, would be annointed therewith: or if one were desirous to preferue the Myrtle, leaues, fruit, and all vpon the branches, or any such thing, there is nothing better than the said Amurca. Last of all, he saith, that what wood soeuer for fewell is dipped in these lees, it will burne cleare without any smoke.

D M. Varro affirmeth, that if a Goat chance to lick with his tongue, or to brouse an oliue when it buddeth the first spring, the same tree will surely be barren and lie in great danger to miscary and die. Thus much of the Oliue tree, and of the oile of Oliues.

CHAP. IX.

¶ All kinds of Fruit good to eat, and their Nature.

E AS for all other fruits of trees, they are hardly to be numbred and reckoned by their forme and figure, much lesse by their sundry tastes and diuers iuices that they yeeld, so intermingled they are together by varietie of grafting one into another.

CHAP. X.

¶ Of Pine-nuts, or Pine-apples, fourte sorts.

THE Pine-nuts, which are the biggest of that kind and hanging highest vpon the tree) doe containe and nourish slender kernels enclosed within certaine hollow beds full of holes, and besides clothed and clad with another coat or husk of a dark murky colour: wherein may be seen the wonderfull care and providence of Nature, to bestow the seedes so soft. A second kinde there be of these Nuts called Terentines, having a shell or huske verie brittle and easie to be crushed between ones fingers, and as soon as they are pecked through with birds bills, who after that manner slich and steale them from off the tree. A third fort yet there is of them, that come of the gentle pitch trees, having their kernels couched within a thin husk or skin more like than a shell, and the same so soft, that it may be chewed and eaten together with the kernell. Now there is a fourth fruit growing of the wild Pine, and called those nuts are of the Grecians, Pitydia.

dia; and these be singular good against the cough. The Taurines in Calabria, haue a deuice to confest Pine-nut kernels, by seething them in hony; and being thus condite, they call them Aquiceli. To conclude, at the solemne and festiual games holden at Isthmus, they who win the best prize, are wont to be crowned with a chaplet of the Pine.

CHAP. XI.

¶ Of the Quince.

NEXT to Pine apples, for big and large, are the Quinces which we call Coronea, the Greeks Cydonæa, because they were first brought out of Candy. So heauy and masse they be, that they bend the boughs to the ground as they hang vpon the tree, and will not suffer their mother to grow.

Many kinds there be of Quinces, to wit, Chrysomela, of a colour inclining to gold, and diuided by certain cut lines. Secondly, there be the quinces of our own country, & so called: these be whiter, and of an excellent smell. They also that come out of the realm of Naples, be highly esteemed. Now there be a smaller sort of the same kind called Struthea (i. the Peare-quince) and those do cast a more odoriferous smell: late they be ere they come to ripenesse or perfection; whereas contrariwise the green quinces called Mulsea, be as hasty and soon mellow. Now if a man do graffe the great quinces vpon the Struthea, the tree will bring forth a kind of quinces by themselves called Mulsiana; and these are the quinces alone of all other that may be eaten raw. In sum, all the sort of these are come now adae to be entertained within the waiting or presence chambers of our great personages, where men giue attendance to salute them as they come forth euery morning, and in bed-chambers also they are to garnish the images standing about the beds-head and sides.

There are besides small wild quinces, next to the Peare quince Struthea, for pleasant and odoriferous smell; and they grow commonly in hedge-rows.

Moreouer, as wel Peaches as Pomegranats, notwithstanding they be of a diuers kind, yet we call Mala (i. apples.) As for the Pomegranats, we haue spoken of nine sorts of them in our treatise of their trees, and others in Africk: and these are full of certaine graines or kernels lying inclosed vnder their rinde; whereas Peaches haue in stead thereof, a grosse stone or woody substance within the carnosus pulpe of the fruit. To conclude, there be certaine pearres weighing a pound, in regard of which poise and bignesse that they beare, called they are Libralia.

CHAP. XII.

¶ Of the Peach, and foure kinds thereof.

OF all Peaches, the principall be those which are named Duracina, for the solid substance of the meat within them. As for the French and Asiaticke Peaches, they beare the name of the regions and nations from whence they come. This fruit ordinarily waxeth ripe after the fall of the lease, or Autumne: but the Abricots are ready to be eaten in Summer. These haue not bin known full 30 yeares, and at their first coming vp, were sold for Roman deniers a peece, whereof there be two sorts, Supernatia, which we haue from the high countries, & namely the Sabines; and Popularia, which grow common euery where. These fruits be harmlesse, and much desired of sicke folke: and for that they are in such request, there would be giuen otherwhiles 30 Scelleres for one of them; which is a price as high as of any other fruit whatsoever: whereas we may maruell the rather, for that there is not any sooner gone, and lasteth lesse while than they: for being once gathered from the tree, they will not be kept about two daies at the most, and therefore must of necessitie be sold and spent out of hand.

CHAP. XIII.

¶ Of the Plum-tree, eleven kinds of them.

TO come now to Plums, there is a world of them: some of sundry colours, others black, and some againe white. There be that are called Hordearia, because they be ripe in barley-haruest; and some there be of the same colour, yet later ere they ripen, and bigger besides; and

and for that they be of small reckoning, named they are Afina [i. * Affe-plums.] Ye shal haue of them that be black, howbeit the yellow wheat-plum like virgin-wax, and the purple, are better esteemed. Moreouer, there are a kind of Abricots come from a foraine nation, and they be called thereupon Armeniaca, which alone for their smell also are commendable. But there is a peculiar brauerie and a shamelesse, which those Plums haue by themselves that are graffed in Nut-tree stocks; they retain the face and forme still of the mother graffe, but they get the taste of the stock wherein they are set, as it were by way of adoption: of them both they carry the name, and are called nut-plums. Now, as wel these, as Peaches, yellow wheat-plums, & the wild Bullaife, may be kept and preferred as grapes in Autumne, within certain barrels or earthen vessels, and so they will continue good till new come. As for all other plums, as they be soon ripe, so they are as soon gone.

It is not long since, that in the realm of Granada and Andalusia, they began to graffe plums vpon apple-tree stocks, and those brought forth plums named Apple-plums: as also others called Almond-plums, graffed vpon Almond-stocks; these haue within their stone a kernel like an Almond: and verily there is not a fruit again wherein is seene a wittier deuise to conioine and represent in one and the same subiect, two diuers sorts.

As for the Damascene-plums (taking name of Damasco in Syria) we haue sufficiently spoken thereof in our treatise of strange trees: and yet long since they haue bin knowne to grow in Italy: which although they haue a large stone and little carnosity about them, yet they neuer wither into wrinkles and riuels when they be dry, for that they want the full strength of the kind Sun which they had in Syria.

We should do wel to write together with them, of the fruit Sebesten, which also come from the same Syria, albeit now of late they begin to grow at Rome, being graffed vpon Sourices. As touching peaches in general, the very name in Latine, whereby they are called Persica, doth evidently shew that they were brought out of Persia first; and that it is a fruit not ordinary either in Greece or Natolia, but a meere stranger there. Contrariwise wilde plums (as it is well knowne) grow euery where. I maruell therefore so much the more, that Cato made no mention thereof, considering that of purpose he shewed the maner, how to preserve and keep diuers wild fruits, till new came: for long it was first ere Peach trees came into these parts, and much adoe there was before they could be brought for to prosper with vs, seeing that in the Island Rhodes

(which was their place of habitation next to Ægypt) they beare not at all, but are altogether barren. And whereas it is said, That Peaches be venomous in Persia, & do cause great torments in them who do eat thereof; also that the KK. of Persia in old time caused them to be transported ouer into Ægypt by way of reuenge to plague that country; and notwithstanding their poisonous nature, yet through the goodnes of that soile they became good and wholesome: all this is nothing but a meere fable & a loud lie. True it is indeed, that the best writers who haue been painful about others to search out the truth, haue reported so much concerning the tree Persica; which is far different from the Peach tree Persica, & beareth fruit like to Sebesten, of color red, and willingly would not grow in any country without the East parts: and yet the wiser & more learned Clerkes do hold, That it was not the tree Persica which was brought out of Persia into Ægypt, for to annoy and plague the country, but that it was planted first by K. Persus at Memphis. Whereupon it came, that Alexander the Great ordained, That all victors who had won the prize at any game there, should be crowned with a chaplet of that tree, to honor the memoriall of his great grandfatheres father. But how euer it be, certaine it is that this tree continueth greene all the yere long, and beareth euermore fruit one vnder another, new and old together. And to returne againe to our Plum-trees, euident it is that in Cato's time they were not knowne in Italy, but all the Plum-trees which we now haue, are come since he died.

CHAP. XIII.

¶ Of nine and twenty kinds of Fruits, contained vnder the names of Apples.

OF Apples (that is to say, of fruits that haue tender skins to be pared off) there be many sorts. For as touching Pome-citrons, together with their tree, we haue already written.

The Greeks call them Medica, according to the name of the country from whence they first came in old time. As for Iuyubes, as also the fruit Tuberes, they be likewise strangers as

well as the rest; and long it is not since they arrived first in Italy; the one sort out of Africk, the other, namely Iubebes, out of Syria: & *Sextus Papinios* (whom my self in my time saw Consul of Rome) was the first man that brought them both into these parts; namely in the later end of *Augustus Caesar* the Emperor, and planted them about the rampiers of his campe, for to beautifie the same. Howbeit, to say a truth, their fruit resembled rather berries than apples; yet they make a goodly shew vpon the rampiers: and no marvell, since that now adayes whole groves of trees begin to ouertop and surmount the houses of priuat persons.

Concerning the fruit Tuberes there be two sorts thereof, to wit, the white and the reddish, called also *Sericum*, of the colour of silke.

The Apples named *lanata* are held in manner for strangers in Italy, and are knowne to grow but in one place thereof, and namely within the territory of Verona. Couered they be all over with a kind of down or fine cotton, which albeit both quince and peach be clad and ouergrown with in great plenty, yet these alone cary the name thereof: for otherwise, no special propriety are they known by to commend them.

A number of apples there are besides, that haue immortalised their first founders and inventors, who brought them into name, & caused them to be known abroad in the world; as if therein they had performed some worthy deed beneficiall to all mankind. In which regard, why should I think much to rehearse & reckon them vp particularly by name? for if I be not much deceived, thereby will appeare the singular wit that some men employed in grafting trees; and how there is not so small a matter, so it be wel and cunningly done, but is able to get honor to the first author, yea, and to eternise his name for euer. From hence it comes, that our best apples take their denominations of *Matius*, *Celsus*, *Manlius*, & *Claudius*. As for the quince-apples, that come of a quince grafted vpon an apple stock, they are called *Appiana*, of one *Appius* who was of the *Claudian* house, and first deuised and practised that feat. These apples cary the smell with them of quinces: they beare in quantitie the bignesse of the *Claudian* apples, and are in color red. Now lest any man should think that this fruit came into credit by reason only of partiall fauor, for that the first inuentor was a man defended from so ancient & noble a family, let him but think of the apples *Sceptiana*, which are in as great request as they for their passing roundnesse; and they beare the name of one *Sceptius* their first inuentor, who was no better than the son of a slave lately enfranchised. *Cato* maketh mention of apples called *Quiriana*, as also of *Scantiana*, which he saith the manner is to put vp in vessels and so keep them. But of all others, the last that were adopted, and tooke name of their patrons and inuentors, be *Petisia*: though they be little, yet are they passing sweet and pleasant to be eaten.

Other apples there are that haue ennobled the countries from whence they came, and caried their names, to wit, *Camerina* and *Gracula*. All the rest took name either vpon some occasion or propriety that they haue: to wit, of brotherhood, as the twin-apples *Gemella*, which hang one to another by couples, and neuer are found single, but alwaies grow double: of their color, as the *Serica*, which for their fresh hew are so called: of kined and affinitie, as the *Melapira* for their resemblance and participation of apples and pears together, as a man would say, *Pearre-apples*, or pom-potes of their hasty ripenesse, as the *Mulsea* [i. hasty apples] which now of their sweet tast of hony, are called *Melimela* [i. hony apples] also of their exquisite roundnesse like a ball, as the *Orbiculata* [i. the round apples]. That these apples came first from their native country *Epirus*, appeareth by the Greeks, who call them *Epirotica*. Again, some there be that take their denomination of their forme, resembling womens paps or breasts, as namely *Orthomastica* [i. the Breast-apples]. Others, for that their condition is to haue no pepins or seed within them, be called of the Belgians, *Spadoma*, as one would say, *Guelded apples*. As for the *Meliosolia* [i. the leafe apples] they be so called, because they haue one leafe and otherwise twain breaking forth of either side in the very midle. The ragged apples *Pannucea* take this name, for that of all others they soonest be riuelled. The Pusses named *Palmonaea* are hosen foolishly and swelt I cannot tell how, with little or nothing in them. Some in colour resemble bloud, they are so red, because at first they were grafted vpon a mulberry. But all apples ordinarily are red on that side that regardeth the Sun.

As for windings and crabs, little they be all the sort of them, in comparifon: their tail is well enough liked, and they cary with them a quick and sharp smell: howbeit this gift they haue for their harsh soundnesse, that they haue many a foule word and shrewd curse giuen them, and that they

A they are able to dull the edge of any knife that cutt them. To conclude, the *Dacian Apples* are of all others in manner least accepted, notwithstanding they be first mellow, and would be gathered betimes.

CHAP. XV.

¶ Of Peares, And of the varietie of grafting.

Vpon the same cause there be Peares also reproched with the name of *Pride*, and are called the *Proud-peares*: little they are, but quickly ripe, and as soone gone. Of all others the *Crustumine* peares be most delicate and pleasant in tast. Next to them in request are the *Falern* peares, so called for their great abundance of liquor, as it were wine, whereof they be full. And these are likewise named the *milk-peares*: but such of them as are of color black, be called the *Syrian* peares. As for other pears, they haue sundry names according to the countries where in they grow. Howbeit these peares following, retain their name still in all places, and represent alwaies the memoriall of those that first planted or grafted them, to wit, *Decimiana* of one *Decimus*, a known citizen of Rome: of which is also a bastard kind which they call *Pseudodecimiana*. Likewise, the *Dolobellian* pear, of one *Dolobella*: and those are of all other the longest tailed. As touching the *Pompeian* peares, which be also called the *Papir Teat-peares*, the *Licerian*, the *Seuerian*, and of their race the *Tyrannian*, they differ one from another in the length of their Steele. The red *Faunonian* peares be somewhat greater than the abouenamed *Proud-peares*. As for the *Laterian* and *Anitian*, which be not gathered nor ripen vntill *Autumne* be past, they haue a prettie tart and sourish tast, but nathelesse pleasant ynough. The *Tiberian* peares beare the name of *Tiberius* the Emperor, for that of all others he loued that fruit best: they might go for *Lycerians* well ynough, so like they be vnto them, saue onely that they grow big, and are more deeply coloured with the Sunne.

Moreover, there are peares which are knowne by no other name than of the countries where they grow, namely, those of *Ameria* which be more lateward than any other: the *Picentine*, *Numantine*, *Alexandrine*, *Numidian*, *Grecian*, and among them the *Tarentine*. Also the *Signine* peares, which many call *Testacea*, of the color of earthen pots that they resemble, like as others be named *Onychium*, for that they represent the *Onyx* stone, or a mans naile; as likewise those which be called *Purple-peares*.

Furthermore, peares take their name of the odour which they yeeld: thus there be *Myraria*, to wit, *Aromaticall*-peares, *Laurell*, and *Nard*-pears. Of the time also when they be ripe, as the *Barley-pears*, of the forme of their neck, as the *Bottle-peares* called *Ampullacea*: of their thick skin, as the *Coriolana*. As for the *Gourd-pears*, they are by nature of a brutish or sauage kind; so harsh, so foure and eager a liquor they doe yeeld.

Many sorts of peares there are, whereof we can giue no certain reason for their denomination, namely, the *Barbarian* and *Venerian* peares, which also be called *Colored*: likewise, the *roiall* peares, which hang or rather sticke fast to the tree, so short a Steele they haue. The *Patritian* also and *Voconian* peares, which are both green and long. Moreover, *Virgil* hath spoken of the *Voleman* peares or wardens, which he had from *Cato*, who also nameth the *Sementine* or the hasty and soon ripe peares. So as in this point verily the world is growne alreadie to the highest pitch, in so much, as there is not a fruit, but men haue made trial and many experiments, for euen in *Virgils* daies the deuise of grafting strange fruits, was very ripe: considering that he speaks of the *Arbut* tree grafted on *Nut-trees*, the *Plane* vpon *Apple-trees*, and the *Elme* vpon *Cherrie* flocks. In such sort, as I see not how men can deuise to proceed farther. And certes for this long time, there hath not bene a new kind of Apple or other fruit heard of.

And yet as industrious as men haue been that way, they are not permitted to graffe all manner of trees indifferently one in another, no more than it is lawfull to graffe vpon bushes and thornes: seeing that it is not so easie a matter to appeale lightnings: for looke how many sorts of trees are thus engrafted contrarie to nature, so many kinds of lightnings and thunderbolts by report, are flashed and shot at once.

Peares naturally are more sharpe-pointed at one end than Apples. And among them, the *Greeke* peares, the *Gourd* and *Laurell* peares are last of all others ripe, for they hang vpon the tree vntill *Winter*, and they mellow with very frost: like as the *Amerine* and *Scantiane* apples.

Furthermore, peares are kept and preferred as grapes, and after so many waies: but none of them

them are put in barrels as plums be. Finally, Peares and Apples both, haue the properties of wine and in like sort Physicians be wary how they giue them to their patients. Howbeit, when they be foddren in wine and water, they sence in stead of a broth or greuell: & so do no fruitels but Pome and Peare-Quinces.

CHAP. XVI.

¶ The manner how to preferue Apples.

THe generall rules to keep and preferue Apples, are these, *Imprimis*, That the solars be wel plankd and boarded in a cold and drie place, provided alwaies, that the windows to the North do stand open, especially euery faire day. *Item*, to keep the windows into the South shut, against the winds out of that corner: and yet the North winds also where they blow, doe cause Apples to shrink and riuell ill fauouredly. *Item*, That Apples be gathered after the *Aequinox* in the Autumne: and neither before the full of the Moone, nor the first houre of the day. Moreouer, that all the Apples which fell, be seuered from the other by themselves, and laid apart, also that they be bedded vpon straw, mats, or chaffe vnder them: that they be so couched as that they touch not one another, but haue spaces between to receiue equal aire for to be vented. To conclude, this is well knowne, that the Amerine Apples, doe last and keepe good long, whereas the honic Apples will abide no time.

CHAP. XVII.

¶ How to keep Quinces, Pome-granats, Peares, Soruisses, and Grapes.

FOr the good keeping and preferuing of Quinces, there must be no aire let into them where they are enclosed: or else they ought to be confectioned in foddren honey, or boiled therein.

Pomegranats should be plunged into sea-water boiling, and so hardened therein: and after that they be dried in the Sun three daies, (so as they be not left abroad in the night to take dew) they would be hanged vp in a solar, and when a man list to vse them, then they must be wel washed in fresh water. *M. Varro* sets downe the manner to keep them within great earthen vessels, in sand. And if they be not ripe, he would haue the earthen pots bottomes broke off, and so the Pomegranates to be put in, and couered all ouer with mould: but the mouth thereof must be well stopp'd for letting any aire in, provided alwaies, that the Steele and the branch wherto the fruit groweth, be pitched. For so (quoth he) they will not giue ouer to grow still, yea, and proue bigger than if they had remained vpon the tree. As for other Pomegranats (i. that are ripe) they may be wrapped and lapped one by one in fig-leaues, such as are not fallen, but plucked from off the tree greene, and then to be put into twigge paniers of oisters, or else daubed ouer with potters clay.

He that would keep Peares long, must put them in earthen vessels turned with the bottomes vpward, well varnished or annealed within, couered also with saw dust or fine shauings, and so entered. As for the Tarentine Peares, they abide longest on the tree ere they be gathered. The Anitian Peares be well preferued in cuit-wine.

As for Soruisses, they are kept also in trenches within the ground, but the couer of the vessel wherinto they are put, ought to be well plastered all ouer, and so stand two foot couered with earth: also they may be set in a place exposed open to the Sun, with the bottom of the vessels vpward: yea, and within great barrels they may be hung vp with their branches and all, after the manner of grape clusters.

Some of our moderne writers handle this argument more deeply than others, and fetch the matter farre off, giuing out rules in this manner, saying, That for to haue Apples or Grapes *de garde*, that is to say, fit to be preferued, and to last long; the trees that beare the one and the other, ought to be pruned and cut betimes, in the waine of the Moone, in faire weather, and when the winds blow drie. Likewise they affirme, That fruits to be preferued, should be chosen from drie grounds: gathered before they be full ripe, and this would be looked vnto in any hand, that the Moon at the gathering time, be vnder the earth, and not appearing in our hemisphere. And more particularly, for Grape bunches they would be gathered with a foot or heele from the old hard wood, and the Grapes that are corrupt and rotten among the rest, be clipped off with a paire

A paire of sheers, or plucked out with pincers: then to be hung vp within a great new earthen vessel well pitched, with the head or lid thereof thoroughly stopp'd and plastered vp close, to exclude all aire. After which manner, they say Soruisses and Peares may be kept, but so, as in any case the twigs and steeles whereby they hang, be well belmeared with pitch. Moreouer, order would be giuen, that the barrels and vessels wherein they are kept, be far ynough from water. Some there be again who keep Grapes together with their branch, after the same maner in plaster: but so, as both ends of the said branch sticke in the head of the sea-Onion Squilla: and others let Grape-clusters hang within hog-heads and pipes hauing wine in them: but so, as the Grapes touch not the wine in any case. There be also that put Apples and such fruits in shallow pans or pancheons of earth, and let them swim and float aloft vpon the wine within their vessels: for besides that this is a way to preferue them, the wine also (as they think) will thereby get a pleasant & odoriferous tast. Others ye haue besides, that chuse rather to preferue al these fruits, as well Apples, Peares, &c. as Grapes, couered in Millet seed. Howbeit, the most part dig a trench or ditch two foot deep in the ground, they floore it with sand in the bottome, and lay their fruits thereupon; then they stop the top with an earthen lid, and afterwards couer al with earth. Some there are which smeare their bunches of Grapes all ouer with potters clay; and when they are dried in the Sun, hang them vp in solars for their vse: and against the time that they should occupie them, steep them in the water, and so wash off the foresaid clay. But for to keep Apples that are of any worth, they temper the same clay with wine, and make a mortar; thereof, wherein they lap the said Apples. Now if those Apples be of the best kind and right soueraign, after the same sort they couer them with a crust of the like past or mortar, or else claud them within a coat of wax: and if they were not fully ripe afore, they grow by that means and break their crust or couer what euer it be. But this would not be forgotten, that they vse alwaies to set the Apple or fruit vpright vpon the taile, howeouer they be kept. Some there are, who gather Apples and such like fruit with their slips and sprigs, hide them within the pith of an Elder tree, and then couer them in earth, as is before written. And others there are, who for euery Peare or Apple, haue a feuerall earthen pot, and after that their lids be well closed and stopp'd with pitch, then they enclose them again with great vessels or tuns. Nay ye shal haue some to lap them with flocks and wool, and so put them in cases, and then they see well luted with mortar made of clay and chaffe tempered together. Some order them in the same sort, but they put them in earthen pans: and others make no more adoe, but dig a hole in the ground, floore the bottom with a course of sand, put the Apples or fruit within, & then anon when they are thus buried, couer all with mould. These be that vse Quinces in this wise; they take them, anoint them with wax comming out of Pontus, and let them afterwards to ly couered in honey.

Columella mine Author reporteth, That fruits will keep well in earthen pots thoroughly pitched, and afterwards set in pits, and drenched in cisternes of water. In the maritime coasts of Liguria next to the Alpes, they vse to take Grapes after they be dried in the Sun & wrap them within bands of rushes and reeds, put them vp in little barrels, and stop them close with plaster. The Greeks haue the same fashion: but they take for that purpose, the leaues of the Plane-tree, of the vine it selfe, or else the fig-tree, after they be dried one day in the shade: and when they be in the barreth, betweene euery bed of grape clusters, they couer a course of grape kernels, and such refuse remaining after the presse. And in this manner are the grapes of Coos and Berytus preferued: and for sweetnesse and pleasant tast, there are no better to be found. And some there be, that for to counterfeit these excellent Grapes, besmeare them with lie ashes so soon as euer they be pulled from the Vine, and presently drie them in the Sunne: which done, they enwrap them within leaues, as hath been said before, and so couer them close within the cake of pressed grapes. Neuertheleste, there be diuers that chuse rather to keepe Grapes in the saw dust or shauings of Firre-wood, Poplar, or Ash. Some are afraid to let grapes hang neere to Apples, Pomegranates, and such like fruit, and therefore giue in charge to let them presently after they be gathered, for to be hung vp in garners or boarded lofts: supposing that the dust which they gather from aboute, is the best couer to defend and preferue them. The remedie to keepe Wespes from them, is to spurt or squirt oile out of a mans mouth vpon them. And thus much concerning the way to preferue Grapes and other fruits aforesaid. As for Dates, we haue spoken sufficiently before of them.

CHAP. XVIII.

¶ Of Figs, 29 sorts of them.

Of all other fruits that haue tender pils or skins, and are called in Latine, Poma, Figges are the biggest: for some of them are found to be as great as Peares. As touching the Sycomores of Egypt and Cypres, and of their admirable fruit we haue written yough in the treatise of foraine Trees. The Idæan Figs that come from the mountaine Ida, are of color red, of the bignesse of Oliues, only rounder they be, & in tast resemble Medlars. In the region about Troas neare to the said hill Ida, they call that fig-tree Alexandrina. It is as thicke as a mans arme about at the cubite or elbow, and full of branches: the wood thereof is tough and strong, howbeit, pliable to wind and bend which way a man would haue it. Void of milky substance it is, clad with a green barke, bearing leaues like the Tillet or Linden tree, but that they be soft. *Oueseritus* writes, that the Fig-trees in Hyrcania beare more pleasant fruit than ours in Italie, without all comparisom: also that they carrie a greater burden, and be farre more plentifull, inso-much, as one of them ordinarily yeelds 270 Modij of Figs. We haue here also in Italie many Fig-trees brought out of other forain countries, to wit, from Chalcis and Chios: whereof there be many sorts. For both our Lydian Figs which are of a reddish purple color, and also the Mamilane or teat-Figs, haue a resemblance of the said Chalcidian and Chian Figs, yea, and the Calistruition Figs beyond others not a little, in goodnes of tast and these of all the rest are the coldest. As touching the Affricane Figs, which many men preferre before all others, they hold the name of Affricke, as if it were their native countrey; and yet there is a great question thereabout, and I wot not well what to say thereof, considering that it is not long agoe that Affricke begun first to haue Fig-trees. For the Alexandrine Figs are of the blacke kind, hauing a white rift or chamfre, and are surnamed Delicate. The Rhodian Fig is likewise blacke of hue: and so is the Tiburtine, which also is of the hasty kind, and ripe before others.

Moreover, there be certaine Figs which beare the names of those that brought them first into Italy: namely, the Liuian and Pompeian, and such are fittest to be dried in the Sun and so to be kept all the yeare long for a mans vse: like as the illfaououred, foolish and gaping Figs Marice: as also those that are speckled with spots like the leaues of Laconian reeds.

There are besides the Herculeane, Albicater and Aratian white Figges, which of all other are most flat and broadest, and withal haue the least taile or Steele wherby they hang. The Porphyrite Figs first shew vpon the tree, and ordinarily be longest tailed. The smallest Figs called the popular Figs, which also are of all others the basest & of least account, come next after and beare the Porphyrites companie. Contrariwise, the Chelidonian Figges be the last: and ripen against Winter.

Moreover, certain Figs there be which are both early, & also lateward: namely, such as beare twice a yeare: and be both blacke and white: for they are ripe first in hauest, and afterwards, in time of vintage. Late also it is before the Duracina be ripe, so called of the hard skin which they haue. Also some there be of the Chalcidian kind which beare thrice a yeare. At Tarentum there grow none but such as are exceeding sweet, and those they call Omas [or rather Oenadas, tasting of wine.]

Cato in his treatise of Figs writes thus, The vnfauorite Fig dotes, Marice, would be sowne in an open, light, and chalkie ground. But the Affricane, Herculeane, and the Winter Saguntine Figges, as also the Telliane (which are blacke and long tailed) loue a fatter soile, or else well dunged.

After this, Figges haue changed into so many kinds, and altered their names very often: in such sort that by this point it is euident, how the world is altered, and to what varietie this life is subiect. In some prouinces, as namely in Mæsia, there be winter Figs that hang all Winter long: but they come to be such, more by art and cunning, than naturally of themselves. For so soone as Autumne is passed, and Winter approches, they vse to couer with dung certaine little Fig-trees which they haue, and together with them the green yong Figs that they find on them in Winter: and when they haue continued so the sharpe time of dead Winter, so soone as the weather begins to be more warme and temperate, they discharge both fruit and tree of their dung: which being thus let out again (as it were) where they seemed buried, and now coming

At tolight, they no sooner find the fresh aire, & another kind of nourishment differing from that, whereby they hued, but doe embrace and receiue the comfort of the new Sun most greedily, as if they were new born and reuiued: in such sort, as that in Mæsia, notwithstanding it be a most cold region, ye shall haue the figs of these trees to ripen, when others begin to blossom, and by this means become early and hasty figs in another yeare.

Now forasmuch as we are fallen to mention the figs in Affricke, which were in so great request in the time of *Cato*, I am put in mind to speake somewhat of that notable opportunity and occasion which by the means of that fruit he took for to root out the Carthaginians, & raise their very city. For as he was a man who hated deadly that city, and was otherwise careful to provide for the quiet and securitie of his posteritie, he gaue not ouer at euery firing of the Senat, to importune the Senators of Rome, and to cry out in their eares, That they would resolute and take order to destroy Carthage: and in very truth one day about the rest, he brought with him into the Senat house an early or hasty fig which came out of that country, and shewing it before all the lords of the Senat, I would demand of you (quoth he) how long agoe it is (as you think) since this fig was gathered from the tree? And when none of them could deny but that it was fresh and new gotten: Lo (quoth he) my masters all, this I do you to wit, It is not yet full three daies past since this fig was gathered at Carthage: see how neere to the walls of our citie we haue a mortal enemy. Vpon which remembrance of his, presently they concluded to begin the third and last Punick war, wherein Carthage was vtterly subuerted and ouerthrowne. Howbeit *Cato* suruiued not the raising and sackage of Carthage, for he died the yeare immediately following this resolution. But what shall we say of this man? whether was more admirable in this act, his prouident care and promptnesse of spirit, or the occasion presented by the sudden obiekt of the fig? was the present resolution and forward expedition of the Senat, or the vehement earnestnesse of *Cato*, more effectual to this enterprise? Certes, somewhat there is about all, & nothing in mine opinion more wonderful, that so great a signiory and state as Carthage, which had contended for the Empire of the world for the space of 120 yeres, and that with the great conquerours the Romanes, should thus be ruined and brought vtterly to nought, by occasion of one fig. A designe that neither the fields lost at Trebia and Thrasymenus, nor the disgrace receiued at the battell of Cannæ, wherein so many braue Romans lost their liues, and left their dead bodies on the ground to be interred, could effect: nay not the disdain that they took to see the Carthaginians incamped and fortified within 3 miles of Rome, ne yet the brauadoes of *Annibal* in person, riding before the gate Collina, euen to dare them, could euer bring to passe. See how *Cato* by the means of one poore fig, preuailed to bring and present the forces of Rome to the very walls of Carthage.

There is a fig tree called *Nauia*, honoured with great reuerence, in the common Forum and publicke place of iustice at Rome, euen where the solemne assemblies are held for election of Magistrates, neere to the Curia, vnder the old shops called *Veteres*: as if the gods had consecrated it for that purpose: neere (I say) it is to the Tribunal named *Puteal Libonis*, & there planted by *Affim Nauis* the Augur, where the sacred reliques of his miracle, to wit, the Rasor and the Whetstone, were solemnly interred: as if it came of the owne accord from the said Curia into the Comitium, and had not bin set by *Nauis*. This tree if it begin at any time to wither, there is another replanted by the priests, who that way are very carefull and ceremonious. But a greater respect is had of another in remembrance of the first fig tree named *Ruminalis* (as it were) the nurse of *Romulus* and *Remus*, the two yong princes foundlings, and founders also of the city of Rome: for that vnder it was found a she wolfe, giuing to those little babes the teat (in Latine called *Rumen*): and for a memoriall hereof there is a monument of brasse erected neere vnto it, representing that strange and wonderful story. There grew also a third fig tree before the temple of *Saturne*, which in the yeare 260 after the foundation of the city of Rome, was taken away, at what time as a chappell was builded there by the Vestal nuns, and an expiatory sacrifice offered, for that it ouerthrew the image of *Sylvanus*. There is a tree of the same kind yet liuing, which came to grow of it self, no man knows how, in the midst of the Forum Romanum, and in that very place where was the deepe chinke and gaping of the ground, that menaced the ruine of the Roman empire, which fatall and portentuous gulfie the renowned knight *Curius* filled vp with the best things that were to be found in the city, to wit, his Vertue and Piety in comparable, testified by a most braue & glorious death. In the very same place likewise there is

an Olive and a Vine, which came thither by as meere a chance, but afterwards well looked and trimmed by the whole people, for to enjoy the pleasure and shade thereof. And there also stood an altar, which afterwards was taken away by occasion of the solemne shew of sword-lencers, which *Iulius Caesar* late Emperor, exhibited to do the people pleasure, which were the last that played their prizes, and fought at the sharp in the said Forum. To conclude, wonderful it is to see, how the fruit of this tree maketh hast to ripe: a man would say that Nature therein sheweth all her skill and force to ripen figs altogether at once.

CHAP. XIX.

¶ Of the wilde Fig trees: and of caprification.

There is a kind of wild Fig trees, which the Latines call *Caprificus*, that neuer brings any fruit to maturitie; but that which it selfe hath not, it procureth to others, and causeth them to ripen. For such is the interchangeable course & passage of causes in nature, that as this thing putrifieth, that ingendreth; and the corruption of one is the generation of another. By this it comes to passe, that the wild fig tree breedeth certaine flies or gnats within the fruit thereof: which wanting nourishment, and not hauing to feed vpon in those figs, because they become rotten and putrified as they hang vpon the tree, they flie vnto the other kinde of gentle and tame fig-trees, where they settle vpon the figs, and greedily nibble thereupon, vntill they haue made way and pierced into them; and by that means let in at first the breath of the warme Sun, and that comfortable and vegetatiue aire besides that helpeth to ripen them. Soon after they suck vp and spend the milky humor which they find there, and which keeps the figs still as it were in their infancie, and hindreth their speedy and timely maturitie. True it is, that the figs in time would ripen of themselves by the power and benefit of Nature only: howbeit skilfull and industrious husbandmen take order alwaies to set these wild fig trees neere to the place where other fig trees grow, but with due regard of the winde side, that when the foresaid gnats breake forth and are ready to fly out, a blast of wind might carry them to the other. And hereupon came the deuise and inuention to bring whole swarms & casts of them, as they hang one to another, from other places, that they might settle vpon the figs to consume the raw moisture within. Now if the soile be lean and hungry, and the fig trees growing thereupon exposed to the North wind, there is no such need of this help: for the figs will dry sufficiently of themselves, by reason as well of the situation of the place, as the cliffs and rifts in them, which will effect that which the gnats or flies aboue named might performe. The like effect is to be seen also where much dust is, namely, if a fig tree grow neere vnto a high-way much frequented and travelled by passengers. For the nature of dust is to dry and soke vp the superfluous moisture of the milke within figs. And therefore when they are thus dried, whether it be by the means of dust, or of the said flies feeding, which is called *Caprification*, they fall not from the tree so easily, by reason they are discharged of that liquid substance which maketh them both tender, and also ponderous, weighty, and brittle withall.

All figs ordinarily are tender and soft in handling. Those which be ripe haue small graines within them: their succulent substance besides, when they begin to ripen, is white like milke: but when they are perfectly ripe it is of the colour of hony. They will hang vpon the tree vntill they be old, and when they are aged, they yeeld a certain liquor which distilleth from them in manner of a gum, and then in the end become dry.

The better sort of figs haue this honor and priuiledge, to be kept in boxes and cates for the purpose: and chiefly those which come from the Isle *Ebusus*, which of all others are the very best and largest: yea, and next to them those that grow in the *Marrucines* country. But where they are in more plenty they put them vp in great vessels called *Orces*, as namely in *Asia*: also in barrels & pipes, as at *Ruspina* a city in *Barbary*. And in very truth, the people of those countries make that vse of them when they be very dry, that they serue both for bread and meat. For *Cato* setting downe an order for dyet and viuals fit and sufficient for labourers, ordained, that they should be cut short of their other pittance, when figs are ripe, and make vp their full meals with it. And it is not long since the manner came vp to eat fresh new figs with salt and powdered meats, in stead of cheefe. And for to be eaten in this sort, the figs called *Coctana* (whereof we haue written before) and the dried figs *Carice* are commended: as also the *Caueas*, which

A which when *M. Crassus* should imbarque in that expedition against the Parthians (wherein he was slain) presaged ill fortune, and warned him not to go forward: namely, when at the very instant that he was ready to set foot a ship-board, there was a fellow heard to cry those figs for to be sold, pronouncing aloud, *Caueas, Caueas*: which word in short speaking was all one with *Cave me cas* [i. Beware of this voyage, and do not go in it.] All these sorts of figges *L. Vitellius* brought out of *Syria*, into his ferm or manor that he had neere *Alba*, hauing *L. Gouvernor* or *Lieutenant* generall in those parts, namely, in the later end of *Tiberius Caesar* the Emperor: and the same *Vitellius* was afterward *Censor* at *Rome*.

CHAP. XX.

¶ Of Medlars: three kinds of them.

B Medlars and Seruises may well and truly be ranged in the ranke of Apples and Peares. Medlars be of three sorts; namely, *Anthedon*, *Setania*, and the third which they call *Gallicum*, [i. the French Medlar] which is of a bastard nature, yet it resembles the *Anthedon* rather than the other. As for the *Setanian Medlar*, the fruit is greater and whiter than the rest; also the kernels or stones within are of a more soft substance, and nor altogether so woody and hard. The rest are smaller than these *Setania* or common Medlars, but they haue a better smell and more odoriferous, and withall will last longer. The tree it selfe that beareth Medlars is reckoned among the greatest sort: the leaves before they fall wax red: the roots be many in number, and run downe right deep into the ground: by which means, ynneth or verie hardly they be quite rooted vp. This tree was not known in Italy by *Cato*'s dayes.

CHAP. XXI.

¶ Of Seruises, foure kinds.

O F Seruises there be foure sundry sorts, differing one from another: for some of them are round like apples, others pointed at the end as Peares; a third kinde are fashioned like eggs, as some long or tankard apples: and these are apt to be soon foure. For sweet sent and pleasant tast the round excell all others: the rest haue a relish of wine. The best kinde of them are they that haue soft & tender leaves about their steles whereby they hang. The fourth sort they call *Torniale*, allowed only for the remedie that they afford to mitigate the torments and wringing of the colique. This tree is neuer without fruit, howbeit the smallest of all the rest, and differeth from the other, for it beareth leaves very like to the Plane. There are none of them that beare fruit before they be three yeares old. Lastly, *Cato* would haue Seruises to be pickered and condite in Cuit.

CHAP. XXII.

¶ Of the Wall-nut.

E T He next place to these for bignes, the Walnuts doe challenge, which they cannot claime for their credit and authoritie, and yet they are in some request among other licentious and wanton *Fescennine* ceremonies, at weddings: for lesse they be than *Pine nuts*, if a man consider the grossefne of the body outwardly; but in proportion thereto they haue a much bigger kernel within. Moreover, Nature hath much graced and honoured these nuts with a peculiar gift she hath endued them with, namely, a double robe whereby they are clad: the first is a tender and soft husk; the next, a hard and woody shel: which is the cause that at marriages they serue for religious ceremonies, resembling the manifold tunicles and membranes wherin the infant is lapped and enclosed within the womb: and this reason foundeth more probable, than that they should be scattered, because in their fall they rebound and make a rattling [to drowne (forsooth) all other noises from the bride-bed or chamber.] That these Nuts also were brought out of *Perfis* first by commandement of the Kings, is euident by their Greeke names; for the best kind of them, they call *Perficon* and *Basilicon*; as one would say, the *Perfian* and *Royall nut*: and these indeed were the first names. Afterwards, the nut came to be named *Ca-ryon*, (by all mens confession) for the beauiiefne of head which it cauferb, by reason of the

Qq

strong

strong smell. Their outward husk serues to die woodd: and the little nuts when they come new forth are good to giue the haire of the head a reddish or yellow colour. The experiment thereof was first found by staining folks hands as they handled them. The elder that nuts be & longer kept, the more oleous and fatty they are. The only difference in the sundry kinds consisteth in the shell, for that in some it is tender and brittle, in others hard; in one fort it is thin, in another thick: lastly, some haue smooth and plain shells, others again be as full of holes and cranies.

Walnuts be the fruit alone that Nature hath inclosed with a couer parted in twaine, and so is ioyned and set together; for the shell is diuided and cleft iust in the middle, and each halfe resembleth a little boat. The kernell within is distinguished into foure parts, and between euery of them there runneth a membrane or skin of a woody substance. As for other nuts, their meat is solid and compact, as we may see in Filberds and Hazels, which also are a kind of nuts, and were called heretofore Abellins, of their native place, from whence came good ones at first. They came out of Pontus into Naxos and Greece, and therefore they be called Pontick nuts. These Filberds likewise are covered with a soft bearded huske, and as well the shell as the kernell is round and solid, all of one entire piece. These nuts also are parched for to be eaten, and within their belly they haue in the mids a little chit or spirt as if it were a nauill.

As for Almonds, they are of the nature of nuts, and are reckoned in a third ranke. An vpper husk they haue like as Walnuts, but it is thin: like as also a second couerture of a shell. The kernell differeth somewhat, for broader it is and flatter, and their skin more hard, more sharpe, and hotter in taste than that of other nuts. Now whether the Almond tree were in Italy during the life of *Cato*, there is some doubt and question made, because he nameth the Greeke nuts, which some do hold for a kind of walnut. Mention maketh he besides the Hazel nuts or filberds, as well the * Galbae, as the Prenefine, commended by him aboue all others, which he saith are put vp in pots, and kept fresh and green within the earth. Now adiaies the Thasian and Albeusian nuts be in great account; and two sorts besides of the Tarentine; whereof the one hath a tender and brittle shell, the other as hard: and those are the biggest of all other, and nothing round. He speaketh also of the soft flatted Filberds Mollusca, the kernels whereof doe swell and cause their shells to breake in sunder.

But to return again to our Walnuts: some to honor them interpret their names Iuglandes, as a man would say, the nuts of *Iupiter*. It is not long since I heard a knight of Rome, a gentleman of high calling, and who had bin Consul, professe and say, that he had certain walnut trees that bare twice a yeare. As for Sticks we haue spoken already of them. To conclude, these kind of nuts the aboue named *Vitellius* brought first into Italy at the same time, namely, a little before the death of *Tiberius* the Emperor: and withall, *Flaccus Pompeius* a knight of Rome, who serued in the wars together with him, caried them ouer into Spain.

CHAP. XXIII.

Of Chestnuts eight kinds.

WE entitle Chestnuts also by the name of Nuts, although indeed they are more aptly to be called a kind of Mast. This fruit what euer it be is inclosed within a huske, and the same defended and armed all ouer with a rampier and palisade (as it were) of sharp prickles like the skin of an urchin; whereas the Acorn and other Mast is but half couered, and that defence in them is begun only. And certes, a wonderful matter it is that we set so little store by this fruit, which Nature is so careful to hide and defend. Vnder one of these husks ye shall find sometime three Chestnuts, and those hauing certain tough pills or shells very pliable. But the skin or filme within, and which is next to the body or substance of the fruit, vlesse it be pulled off and taken away, marreth the taste of it, like as it doth also in other nut-kernels. Chestnuts if they be roasted are better and more pleasant meat than otherwise. They vse also to grind them to meale, and thereof is made a kind of bread, which poore women for hunger will eat. The first Chestnuts were known to grow about Sardis, & from thence were brought, wherefore the Greeks call them Sardinian nuts: but afterwards they came to be named *aei castani*, [*i. Iupiters* nuts] when as men began to graffe them; for thereby they became more excellent. And this day there be many sorts of them. The Tarentine be gentle and not hard of digestion, and in forme flat and plaine. That which they call Balanitis, is rounder, it will soone be pilld and cleaned,

cleanfed, and of it selfe will leape out of the skin. And of this kind, the Salarian is more neat, flat, and smooth: the Tarentine not so easie to be handled and dealt withall: the Corellian is more commended than the rest; as also the Metearne, which cometh of it by grafting: the manner whereof we will shew when we come to treat of graffes. These haue a red pilling, in which regard they are preferred before either the three comered, or the blacke common ones, which be also called *Costiua*, [*i. Chestnuts to be boiled*]. The best Chestnuts are they which grow about Tarentum, and Naples in Campaine. All the rest are good in manner for nothing but to feed swine. * To close sticketh the pill or inner skin also, as if it were powdered to the kernell within, and to hard it is to separate the one from the other.

CHAP. XXIII.

Of Carobes: of fleshy and pulpos fruits: of Mulberries: of liquid kernels or graines, and of berries.

THE fruit called Carobes or Caras, may seeme to come neare vnto the foresaid Chestnuts, (so passing sweet they be) but that their cods also are good to be eaten. They be as long as a mans finger, and otherwhiles hooked like a faulcheon, and an inch in bredth. As for mast, it cannot be reckoned among fruit properly called Poma, and therefore we will speake of them apart, according to their nature.

Now are we to treat of the rest which are of a carnos substance: and those are diuided into fruits that be soft and pulpos, and into berries. The carnosie in Grapes and Raisons, in Mulberries, and the fruit of the Arbut tree, differs one from the other. Again, the fleshy substance in Grapes between the skin and the liquid juice, is one, and that in Sebelins is another. Berries haue a carnosie by themselves, as namely Olives. Mulberries yeeld a juice or liquor within the pulpe thereof, resembling wine. They be ordinarily of three colours: at the beginning, white, soone after, red, and when they be ripe, blacke. The Mulberry tree bloometh with the last, but the fruit ripeneth with the first. Mulberries when they be full ripe, staine a mans hand with the juice thereof, and make them blacke: but contrariwise being vnripe, they scoure them cleane. There is not a tree againe, wherein the wit of man hath bin so little inuentiue, either to deuise names for them, or to graff them, or otherwise, saue only to make the fruit fair and great. There is a difference which we at Rome doe make, betweene the Mulberries of Otia and Tusculum.

There is a kind of Mulberries growing vpon the bramble, but their skin is much harder than the other. Like as the ground-strawberries differ in carnositie from the fruit of the Arbut tree, and yet it is held for a kind of Strawberry, even as the tree it selfe is teamed the Strawberry tree. And there is not a fruit of any other tree, that resembleth the fruit of an hearb growing by the ground, but it.

The Arbut tree it selfe spreadeth full of branches: the fruit is a whole yeare in ripening: by which means a man shall find alwaies vpon the tree, yong and old fruit together one vnder another; and the new euermore thrusts out the old. Whether it be the male or female that is barren, writers are not agreed. Surely the fruit is of bafe and no reckoning at all: no maruell therefore if the Latines gaue it the name Vnedo, for that one of them is enough to be eaten at once.

And yet the Greeks haue two names for it, to wit, Comarum & Memecylon: whereby it appeareth, that there be as many kinds among the Latines also, although it be teamed by another name, Arbutus. *K. Julia* saith, that these trees in Arabia grow to the height of fiftie cubites.

As touching Graines and liquid Kernels, there is great difference betweene them: for first and forme, among very grapes, there is no small diuersitie in the skin, either for tendernes or thickenesse: in the inner stones or pepins, which in some grapes are but single, or one alone; in others double, and those commonly yeeld not so much wine as the others do. Secondly, those of Luie and Elder differ very much, yea and the graines within a Pomegranate are not like to others in their forme, for they alone be made comered and angle-wife; and finally as they bee, they haue not a particular skin of their own, but they are altogether clad within on, which is white: and yet they stand all wholly of a liquor and pulpos carnosie, especially those which haue within them but a small stone or woodie kernell.

Sensibly, there is as much varietie in berries: for olives differ much from Bay berries: likewise those of a Lotte tree are diuers from them which the Corneil tree beares. The Myrtle also

* *Scrupulae corticis interioris circa nucleos quosque formatio*

differeth from the Lentisk in the verie berrie. As for the huluer or hollie berries and the hawes G of the white-thorn, they are without any iuice or liquor: whereas Cherries be of a middle kind, between berries and graines. This fruit is white at the first, as lightly all berries be whatfoever: but afterwards some waxe greene, as Oliues and Baies; others turn red, as Mulberries, Cherries, and Cornioles; but in the end they all become blacke, as Mulberries, Cherries, and Oliues.

CHAP. XXV.

¶ Of Cherries, eight kinds.

BEfore the time that L. Lucullus defeated K. Mithridates, there were no cherrie-trees in Italy: but after that victorie (which was about the 680 yeare from the foundation of the citie of Rome) he was the man that brought them first out of Pontus, and furnished Italie to well with them, that within fixe and twentie yeres, other lands had part thereof, even as far as Britain beyond the ocean. Howbeit (as we haue before said) they could neuer be brought to grow in Egypt, for all the care and industrie employed about them. Of Cherries, the reddest fort bee called Apronia; the blackest, Aetia; the Cæcilian be round withall. The Iulian Cherries haue a pleasant tast, but they must be taken new from the tree and presently eaten, for so tender they be otherwise, that they will not abide the carriage. Of all other, the Duracine Cherries be the foueraign, which in Campaine are called Pliniana. But in Picardie, and those low countries of Belgica, they make most account of the Portugall Cherries: as they do also who inhabit vpon the riuier Rhene. They haue a hew with them composed of three colors, between red, black and green, and alwaies look as if they were in ripening still. It is not yett full 5 yeres since the Cherries which they call Laurea, were known: so called they be, because they were graffed on a Bay-tree stocke, and thereof thy take a kind of bittrenesse, but yett vnpleasant to the tast. There be moreover Macedonian Cherries, growing vpon a small tree seldome aboue three cubits high: and yett there be certain dwarfe Cherries not full fo tall, called Chamecerasti, [i. ground cherry-thrubs.] The Cherry-tree is one of the first that yeelds fruit to his master, in token of thankfulnessse & recognifance of his paines all the yeare long. It delights to grow in cold places and exposed to the North. The Cherrie wil drie in the sun, and may be kept in barrels like Oliues.

CHAP. XXVI.

¶ Of the Corneile and Lentiske tree.

THE same care is had in conditing the berries of the Corneile and the Lentiske, as in preferring Oliues: so curious are men to content their tooth, as if all things were made to ierue the belly. Thus we see, how things of diuers relishes are mingled together, and one giues a tast vnto another, and causeth to be pleasant at the tongues end. Nay we entermingle all climates and coasts of heauen and earth to satisfie our appetite: for to one kind of meat we must haue drugs & spices fetcht as far as from Indiato another, out of Egypt, Candie, and Cyrene: and in one word, for euery dish we haue a seuerall land to find vs fauice. To conclude, we are growne to this passe, that we cease not to sophisticate our viands, euén with hurtfull things, fo they tast well: yea and to make dishes of very * poisons, because we would deuoure and send all downe the throat. But more plainly hereof, in our professed discourse of the nature and vertue of Hearbs.

CHAP. XXVII.

¶ The diuersitie of tastes and saouours.

IN the meane time, as touching those things which are common as well to all fruit, as iuices and liquors: first and formost we find of tastes 13 seuerall kinds; to wit, sweet, pleasant, fattie, bitter, harsh and vnpleasant, hot and burning at the tongues end, sharpe and biting, tart or astringent, sowre, and salt. Ouer and besides all these, there be three others of a most strange and wonderful nature. The first is that, wherein a man may haue a smacke of many tastes together, as in wines: for in them a man shall find an harsh, sharpe, sweet, and pleasant relish all at once; and yett these all differ from the native verdure of wine. A second fort there is besides, which carries a strange & different tast verily from the thing it self, and yett it hath besides the proper and peculiar

A cular tast of the owne substance, as the Myrtle: for it carrieth a seuerall tast by it selfe, proceeding from a certaine kind, mild, and gentle nature, which cannot truly be called either sweet, fattie, or pleasant, if we would speake precisely. Last of all, water hath no tast at all of any iuice or liquor whatfoever, and yett therein is a tast by it selfe, which is called waterish, that nothing else besides hath: for if a man do tast in water a relish of any sap or liquor, it is reputed for a bad and naughtie water.

Furthermore, a great and principall matter of all these tastes, lyeth in the fauour and smell, which is connaturall vnto the tast, and hath a great affinitie with it: and yett in water, is neither one or other to be perceived: or if any be felt either by tongue or nose, it is faultie, that is certaine. Finally, a wonderful thing it is to consider, that the three principall Elements whereof the world is made, namely, Water, Aire, and Fire, should haue no tast, no fauour, nor participation of any sap and liquor at all.

CHAP. XXVIII.

¶ The iuice and sap of Fruits and Trees: their colours and odours: the nature of Apples, and such soft Fruits: and the singular commendation of all Fruits.

TO begin withall, The Pearc, The Mulberry, & the Myrtle-berrie, haue a iuice or sap with in them, resembling wine, * no marrell then, of Grapes, if they haue the like, Oliues, Bayberries, Walnuts and Almonds, haue a fattie liquor in them. The Grape, the Fig, and the Date, carrie a sweet iuice with them. Plums haue a waterish tast.

There is no small difference in the colours also that the iuice of fruits do beare: Mulberries, Cherries, and Corniels, haue a sanguine and bloudie liquor: fo haue the blacke grapes; but that of the white grapes, is likewise white. The iuice of Figs toward the head or neck of the fruit, is white like milke; but of another color in all the bodie besides. In Apples, it is in manner of a froth or foamie Peaches, of no colour; and yett the Duracina of that kind, be full of liquor, but who was cuer able to say, what colour it was of?

The odor and fauor likewise of fruits, is as strange and admirable: for the smell of Apples is sharpe and piercing; of Peaches, weake and waterish. As for sweet fruits, they haue none at all: D for verily we see, that sweet wines likewise haue little or no smell, whereas the small and thin are more odoriferous: and all things in like manner of a subtil substance, do affect the nostrills more, than the thicke and grosser doe: for whatfoever is sweet in sent, is not by and by pleasant and delicate in tast: for sent and smacke are not alwaies of like sort: which is the reason that Pomecitrons haue a most piercing and quick fauor, whereas in relish they are rough and harsh: and fo it fares in some sort with Quinces. As for Figs, they haue not any odor. And thus much may suffice in generall, for the sundrie kinds and sorts of fruits which are to be eaten, it remaineth now to search more narrowly into their nature.

To begin then with those that are enclosed within couts or husks: yea shall haue some of these couts to be sweet, and the fruit or seed contained within, bitter, and contrariwise, many of those E graines or seeds are pleasant and toothsome enough; but eaten with the huskes, they be sharke naught and loathsome.

As touching berries, there be that haue their stone or wooddie substance within, and the fleshy pulp without, as Oliues, and Cherries: and there be again, that within the said woody stone haue the carnositie of the berry as some fruits in Egypt, whereof we haue already written. As for berries carnos without-forth, & pulpos fruit called Apples, they be of one nature. Some haue their meat within, & their woodie substance without, as nuts; others, their carnosity without, and their stone within, as Peaches and Plums. So that in them we may say, That the faultie superfluity is entrued with the good fruit, whereas fruit otherwise is ordinarily defended by the said imperfection of the shell. Walnuts and Fiberds are enclosed with a shell: Chestnuts be contained vnder a tough rind, that must be pulled off before they be eaten; whereas in Medlars, the carnositie and it be eaten together. Acornes, and all sorts of mast, be clad with a crust; F Grapes with a skin, Pomegranates with a rind and a thin pannicle or skin besides. Mulberries do consist of a fleshy substance, and a liquor. Cherries, of a skin and a liquid iuice. Some fruits there be, the substance whereof will soon part from their woodie shell without, or stone within,

as nuts and Dates: others sticke close and fast thereto, as Oliues and Bay berries. And there be againe that participate the nature of both, as Peaches: for in those that be called Duracina, the carnos substance cleaueth hard to the stone, so as it cannot be plucked from it, whereas in the rest, it commeth easily away. Now ye shall meet with some fruits, that neither without in shell, nor within-forth in kernell, haue any of this woodinesse, as a kind of Dates [named Spadones.] And there be againe whose very kernell and wood is taken for the fruit it selfe, and so vsed; as a kind of Almonds, which (as we said) doe grow in Egypt. Moreouer, yee shall haue a kind of fruits furnished with a double superfluity of excrement to couer them without-forth, as Chest-nuts, Almonds, and Walnuts. Some fruits haue a substance of a threefold nature, to wit a bodie without; then, a stone or wood vnder it, and within the same, a kernell or seed, as Peaches. Some fruits grow thick and clustred together vpon the tree, as Grapes, and likewise Scruifles, which claspe about the branches and boughes, bearing and weighing them downe as well as grapes. Others for it, hang here and there very thin, as Peaches. And there be againe that lye close, contained (as it were) within a wombe or matrice, as the kernells of the Pomegranates. Some hang by smal steles or tailes, as Peares: others in bunches, as Grapes and Dates. Ye shall haue some fruit grow by clusters, and yet hang by a long taile, as the Berries of Iuie and Elder: and others againe cleaue fast to the branch of the tree, as Bay berries: some both waies, as Oliues, for there bee of them that haue long steles, and others againe short tailed. Some fruits there be also, that are formed like cups or mazers, as Pomegranats, Medlars, the Egyptian bean or Lote, and that which groweth about the riuer Euphrates.

As for the singularities and commendable parts in fruits, they be of diuers sorts, Dates are most set by for their fleshie substance, and yet they of Thebes about in high Egypt, are esteemed only for their outward coat or crust that they haue. Grapes, and the Dates called Caryote, are in great account and estimation for their iuice and liquor: Peares and Apples be most accepted for their callous substance next vnto their skin or paring; but the honey-apples Melimela, are liked for their carnositie and fleshie pulpe within: Mulberies content the tast with their gristle or cartilage substance; and the best part of the nut, is the very graine of the kernell. In Egypt, some fruits are regarded only for their vmoist skin, as drie Figs: when Figges bee green, the same is pulled off and cast aside like a shell, but be they once drie, the said skin is passing good. In all kind of Papyr-reeds, Ferula plants, and the white thistle Bedegnar, the verie maine stemme is the fruit to be eaten. The shoots also and tender sprigs of the Frg-tree, are reputed for good meat, and also medicinable. To come vnto the shrubs kind, the fruit of Capres is eaten together with the stalke. As for Carobe, what is it else but a meere wooddie substance that folke doe eat? (and yet the seed and graines within them, are not altogether to be despised for the proprietie that they haue) although to speak precisely, it cannot properly be called either flesh, wood, or gristle; neither hath it found any other convenient name to be termed by.

CHAP. XXIX.

Of the Myrtle, eluen kinds thereof.

Nature hath shewed her wonderful power and bounty, especially in the iuice of the Myrtle, considering that of all fruits, it alone doth yeeld two sorts both of oile and wine: likewise the mixture or composition called Myrridanum, as we haue said before. Also there was another vse in old time of Myrtle berries: for, before that Pepper was found and vsed as it is, they serued in stead thereof: from whence tooke name that exquisite and daintie dish of meat, which euen at this daie is called Myrratum. And herof came that excellent sause so highly commended for the brayne of the wild Bore, when for the most part Myrtle berries are put thereto to dip the meat therein, for to giue a better tast to that kind of venison.

As for the very tree it selfe, the first that euer was seen within the compass and precincts of Europe (which beginneth at the mountaine Ceraunia) was about Circeij, where flood the tombe sometimes of *Elpenor*; and still it retains the Greeke name: whereby we may well iudge, that it is a stranger. Howbeit there grew a Myrtle tree in old time, when Rome was first founded, euen in that plot of ground where the citie now standeth. For thus goeth the historie: That vpon a time the Romanes and Sabines being raunged in battaile array, and at the point

A to fight a field, and to try the quarell (for the wrong which the Sabines pretended, was done to them, in regard that the Romans had rauished their daughters being young maidens) were reconciled and made friends: and thereupon laid downe their armes and weapons, and were there purified with the sacred branches of Myrtle, in that very place wherein now the temple & image of *Venus Cloacina* standeth: which therupon tooke the name (for that *Cluere* in old Latin, signified to purge or cleanse.) Besides, that tree otherwise doth afford a kind of sweet perfume to be burned. Now was this tree chosen for that purpose then to make attencement and to ratifie the marriage between the Romans and the Sabine Virgins, because *Venus* is the president and mother of carnall copulation, and the patronesse withall of the Myrtle tree. I will not confidently auouch, but me thinks I may presume to say, that the Myrtle was of all other trees first planted in the publick places of Rome for some memorable preface and fore-tokening of future events and things to come. For whereas the temple of *Quirinus* (i. of *K. Romulus*) is reputed for one of the most antique buildings now extant, there grew euen before it for a long time two old and sacred Myrtle trees: the one named *Patritia* (i. the Myrtle of the Nobility: and the other *Plebeia*; that is to say, the Myrtle of the Commonalty. The *Patritian* prospered and flourished many yeares together, whiles the *Plebeian* began to fade and wither. And to say a truth, so long as the Senate was able to maintaine and uphold their authority, the Myrtle of the Nobles continued fresh and greene, and spread her boughes at large; whereas that other of the Commons seemed as it had beene blasted, dried, and halfe dead: but after that the state of the Senat began to quail and droupe (which was about the time of the war with the *Marfyans*) as their tree decayed and wasted, so the *Plebeians* Myrtle held vp the head againe: and so by little and little, as the Maiesty of the Senatours was taken downe and abated to nothing, so their Myrtle waxed poore and barren vntill it became dry and stark dead. Moreouer, there stood an old chappell and an altar consecrated to *Venus Myrica*, whom now at this day they call *Muria*.

Cato in his time wrote of three kinds of Myrtle: to wit, the white, the blacke, and the Coniugula (so called haply of wedlock or marriage): & peraduenture it may come of the race of those Myrtles belonging to *Venus Cloacina* above named. Howbeit, in these daies wee distinguish our Myrtles otherwise; for some we reputewild and sauage, others tame and gentle: and these both are likewise of two sorts, to wit, either broader or narrower leaued. To the wilde kind properly belongeth the prickie Myrtle Oximyrsine. As for the tame and gentle Myrtles, they be those that are planted in hort-yards and gardens, wherewith gardeners make arbours, knots, and diuers deuises. Whereof be sundry kindes. The Tarentine with small leaues; ours of Italy with broader, and the Myrtle * *Hexastica*, which is very full of leaues, and ordinarily each branch hath six rankes thereof. But these are altogether out of request: both the other are full of boughes and branches. As touching the above named Coniugula, I suppose it be the fame that our common Myrtle here in Italy. But the most odoriferous Myrtle of all others, is that which groweth in Egypt.

Now concerning the wine of Myrtles, *Cato* hath shewed vs the manner how to make it: namely, to take the black Myrtle berries, to dry them in the shade vntill they haue lost all their waterish humidity, & so to put them in Malt or new wine, & let them lie there infused, or in steep. E For certainly, if the berries be not drie before, they would yeeld a oile from them. Howbeit, afterward there was a deuise found out to make a whitewine of the white Myrtle in this manner. Take of Myrtles wel beate[n] or stamped, the quantity of two * Sextares, steep the same in three hemires or pintes of wine, and then straine and presse forth the liquor.

Moreouer, the very leaues of the Myrtle tree, being drie and reduced into a kinde of meale, are singular good for to cure the vlcers in mens bodies: for certaine it is, that this powder doth gently eat away and consume the superfluous humours that cause putrification. And besides, it serueth well to coole and repress immoderate sweats.ouer and besides, the Oile also of Myrtles (a strange and wonderfull thing to tell) hath a certaine relish and taste of wine: and withall, the fat liquor thereof is indued with a speciall and principall vertue to correct and clarify Wines; if the bagges and strainers where-through the wine runneth, bee first fooked and drenched therewith: for the said oleous substance retaineth and keepech with it all the lees and dregges, and suffereth nothing but the pure and cleare liquor to passe through, and more than that, it carrieth with it the commendable odour and principall vertue of the said oile. Furthermore, it is said, That if a way, faring man that hath a great journey for to goe on foot, carrie

* not *Noticia*,
Turah.

* *in wine questis*

Virgani
But Turanus
theadeth Virge
Fauti. i. laus
or Laurelines
made of their
their boughs
And Expiris
Tori. i. notched
with yron.

in his hand a sticke or rod of the Myrtle tree, he shall neuer be weary, nor thinke his way long and tedious. Also strings made of Myrtle twigs, without any edged iron tooke, keep downe and cure the swelling bunch that riseth in the groin. What should I say more? The myrtle intermedleth in war affaires: for *Posthumus Tubertus*, being Consul of Rome (who was the first that entred in a petty triumph, ouant into the city, because he had easily conquered the Sabines; and drawne in manner no blood of them) rode triumphall in this manner, to wit, crowned with a chaplet of Myrtle, dedicated to *Venus Victricis*; and from that time forward the Sabines (euen his very enemies) let much store by that tree, and held it in great reuerence. And euer after, they that went but ouant into the city after a victory, ware this kind of garland only, except *M. Crafus*, who after he had vanquished the fugitive slaues, and defeated *Spartanus*, marched in a corner of Lawrell. *M. Asinius* writeth, how Generals when they entred triumphall into Rome, riding in their stately chariots (which was the greatest honor of all others) ware vpon their heads, chaplets of Myrtle. *L. Piso* reporteth, That *Papirius Mafso* (who first triumphed in mouth Albanus ouer the Corsians) vsed euer after to come vnto the games Circenses, and to behold them, crowned with a garland of myrtle. This *Papirius* was grandfather by the mothers side, to the second *Scipio Africanus*. Finally, *M. Valerius*, according to a vow that he made in his triumphs, vsed to weare coronets as well of Lawrell as Myrtle.

CHAP. XXX.

¶ Of the Lawrell or Bay tree, thirteene kinds thereof.

Lawrell is appropriate vnto triumphs, and besides groweth most pleasantly before the gates of the Emperors court, and bishops palace, giuing attendance there as a dutifull portree or huissier, most decently. This tree alone both adorneth their stately houses, & also keepe watch and ward duly at the dores. *Cato* setteth down two kinds of Lawrell, to wit, the Delphick, and the Cyprian. Here vnto *Pompeius Lenaxus* hath ioined a third, which he called Mustacea, because in old time they vsed to lay the leaues thereof vnder certain cakes or March-panes (which in those daies they called Mustacea) as they were in baking: this third kind hath leaues of all others largest, flaggy, hanging, and whitish withall. As for the Delphick, it carrieth leaues of one entire colour, greener than the rest: the baies or berries thereof likewise are biggest, and of a reddish green colour. With this Lawrell were they wont to be crowned at Delphos, whowon the prize at any tourney or solemne game, as also the victorious captains who triumphed in Rome. The Cyprian Lawrell hath a short leafe, black, crisped, or curled, and about the sides or edges thereof it turneth vp hollow like a gutter or crest-tile. Howbeit, afterwards there were ranged in the rank of Lawrells other trees, to wit, the *Tinus*, which some take to be the wild Lawrell, others say it is a kind of tree by it selfe indeed, it differeth from other Lawrells in the colour of the fruit, for it beareth blew berries. Then came the roiall Lawrell in place, which began to be called Augusta or Imperiall. This is a very tall and big tree, with leaues also as large in proportion, and the Baies or berries that it beareth are nothing sharp biting and vnpleasant in tast. But some there be that thinke this roiall Bay, is not a Lawrell, but a feuerall tree apart, as hauing longer & broader leaues than the rest of the ordinary fort. And these writers speaking of other kinds, call our common Bay tree, *Baccalia*, and namely that which is so fruitfull and beareth such a sort of berries: as for the fruitlesse and barren of that sort they name *Triumphal*, which is, as they say, vsed in triumphs. Whereat I maruell very much, vnlesse this ordinance and custom began of *Augustus Caesar*, by occasion of that Lawrell which came to him as sent from heauen (as I will shew anon more at large) and of all others it is for height lowest, in leafe short and frizled, very geason and hard to be found. Now there is another kind of Lawrell named *Taxa*, very fit for greene arbors, and to be wrought into knots. Out of the midst of the leafe there grows forth another little one, in manner of a skirt, tongue, or lappet of the leafe. Also without any such excreffence there is that, which they name *Spadonia*, as one would say, the gueldd Bay, that cares not how shadowie the place be where it grows: for be it neuer so remote out of the Sun, or ouer shadowed how soeuer, yet it ceases not to grow & ouerspread the ground where it standeth. Moreover, in this rank is to be reckoned the wild shrub called *Lowner* or *Chamaedaphne*. There is besides the Lawrell *Alexandrina*, which some call *Idxa*, i. Mountaine Lawrell others *Hypoglossion*, [i. Horse tongue] some *Daphnitis*, others *Carpophyllon* or *Hypelate*. This plant putteth forth branches

A branches immediately from the root, of a span or nine inches long: very proper and handfom to draw workes, or to clad arbors withall in a garden, also to make garlands and chaplets. The leaues are more sharp and pointed, softer also and whiter than those of the Myrtle, yea, & haue within them a bigger grain or feed, of colour red. Great plenty thereof groweth vpon the mountaine *Ida*, likewise about *Heraclea* in Pontus: and in oneword, neuer but in hilly and mountain countries.

As for the herb *Daphnocides* or *Laureola*, it hath many names: for some terme it *Pelagium*; others *Eupetalon*, and there are again who would haue it to be *Stephanos Alexandri* (*i. Alexanders chaplet*.) This plant also is full of branches, carrying a thicker and softer leafe than the common Lawrell, and if a man tast thereof, it will set both the mouth & also the throat on a fire: the berries that it beareth be blackish, inclining to a kind of red. It hath bin noted and obserued in ancient writers, that no kind of Lawrell in old time was to be found in the Island *Corsica*; and yet in these daies it is there planted, and thruieth well enough. The Lawrell betokeneth peace: inasmuch, as if a branch thereof be held out among armed enemies, it is a signe of quietnes and cessation from armes. Moreover, the Romans were wont to send their mislike letters adorned with Lawrell, when they would giue aduertisement of some special good newes or ioyfull victory: they vsed besides to garnish therewith their lances, pikes, and spears. The knitches also and bunches of rods, born before grand captains and generals of the army, were beautified & set out with Bay branches. Herewith they stick and bedeeke the bosome of that most great and gracious *Iupiter*, so often as there cometh glad tidings of some late & fresh victory. And all this honor is don to the Lawrell, not because it is alwaies green, nor for that it pretendeth and sheweth peace (for in both these respects the olive is to be preferred before it) but in this regard, that the fairest and goodliest of them grow vpon the mountain *Parnassus*: and therefore also is it so acceptable to *Apollo*, for which cause (as may appeare by *L. Brutus*) the Roman kings in old time were accustomed to send great presents and oblations thither to the temple of *Apollo*: or peradventure it was in memoriall of that ground that bare Lawrell trees, and which according to the Oracle of *Apollo*, the said *L. Brutus* kissed, when he intended the publicke freedom of the city, and minded to deliuer it from the yoke and sermitude of the kings: or haply, because it alone either set with the hand before the dores, or brought into the house, is not blasted and smitten with lightning. And these reasons verily induce me to beleuee, that in times past they chose the Bay tree for their triumphs, before any other: rather than as *Masurius* would haue it, because the Lawrell serued for a solemne perfume, to expiate and assoile the carnage and execution don vpon the enemies. And so far were men in old time from common vsing either Lawrell or olive, and polluting the same in any prophane vse, that they could not be permitted to burne thereof vpon their altars when they sacrificed or offered Incense, although it were to doe honour to the gods, and to appease their wrath and indignation. Euidēt it is, that the Bay tree leaues, by their crackling that they make in the fire, do put it from them, and seem to detest and abhor it. It cureth moreover the diseases of the guts [i. the matrice and the bladder] also the lassitude and wearinesse of the sinews. It is reported, that *Tiberius Caesar* the Emperour vsed euer to weare a chaplet thereof when it thundered, for feare of being stricken with lightning.

E Moreover, certaine strange and memorabile euents as touching the Bay tree, haue happened about *Augustus Caesar*. For *Liute Drusilla* (who afterwards by mariage with the said *Augustus*, became Emperesse, and was honored with the title of *Augusta*) at what time as he was affianced and espoused to *Caesar*, chanced as she sat still, to haue an exceeding white hen to light into her lap (which an *Aegle* flying aloft, let fall from on high) without any harme at all to the said pullet. Now when this lady or princeesse aduised & considered wel the hen, without being astoned and amazed at so strange & miraculous a sight, she perceived that the hen held in her bill a lawrell branch full of Bay berries. The *Wizards* and *Soothsayers* were consulted withall about this wonderful occurrent, and gaue aduise in the end to preferre the bird and the brood thereof likewise to set in the ground the foresaid branch, and duly to tend and look vnto it. Both the one and the other was done and executed accordingly, about a certain house in the country beloning to the *Casars*, seated vpon the riuer *Tiberis*, neere the caufey or port way *Flaminia*, about fiftie miles from Rome: which house therupon was called, *Ad Gallinas*, as a man would say, The signe of the Hens. Well, the foresaid branch mightily prospered, and proued afterwards to be a groue of Lawrells, which all came from the first stock. In proceesse of time, *Augustus Caesar* when

he

he entred in **Triumph** into Rome, caried in his hand a branch of that Bay tree, yea, and wore a chaplet vpon his head of the same: and so did all the Emperors and *Cæsars* his successors after him. Hercof also came the custome to set againe and replant those branches of Lawrell that emperors held in their hands when they triumphed; & therof continue whole woods & groues distinguished each one by their severall names, and perhaps therefore were they named **Triumphall**. This is the only tree known in the Latine tongue, whereof a man beareth the name. Againe, there is not another tree besides that hath the leafe to cary in the Latine tongue a denomination and name by it selfe apart, as well as the tree: for whereas the plant is named **Laurus**, the leafe we call **Laurea**. Morcouer, there is a place likewise within the city of Rome on mount **Aventine**, retaining still the name **Lortum**, which first was imposed vpon it by reason of a lawrell grove which grew there. The Bay tree also is vsed in solemne purifications before the gods: and to conclude, this would be resolu'd and agreed vpon by the way, That if a branch thereof be set, it will prosper and become a tree; although *Democritus* and *Theophrastus* make some doubt thereof. Thus much of Lawrells and other domestick and natie trees: it remaineth now to write of those that be wild and sauage, and of their natures.



THE SIXTEENTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS

SECVNDVS.

The Proeme.

Hitherto haue we treated of those Trees that beare Apples and such like fruits: which likewise with their mild iuice and sweet liquors made our meats first delightfull, and taught vs to mingle together with the necesserie food for sustentation of our lines, that which maketh delicate and pleasant to content our taste: as well those trees that naturally were so in the beginning, as those which through the industry and skill of man, what by grafting and what by wedding them (as it were) to others, became toothsome, and delectable to our tongue: whereby also we haue gratified in some sort wild beasts, and done pleasure to the soules of the aire. It followeth now by order, that we should discourse likewise of trees that beare Mast; those trees (I say) which ministered the first food to our forefathers, and were the nouices that fed and cherished mankind in that rude wild age and poore infancy of the world: but that I am forced to break the course of mine history, and preuented with a deep study and admiration arising from the truth and ground of experience, to consider, What manner of life it might be, so liue without any trees or shrubs at all growing out of the earth.

CHAP. I.

¶ Of Nations that haue no Trees nor Plants among them. Of wonderfull trees in the Northerly regions.



Much haue shewed heretofore, that in the East parts verily toward the maine Ocean, there be many countries in that estate, to wit, altogether destitute of trees. In the North also I my selfe haue seene the people called * **Cauchi**, as well the greater as the lesse (for so they be distinguished) where there is no shew or mention at all of any tree whatsoeuer. For a mightie great compass, their Country lieth vnder the Ocean, and

* I. The Low-
countries of
Zeland, &c.

A and subiect to the tide, that twice in a day & night by turns, the sea ouerfloweth a mighty deale of ground when it is flood, and leaves all dry again at the ebbe & return of the water: in so much, as a man can hardly tell what to make of the outward face of the earth in those parts, so doubtfull it is between sea and land. The poore silly people that inhabit those parts, either keep together on such high hills as Nature hath afforded here and there in the plain: or els raise mounts with their own labor and handy work (like to **Tribunals** cast vp and reared with turf, in a camp) about the height of the sea, at any spring tide when the flood is highest; and thereupon they set their cabbins and cottages. Thus dwelling as they do, they seeme (when it is high water, & that all the plain is ouerspread with the sea round about) as if they were in little barks floating in the midst of the sea: againe, at a low water when the sea is gone, looke vpon them, you would take them for such as had suffered shipwracke, hauing their vessels cast away, and left lying a-side amid the sands: for ye shall see the poore wretches fishing about their cottages, and following after the fishes as they go away with the water: they haue not a four-footed beast among them, neither enjoy they any benefit of milk, as their neighbour nations do: nay, they are destitute of all means to chase wild beasts, and hunt for venison; in as much as there is neither tree nor bush to giue them harbor, nor any neare vnto them by a great way. Sea-weeds or Reike, rushes and reeds growing vpon the washes and meers, serue them to twist for cords to make their fishing nets with. These poore soules and silly creatures are faine to gather a slimy kinde of fatty mud or oafe, with their very hands, which they drie against the wind rather than the Sun: and with that earth, for want of other fuell, they make fire to seeth their meat (such as it is) and heat the inward parts of their body, ready to be starke and stiff againe with the chilling North winde. No other drink haue they but rain water, which they saue in certain ditches after a shower, and those they dig at the very entry of their cottages. And yet see! this people (so wretched and miserable a case as they be in) if they were subdued at this day by the people of Rome, would say (and none sooner than they) that they liued in slavery. But true it is, that Fortune spareth many men, to let them liue still in paine and misery. Thus much as touching want of woods and trees.

On the other side, as wonderfull it is to see the mighty Forrests at hand thereby, which ouerspread all the rest of Germany: and are so big, that they yeeld both cooling and shade to the whole country: yea, the very tallest woods of all the rest are a little way vp higher in the country, and not farre from the **Cauchi** abovesaid: and especially those that grow about the two great loughes or lakes in that tract. Vpon the banks whereof, as also vpon the sea-coasts, there are to be seene thick rows of big Okes, that loue their seat passing wel, and thrive vpon it in growth exceeding much: which trees happening to be either vndermined by the waues and billowes of the sea vnder them, eating within their roots, or chased with tempestuous winds beating from aboue, carry away with them into the sea (in manner of Islands) a great part of the Continent, which their roots doe claspe and embrace: wherewith being counterpoised and ballasted, they stand vpright, floating and making saile (as it were) amid the waues, by the means of their mighty armes which serue in stead of tackling. And many a time verily, such Okes haue frightened our fleets and armados at sea, and especially in the night season, when as they seemed to come directly against their proes standing at anker, as if of purpose they were driuen vpon them by the waues of the sea: in so much, as the sailers & passengers within, hauing no other means to escape them, were put to their shifts, and forced for to adresse themselves, and range a nauall battell in order, and all against trees, as their very enemies.

CHAP. II.

¶ Of the huge and great Forest Hercynia

In the same North climat is the mighty Forrest **Hercynia**. A huge and large wood this is, stored with tall and big Okes, that neuer to this day were topt or lopt. It is supposed they haue been euer since the creation of the world, and (in regard of their eternall immortality) surmounting all miracles besides whatsoever. And to let passe all other reports which happily would be thought incredible, this is knowne for certain, That the roots of the trees here, run and spread so far within the ground, that they encounter and meet one another: in which resistance they swell and rise vpward, yea, and raise vp mounts of earth with them to a good height

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in many places: or, where as the earth follows not, a man shal see the bare roots embowed arch-wise, and mounting aloft as high as the very boughes: which roots are so interlaced, or els rub one against the other, striding (as it were) not to give place, that they make a shew of great portallies or gates standing open lowide, that a whole troupe or Squadron of horsemen may ride vpon right vnder them in ordinance of battell.

CHAP. III.

¶ Of trees bearing Mast.

MAst trees they were all, for the most part, which the Romanes euer so highly honoured and held in best account.

CHAP. IV.

¶ Of the Ciuicke garland: and who were honoured with chaplets of Tree-leaves.

From Mast trees (and the Oke especially) came the Ciuicke coronets. And in very truth, these were the most honorable badges and ornaments that could possibly be giuen vnto souldiers and men of war, in regard of their vertue and man-hood: yea, and now for a good while, our Emperors haue had this chaplet granted vnto them, in token and testimony of clemency: euer since that by our prophane and vnkind ciuill wars the world is grown to this passe, that it is reputed a singular demerit and gracious act, not to kill a citizen of Rome, but to let him liue. To this kind of garland, none other be comparable: for the Murall and Vallare coronets (bestowed vpon them that either scaled the walls, or entred the breach first into an enemy city, or els mounted ouer the rampier of a camp) albeit they were of gold, and of greater price by far, yet they gaue place to these. Yea, the very Nauall coronets, fashioned like the three forked pikes of ship beake-heads (wherewith they were honored, who had performed some braue seruice at sea) came behind these Ciuicke garlands, due to them who haue rescued citizens and saved them out of the enemies hands: and yet in these our daies there haue bin knowne two in that kind most renowned about the rest; whereof the one was bestowed vpon *M. Varro* by *Pompey* the Great, for defeating the pyrats, and for scouring and clearing the seas of them: the other likewise giuen to *M. Agrippa*, by *Augustus* Caesar, for vanquishing the Sicilians, who also were no better than rousers.

Now forasmuch as we are light vpon the mention of Nauall or Rostrate coronets, this would be noted, That in old time the said brazen beake-heads of ships woon from the enemies, and set vpon the front of the Tribunall or publick pulpit in Rome, serued for an ornament to beautifie the Forum or common place of the city, so as the very body of the people of Rome seemed to be crowned and honored thereby. But after that the Tribunes in making seditious orations began to stamp and fare like mad men there, to trample (I say) vnder foot, and to pollute that sacred place and those goodly ensignes; after that theyfel once euerly man to make his priuat and particular profit of the common good, without regard to aduance the weale publick; after that each one sought to strengthen and arm himself by the benefit of authority, and that to the weakening of the main state, in so much as they who were reputed by their place sacrosanct and inviolable, polluted and prophaned all: then the said ornaments of beake-heads, which beautified the place vnder their feet, serued to adorne the heads of Roman citizens. So as, to returne againe now to the aboue named *Agrippa*, *Augustus* Caesar gaue vnto him a Nauall coronet for subduing the Sicilian Pyrats: and himselfe receiued of mankind a Ciuicke chaplet, for sparing the bloud, and sauing the liues of so many citizens.

In ancient time they vsed to crowne none but the gods. And hereupon it is, that the Poet *Homer* speaketh of no garlands and chaplets but due to the celestiall & heavenly wights, or at leastwise in the name of a whole army, for victory attieued in some notable battell: for to one man alone he alloweth not any, no not in regard of the better hand in combat or single fight. And to say a truth, the first that euer set a Garland vpon his owne head, was prince *Bacchus*, and the same was made of Iuic: but afterwards, those that sacrificed to the honour of gods, not onely were chaplets themselves, but also adorned therewith the heads of the very beasts which were appointed to be killed for sacrifice. In the end, the custome was taken vp to honour them with

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A garlands, who wan prizes at those sacred and solemne games, Olympia, Isthmia, Pythia, and Nemea. Howbeit the manner was then, and so continueth to this day, to giue chaplets to the said victors, not in their own name, but in the behalfe of their native country, which by open proclamation they pronounce to be crowned and honored thereby. And hereof it came also, that such coronets and chaplets were granted to them that should triumph, yea and soone after to those also who had won the prize in any publick games, vpon condition to dedicate them to the temple of the gods.

To discourse what Roman citizen receiued this honor first of a chaplet or coronet, were a long peece of worke, and nothing pertinent to our purpose and matter in hand; considering that they were acquainted with none at all, but in regard of seruice performed in the war. Yet thus much I may auer for certain, That no nation vnder heauen, nay put them all together, can shew so many sorts of chaplets and coronets, as this one state and people of Rome. *K. Romulus* crowned *Hofius Hoftilius* with a garland of bare greene leaues, for that in the forcing and ruining of Fidenae, he brake first into the city and made way for the rest. This man was grandfire to *Tullus Hoftilius* king of Rome: Semblably in the war against the Samnites, wherein *Cornelius Cofus* the Confull was L. General, the whole army crowned *P. Decius* the father with a chaplet of greene leaues, who then was a martiall Tribune or Colonnell ouer a regiment of souldiers, for that hee had saved and deliuered the said army.

But now to come againe to our Ciuicke garland, it was made at first of the Ilex or Holme tree leaues: afterwards men tooke a better liking to make it of the *Æsculus*, a tree consecrated to *Iupiter*. They staid not there, but changed soone after with the common oke; neither made they any precise choise, but tooke the leaues of that which came next hand, wherefoever they found it growing, provided alwaies that it bare acorns: for all the honor of these garlands consisted principally in the mast. Moreouer, there belong to these Ciuicke garlands straight laws and ordinances, in which regard these chaplets be proud and stately: and we may be bold to compare them with that Paragon-coronet of the Greeks, which passeth all others, giuen solemnly and published in the presence of *Iupiter*, and made of the wilde Oliue dedicated vnto him: comparable (I say) to any crowne or chaplet whatsoever; euen to that, for which a city in token of ioy, would not stick to lay open a breach in their very wall to receiue it when it should enter in. The lawes ordained in this behalfe run in this forme: *Imprimis*, He that is to enioy the honour of a Ciuicke chaplet, ought, first to haue rescued a citizen, and withall to kill the enemy in whose danger hee was. Item, it is required, That the enemies the same day held the verie ground and were Masters thereof, wherein the rescue was made and the seruice performed. Item, That the partie himselfe so saved, doe confesse the thing, for otherwise all the witnesses in the World maile not in his case. Item, the man thus deliuered, must be a free Citizen of Rome in anie band: for for case that hee were a King which was thus rescued, if hee were a stranger, and came onely amongst the auxiliaries to aide the Romanes, it would not boot, nor gaue any man his honour for to save his life. Item, say that the Generall himselfe were rescued and deliuered out of danger, the partie for his good seruice should haue no more honour due vnto him, than if hee had preserved but a simple common souldier, so hee were a Roman Citizen: for the makers of these ordinances aimed chiefly at the life of a Citizen whofoever hee was, without regard of any other circumstance. Item, that that was once crowned with this garland, was endued also with

these priuileges: That hee might weare it alwaies after, whensoever it pleased him: That so often as hee came in place of publicke playes or games, men should accustomably rise vnto him, yea, and the verie Senators themselves, doe him honour in that sort: That hee should haue his place allowed him to sit next vnto those of Senators degree: That both himselfe, and also his father and grandfire by the fathers side, should euer after be exempt from all ciuile charges, and inioy full immunitie. Thus much concerning the lawes and priuileges attending vpon the Ciuicke garland. *Scinius Dentatus* (as wee haue specified before) receiued foureteeen of these chaplets for his good seruice: [*Atanlius*] *Capitolinus* six, and hee verily had one of them for rescuing *Seruilus* beeing Generall of the Armie. As for *Scipio Africanus*, hee refused this honour when it was offered and presented vnto him, for sauing the life of his owne father at the iourney and battaile of Trebia. O the excellent orders and customes of those times, worthe of immortalitie and euerlasting memorie!

FO the willdome of men in those daies, who assigned no other reward for so braue exploits and singular workes, but honour onely? And whereas all other militarie coronets they enriched and adorned with gold, they would not set the life of a citizen at any price. A plaine and euident

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* As the manner was to receive the Honore.

profession of our ancestors and predecessors, That it is an vnlawfull and shameful thing to seeme for to saue a mans life, in hope of any gain and profit thereby.

CHAP. V.

¶ Of Mast, thirteene kinds.

Many nations there be euen at this day, and such as inioy peace and know not what warre meaneth, whose wealth and riches lyeth principally in Mast: yea and elswhere in time of dearth and for want of other graine, folke vse to dry their mast, grind it into meale, temper it with water, and thereof make dough for bread. Moreover, euen at this day throughout Spaine, the manner is to serue vp acornes and mast to the table for a second seruice: and sweeter it is being rolled vnder the cinders and ashes, than otherwise.ouer and besides, provided it is by an expresse act and law of the twelue tables in Rome, that a man may gather the mast that falleth from his owne trees into another mans ground.

Diuers and sundry sorts there be of Mast, and their difference consisteth in the forme and fashion of the fruit, in the site and situation of the place, in the sex, and in the taste: for the mast of the Beech tree is of one figure and making, the Acorne (which is the mast of the Oke) another, and the mast of the Holme or Ilex, differeth from them both: yea & in euery one of these kinds, they do vary one from another. Also, some are of trees growing wild; others more milde and gentle, louing places well tilld and ordered by husbandry. Some like the hilly countries, others the champaine and the plains. Semblably there is mast coming from the male trees: there is againe that groweth on the female. In like maner, the tellish & salt maketh a difference and diuersity in mast. The sweetest of all, is the Beech mast: for *Cornelius Alexander* reporteth, That the inhabitants of Chios, when they were streightly beleaguered, indured the sieg a long time by the benefit & substance only of that mast. We are not able distinctly to specifye name by name, the sundry sorts of mast and the trees which beare the same, considering that in euery country they alter their names: for we see the Robur and the Oke to grow commonly euerie where, but the Efculus is not forie in all countries. A fourth sort there is of the same kind, that is not known ordinarily in most places of Italy. We will therefore distinguish them according to their nature and properties: yea and when need shall require, by their Greeke names also.

CHAP. VI.

¶ Of the Beech mast, and other Masts: of Charcole, and the feeding of Hogs.

The Beech mast is like to the kernell of a Chestnut, inclosed within a three cornered skin. The leafe of the tree is thin and very light, resembling that of the Poplar: it turneth yellow passing foene. In the middle whereof, for the most part, and in the vpper side, it bringeth forth a little green berrie, pointed sharpe at the toppe. The mast of Beech, Rats and Mice are much delighted in mark there when there is store of that mast, ye shall haue as great increase of that vermin. It will feed also Reremice or Dormice fat: and the Ousels or Blackbirds take a great liking thereto, and will flie vnto it. Lightly, all trees are most fruitful one yere than another, and beare most euery second yere; but about all, Beeches keepe this course. As touching Mast (which properly is so called) it groweth vpon the Robur, the common Oke, the Efculus, Cerrus, Ilex, and Cork tree. All kinds of mast are contained more or lesse, within a rough cup, which lieth close to the vntmost skin thereof, & claspeth it about. The leaues of all these mast trees, except the mast-Holme Ilex, be heauy, fleshie, large, waued or indented along the sides, neither be they yellow when they fall, as the Beech leaues are; longer also or shorter, according to the diuers trees whereupon they grow.

Of the Ilex or mast-Holme tree, there be two sorts. Those in Italy differ not much in leafe from the Oliue. Some Greeks call them Smilaces, but in other prouinces Aquifolia. The mast of Ilex, both the one and the other, is shorter and slenderer than of the rest. *Homer* calleth it Aeylon, by which name he distinguisheth it from other mast. The male Holmes (men say) beare no fruit. The best mast and the biggest, is the Acorn growing vpon the common Oke: next to it is that of the Efculus: as for that of the Robur, it is but small. The Cerrus carieth a mast vnpleasant to the eie, and rough to be handled, for clad it is with a cup beset with sharpe prickles like

A to the Chestnut shell. Among the vber Acornes, some haue a swifter tast than others: the female Oke beareth those that be more soft and tender; the male, rough, thick, and massie: and the best simply are those that come of the broad leaved Oke, for so it is called by reason of the large leaues. Moreover, there is another difference in mast and acornes, for some be bigger than others; againe, there are that haue thin and fine skins inclosing the kernell, and ye shall find others for them as thick skinned; likewise many of them are couered with a rough and rustie tunicle; and as many againe do shew immediately their bare whiteskin and naked fleshy substance. Furthermore, that mast is accounted good, which at both ends (taking it long-waies) groweth hard in manner of a stone; howbeit that which hath an hard shell without, and a soft body within, is better than that which is hardened in the carnos substance of the body; and lightly neither of both these qualities happeneth to any but the male kind, ouer and besides, some you shall find B fashioned long like an egge, others as round as a ball, and a third sort sharp pointed. The outward colour also yeeldeth variety: for some be blacker than other, but the whiter commonly be the better set by. Some are bitter toward the ends, and sweet in the mids. The length also & the shortnesse of the stele or taile whereto they hang, maketh a difference. The very tree it self causeth diuersity of the fruit: for that Oke which beareth the biggest mast, is named *Hemeris*. A shorter tree this is than the rest, with a round head, and putting forth many hollow arm-pits (as it were) of boughes and branches. The wood or timber of the ordinary and common Oke is rougher and harder than that of others, and lesse subiect to putrifaction: full of arms & boughes it is, as the other, but it groweth taller and is thicker in the body. The highest of all, is the *Agilops*, which longeth to grow in wild and desert places. Next to it for tallnesse, is the broad leaved Oke, but the timber thereof is not so good and profitable for building, howeuer it be imploied for to make charcole; yet being once squared to that purpose, & cleft, it is subiect to the worm, and will soon rot: and for this cause, being in quarters, they vse not to make cole of it clouen, but of the solid and round boughs or branches thereof. And yet this kind of charcole serueth only the Bloom-smithies and furnaces; the hammer-mills also of brasie and copper-smithies, whom it standeth in great good stead and saue them much fewell; for it burneth and consumeth no longer than the bellows goe: let them leaue blowing once presently the cole dieeth, and so it lasteth long: for at euery new blast it is repewed againe and refreshed: otherwise it sparketh very much and yeeldeth many cinders. But the charcole made of yong trees is the better.

D Now the maner of making them is this: when the wood is cut into many clefts & splents, fresh and green, they are heaped vp on high, and hollow, in manner of a furnace or chimney, and then well luted with clay in the top, and all about which done, the pile of truncheons aforesaid, is set on fire within; and as the outward coat or crust of clay beginneth to wax hard, the workemen or colliers pierce it with poles and peaches, and make diuers holes therein for vent, and to let out the smokie vapor that doth sweat and breath from the wood. The worst of all other for timber or cole, is the ok named *Haliphleoa*; a thicke barke it hath, and as big a body, but for the most part hollow and light like a sponge or mushrom: and there is not another besides it of all these kind of trees, that rotteth as it stands alieue. Besides, so vnfortunate it is, that the lightning smiteth it, as low as it groweth; for none of them ariseth to any great height: which is the cause that it is not lawfull to vse the wood thereof about the burning of any sacrifice. Seldome beareth it E any Acornes, and those few that it hath, be exceeding bitter, so as no other beast will touch them but swine againe; nor they neither, but for pure hunger, when they can meet with no other food. Moreover, in this regard also reiecteth it is, and not employed in any religious vse, for that without blowing at the wood and cole thereof continually, it will not burne cleare and consume the sacrifice, but goeth out and lieth dead.

But to returne vnto our mast againe: that of the Beech tree feedeth swine quickly, maketh their flesh and lard faire and pleasant to the eie, tender to be soone foddren or roasted, light and easie of digestion, and good for the stomacke. The mast of the Holme causeth hogs to gather a more fast and compact flesh, their bodies to be neat, slender, Ianke, and ponderous. Acornes doe engender a fleshy substance, more square and spreading, and the same also most heauy and hardest of digestion, and yet they are of all other kinds of mast, most sweet and pleasant. Next to them in goodness, by the testimony of *Nigidius* is that of the tree *Cerrus*, neither is there bred of any other a courser flesh, howbeit hard it is, salt, and tough. As for the mast of Ilex, hogs are endangered by eating thereof, vnlesse it be giuen them warily by little and little. Hee sayth moreover,

moreouer, that of all other it falleth last. Moreouer, the mast of Efculus, Robur, and the Corke, G
caufeth the flesh to be spongieous and hollow. To conclude, what trees soeuer beare mast, carry
also certaine nuts called Galls: and lightly they are full of mast but each other yeare. But the
oke Hemeris beareth the best galls, and fittest for the curriers to dresse their leather. The broad
leaved Oke hath a kinde of Galls like unto it, but lighter in substance, and not so good by far:
it carrieth all blacke galls (for 2 sorts there be) and this is better for the diet to colour wooll.

CHAP. VII.

¶ Of the Gall-nuts: and how many other things Mast-trees doe
beare besides Mast.

THE nuts called Galls, doe ever breake out all at once in a night, and namely about the be-
ginning of Iune, when the Sun is ready to goe out of the signe Gemini. The whiter sort
thereof commeth to the growth in one day: and if in the first spring and breaking forth
thereof it be hot weather, it drieth and withereth out of hand, and commeth not to the full big-
nesse and perfection, namely to haue a kernell as much as a bean. The blacke of this kind con-
nueth longer fresh and green, and groweth fill, to the bignesse otherwhiles of an apple. The
best galls be those of Comagena: the worst is that of the oke called Robur, which are knowne
by the holes they haue, that may be seen through. The common oke Quercus, ouer and besides
the fruit (which is the mast) beareth many other things, for it carrieth both sorts of gal, the black
for the most part a bulls head, containing within them a fruit much like the kernells of the olive.
Moreouer, there grow vpon it certain little bals not vnlike to nuts, hauing soft flesh within good
to make candle-wick or matches for lamps, for burn they wil without any oyle, like as the black
Gals. It beareth also other little pills or balls good for nothing, couered ouer with haire, & yet
in the spring time they yeld a certain iuice or liquor like hony. Furthermore, there breed in
the hollow arm-pits (as it were) of the boughes, other small pills fetled or sticking close to the
wood, and not hanging by any fleshes, which toward the nauill or bottome thereof are whitish;
otherwise they be speckled all ouer with black spots, save that in the mids between they are of
a scarlet red colour: open them, and hollow they are within, but very bitter. Sometimes also this
oke engendreth certain hard callosities, like Pumish stones, yea and other round balls made of
the leaues folded one within another: on the backside also of the leafe where it is reddish, yee
shal find sticking certain waterish pearls, white and transparent or cleare within, so long as they
be soft and tender, wherein there breed little flies or gnats: howbeit in the end they ripen and
wax harder, in manner of Galls.

CHAP. VIII.

¶ Of the Catkin called Cackrys: the graine of Scarlet: of Aga-
ricke, and Corke.

THE Oke called Robur, bringeth forth likewise a certaine pendant chat or catkin, named in
Greece Cackrys: for so they terme the little pill, which is of a burning and causticke Na-
ture, and whereof there is vse in Physick for potentiall cauteries. The like groweth vpon
Firres, Larch trees, Pitch trees, Lindens of Tilletts, Nut-trees, and Planes, namely after that the
leaves be fallne, and abideth vpon the tree in winter time. These chats haue a kernell within like
to those of the Pine-nuts. It beginneth to grow in winter, & by the spring time al of it openeth
and spreadeth to the prooffe, but when the leaues begin to bud and put forth, it falleth off. Thus
you see how fruitfull these okes be, and how many things besides mast, they do bring forth: and
yet they cease not nor giue ouer thus, for many times a man, shall see certaine excrecences
growing forth about their roots, such as roadd stools & muhroms, the last deuises that our glut-
tons haue inuented to whet their appetite and stomacke, and to maintaine gourmandize. The
common Oke breedeth the best of this kind: as for those that grow about the Oke Robur, the
Cypresse, and Pine-tree, they are hurtfull to be eaten, and venomous. Moreouer, Hesiodus saith,
that the Okes Robora doe beare Mistletoe, and yeld hony. True it is indeed, that the hony-dewes
called Manna, falling from heauen (whereof we haue spoken before) light not vpon any other
leaves

A leaues more than of those okes. Moreouer, this is knowne for certain, that the astios of this Oke
when it is burnt, hath a quality or taste of nitre or salt-peter.

Howbeit for all the riches and fruit that the Oke affordeth, the Scarlet grain alone which
commeth of the Ilex, challengeth yea and ouermatcheth it. This graine is no other than a very
excrement or superfluity arising about the stem of the small shrub called Ilex Aquifolia, scrap-
ped and pared off from it, like such refuse as they Cusculum or Quinquilium: but of such price
it is, that the poore people of Spaine gather it, & make a good part of their renewen thereby,
even as much as will pay halfe their tribute. As touching the commendable vse thereof in dy-
ing, we haue sufficiently spoken in the discourse of the purple tincture. This scarlet grain is in-
gendred also in Galatia, Africa, Pisidia, and Cicilia. But the worst of all other is that which
commeth out of Sardinia.

B As for Agaricke, it groweth in France principally vpon trees that beare mast, in manner of a
white muhrom: of a sweet fauor, very effectual in Physicke, and vsed in many Antidotes and
soueraigne confections. It groweth vpon the head and top of trees: it shineth in the night, and
by the light that it giueth in the darke, men know where and how to gather it.

Of all Mast-trees, the Oke called by the Greeks Eglyops, beare certaine drie excrecences
swelling out like Touch-wood, couered all ouer with a hoary & hairy mosse, and these not only
beare out from the bark of the fruit, but also hang downe from the boughes a cubit in length:
and odoriferous they are, as we haue shewed in our treatise of Ointments.

C Now concerning Corke, the woody substance of the tree is very small, the mast as bad, hol-
low, spongieous, and good for nothing. The barke only serueth for many purposes, which will
grow again when the tree is barked, & that of such a thickness, that it will beare 10 foot square.
Much vse there is of it in ships, & namely for boys to anere cables, also for stotes to trainells or
dragnets that fishers do occupy: moreouer in bungs & stoppels of barrels, bottles, and such like
vessels. Finally, our gentlewomen and dainty dames haue the soles of their pantoffes & winter-
shoes vnderlaid therewith. In regard of which bark, the Greeks call it by a pretty name, and
not improperly, The bark tree, or the tree all barke. Howbeit some would haue it to be the fe-
male Ilex or Mast-Holm, and so they name it: and where there growth no Ilex, in stead thereof
they take Corke, especially in Carpentry, and cart-wrights worke, as about Elis and Lacedæ-
mon. Neither groweth it in all parts of Italy, ne yet in any one quarter of France.

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CHAP. IX.

¶ What trees they be that carry barke good for any vse.

THE peasants of the country and the rustical people employ much, the baake also of Bee-
ches, Lindens or Tilletts, Firrs, and Pitch trees; for thereof they make sundry vessels, as
paniers, baskets, and certain broad and wide hampers for to carry their corn and grapes in
time of haruest and vintage, yea and other hiles they couer their cottages therewith. More-
ouer, (pies vse to write in barks (when they be fresh and greene) intelligences to their captaines,
grauing and drawing their letters so, as that the sap and iuice thereof couereth them. To con-
clude, the bark of the Beech tree is vsed in certain religious ceremonies of sacrifice: but when
the tree is spoiled of the bark, it soone fadeth and dieth.

CHAP. X.

¶ Of Shaddles: of the Pine tree, the wilde Pine, the Fir, Pitch tree, Larch tree,
Torch tree, and the Tew.

THE boards or shindles of the wild Oke called Robur, be of all others simply the best: and
next to them, those which are made of other mast-trees, and especially of the Beech. The
shindles are most easily rent or clouen out of all those trees which yeld Robin, but setting
aside the Pine-wood only, none of them are lasting. Cornelius Nepos writeth, that the house in
Rome were no otherwise couered ouer head but with shindles, until the war with K. Pyrrhus, to
wit, for the space of 470 yeeres after the foundation of the city: and of a truth, the chiefe quarters
of Rome were diuided & distinctly named by certain woods and groues neere adjoining. And
euen at this day there remaineth the quarter of Iupiter *Fastualis*, where sometime stood a tuft or
groue

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grove of Beeches: also the gate Querquetulana, bearing the name of an Oke row: likewise the hill Viminalis, from whence they used to fetch windings and bands of Officers: and many other groves, whereof some were set double, and were two of a name. We read in the Chronicles, that *Q. Horatius*, Dictator for the time being, (when as the commons arose, and in that mutinie or insurrection forsooke the city and withdrew themselves to the fort Ianiculum) made a law & published it within a certain grove hard by, called Esculetum, where there grew a number of trees named Esculi: and the said statute ran in this forme, That whatsoever ordinance should be enacted by the said Commonaltie, it should bind all Citizens of Rome whomsoever to observe and keepe.

In those daies the Pine and Fir, and generally all trees that yeeld pitch, were held for strangers and aliens, because none of them were knowne to grow neere vnto the city of Rome: whereof now we will speak, the rather because the beginning & whole manner of confecting and preserving wines might be thereby thoroughly knowne. First and formost, some of the trees afore-said in Asia or in the East parts do bring forth pitch. In Europe there be six sorts of trees, seeming all of one race, which yeeld the same. Of which, the Pine and the Pinaifer carry leaues thin and slender in manner of hairens, long also and sharp pointed at the end. The Pine beareth least rosin of all others, howbeit otherwise some it hath in the very fruit thereof, which we call Pine nuts or apples (whereof we haue already written) yet so little it is, that hardly a man would reckon the Pine among those kinde of trees that yeeld rosin. The Pinaifer is nothing els but the wild Pine: it growes wonderful tall, putting forth arms from the mids of the trunk or body upward; whereas the other Pine brancheth only in the head. This of the twain is more plentifull in rosin, whereof we will speake more anon. These wild Pines grow also vpon plains. There be trees vpon the coast of Italy, which men call Tibuli, and many think they be the same, although they carry another name: slender they are and shorter, altogether without knots, and little Rosin they haue in them or none; but they serue well for shipwrights, to build frigats & brigandines.

The Pitch tree loueth the mountains and cold grounds, a deadly and mournfull tree it is, for they used in old time to sticke vp a branch thereof at the dores of those houses where a dead corps was, to giue knowledge thereof abroad: and commonly it grew green in churchyards and such places, where the manner was to burn the bodies of the dead in funeral fires: but now adays it is planted in courtyards and gardens neer our houses, because it may be easily kept with cutting and shredding, it brancheth so well. This tree puts forth great abundance of rosin, with white grains or kernels comming between, so like vnto frankincense, that if it be mixt therewith, vnnett or hardly a man may discern the one from the other by the eye. And hereupon it cometh, that Druggists and Apothecaries do sophisticate frankincense, and deceiue folk with it. All the sort of these trees are leaued with short thick and hard prickly bristles in manner of the Cypres. The Pitch tree beginneth to shoot forth branches euen from the very root almost, and those be but small, bearing out like armes, and tickling one against another in the sides. Semblably do the Fir trees, which are so much sought for to serue shipping: and yet this tree delightheth in the highest mountains, as if it fled from the sea of purpose, and could not away with it: and surely the form and manner of growing is all one with the pitch tree. The wood thereof is principal good timber for beams, and fitteth our turn for many other necessities of this life. Rosin if it be found in the Fir is thought a fault in the wood, whereas the only commoditie of the pitch tree is her rosin; and yet sometime there crieth and sweateth out a little thereof in the extreme heate of the sun. The timber of them both is not alike, for that of the Fir is most faire and beautifull: the pitch tree wood serueth only for clouen lath or rent shindles, for coopers to make tubs and barrels, and for some few other thin boords and painels.

As for the Larch tree, which is the fifth kind of those that beare rosin, like it is to the rest, and loueth to grow in the same places: but the timber is better by ods, for it rots not, but will last and endure a long time: the tree will hardly be killed, besides, it is red of colour, & carries a hotter and stronger smell than the other. There issueth forth of the tree as it growes, good store of liquid rosin, in colour like hony, somewhat more clammy, which will neuer grow to be hard.

A sixth sort there is of these trees, and it is properly called Teda, the Torch tree: the same yeelds more plenty of moisture and liquor than the rest: lower it is of growth than the Pitch-tree, but more liquid and thin, very commendable also to maintain fire at sacrifices, & to burn in torches for to giue light. These trees, I mean the male only, bring forth that strong and stin-

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king

A king rosin, which the Greeks call Syce. Now if it happen that the Larch tree proue Teda, [i. to be Torch-wood] it is a signe that it doth putrifie and is in the way of dying.

The wood of all these kinds before named, if it be set a fire, maketh an exceeding grosse and thick smoke, and presently turneth into a cole, spitting and sparking a far off; except that only of the Larch tree, which neither burneth in light flame, nor maketh cole, ne yet consumeth in the fire otherwise than a very stone.

All these trees whereof we speake continue greene all the yeare long; and very like they are in leafe, that men otherwise of cunning and good experience, haue enough to do to discern one from the other by it, so neere of kin they be, and their race so much intermingled. But the pitch tree is not so tall as the Larch: for the Larch is thicker in body, of a thinner and lighter barke, more shag leaued, and the said leaues fatter, growing thicker, more pliable, and easier to wind B and bend: whereas the leaues of the pitch tree hang thinner, they be of a drier substance, more slender and subiect to cold: and in one word, the whole tree is more rough and hideous to see to, and withall, full of rosin: the wood also resembleth the Firre, rather than the Larch.

The Larch tree, if it be burnt to the very stump of the root, will not spring againe and put forth new shoots: whereas the pitch tree liueth still for all the fire, and wil grow afresh: the experience whereof was seen in the Island Lesbos, at what time as the Forrest Pyrrhæum was set on fire, and clean burnt to the ground.

Moreover, euery one of these kinds differ in the very sex: for the male of each kind is shorter and harder: the female taller, hauing fatter leaues, and the same soft and plain, & nothing stiff and rugged. The wood of the male is tough, and when it is wrought keepeth not a dire & grain, C but windeth and turneth, so as the carpenter must goe euery way about it with axe and plane: contrariwise that of the female is more firm and gentle. And commonly the axe or the hatchet will tell the difference of male and female in any tree; for what wood soeuer it be, it will soone find and feeble the male: for hardly is it able to enter, but either turnes edge, or rebounds againe: and whether a man heu or cleaue withall, it maketh more crashing and a greater noise where it fetleth and taketh hold; it ticketh also faster, and with more ado is plucked forth. Moreover, the very wood of any male tree is of a more brown and burnt colour, yea, and the root of a blacker heu.

About the Forrest Ida within the territory of Troas, there is another distinction of trees in the same kind: for some grow vpon the mountains, others toward the coast on the sea side. In D Macedony, Arcadia, and about Elis, these trees oftsoons change their names, so that the Greek writers are not agreed how to distinguish their several sorts, and range them in their due kind. I therefore haue exprest them according to the iudgment of Roman and Latine Authors.

Of all the trees before named, the Firs surpass for bignesse, and the females are the taller. The timber also is more firm and soft, more profitable also, and easier to be wrought: the tree it self rounder, and so it brancheth arcliwise: the boughes as they resemble wings stretched out and displaced, so they stand so thicke with leaues, that they will beare off a good shower, in suchwise as no rain is able to pierce through. In sum, the female Firre is far more louely and beautifull euery way than the male.

All the sort of these foresaid trees, saue onely the Larch, beare certain knobs like Catkins or E Chats, composed (as it were) of many scales wrought one ouer another, and those hang downe dangling at the branches. These knobs or clogs in the male Firre haue in the vpper end a kernel within: but those of the female haue no such thing. Moreover, the pitch tree as it hath such catkins lesse and slenderer; so all within, from one end to the other, the kernels be passing little and black withall, like to lice or fleas, which is the reason that the Greekes call it *Philiprophoros*. The said catkins of the male pitch trees are more flat, and nothing so round as those of the females, lesse gummie also, and not so moist of the rosin.

To come now to the Yugh, because we would ouerpass none: it is to see to like the rest, but that it is not so green; more slender also and smaller, vnpleasant and fearefull to looke vpon, as a curled tree, without any liquid substance at all: and of these kind of trees, it alone beares berries. F The fruit of the male is hurtfull: for the berries in Spain especially haue in them a deadly poison. And found it hath bin by experience, that in France the wine bottles made thereof for waifaring men and trauellers, haue poisoned and killed those that drunke out of them. *Sesilium* saith, That the Greekes call it Smilax: and that in Arcadia it is founomous, that whoeuer

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take either repose or repast vnder it, are sure to die presently. And hereupon it commeth, that those poisons wherewith arrow heads be inuened, after some were called in times past Taxica, which wee now name Toxica. But to conclude, it is seen by good prooue, that if a brazen wedge or spike be driuen into the very body of the tree, it loseth all the venomous nature, and becommeth harmlesse.

CHAP. XI.

¶ How to make all kinds of Pitch. The manner how Cedrium is made.
Also, of thicke Pitch, how it is made; and in what sort Rosin is boiled.

The liquid Pitch or Tar throughout all Europe is boiled out of the Torch tree: and this kind of pitch serueth to calke ships withall, and for many other vses. Now the manner of drawing Tarre out of this tree, is to cut the wood thereof into pieces, and when they are piled vp hollow into an heape, to make a great fire within, as it were vnder a furnace, being claied without forth: thus with the heate of the fire it doth fry and seeth again. The first liquor that sweatech and issueth forth runneth cleare as water, in a channell or pipe made for the purpose, and this the Syrians call Cedrium: which is of such force and efficacy, that in Egypt they vse to embalme the dead bodies of men and women departed, and keep them from putrefaction. At the next running it is thicker, and this second liquor is very pitch. Howbeit this is cast again into certaine coppers or cauldrons of brasse, and together with vineger sodden a second time, vntill it come to a thicke *consistence: and when it is thus thickened, it taketh the name of Brutian pitch, good only for tuns, barrells, and other such vessels. Much like it is to the former pitch, but that it is more glutinous and clammy, redder also of colour, and more fatty. And thus much concerning the pitch made of the Torch tree.

As for that which comes of the pitch tree, the rosin thereof is drawen with red hot stones in certain vessels made of strong and thick oken planks: or in default thereof, the wood is clouen into pieces, and piled together after the order of a charcole hearth, & so the pitch boiles forth. The vse hereof when it is beaten into a kind of meale or pouder, is to be put into wine, and it is of a blacker colour than the rest. The same pitch-rosin, if it be boiled more lightly with water, and be let to run through a strainer, comes to a reddish colour, and is glerie: and thereupon it is called, stilled Pitch. And for this purpose lightly, is set by the more grosse and faultie substance of the rosin, together with the bark of the tree. But there is another composition and manner of making of pitch, that serueth for heady wine, called Crapula. For the floure of the Rosin is taken green and fresh, as it distilleth from the tree, together with a good quantitie of small, thin, and short spils or chips of the tree plucked away with the same: the same are minced or shred so small, as they may passe through a sieue or a riddle: which donall is put into scalding water, and there boileth vntill it be incorporate with the water. The far substance that is strained and pressed from hence, is the excellent pitch Rosin, hard to come by, and not to be found in Italy, vlesse it be in few places vnder the Alps, and very good it is in physick. Now to make it passing white, there must be taken one gallon of the rosin, & sodden in two gallons of rain water. But some think it the better way to seeth it a whole day together at a soft fire, without any matter at all, in a pan or vessel of Lattin. Others there be likewise that boile Turpentine in a hot frying pan, and are of opinion, that this is the best of all others. And the next to it in goodness is the Lentiske rosin, called Mastick.

CHAP. XII.

¶ Of the Pitch Zopissa, which is scraped from ships: and of Sapim. Also what trees are in request for their timber.

It would not be forgotten, that the Greeks haue a certaine Pitch, scraped together with wax from the ships that haue lien at sea, which they Zopissa (so curious are men to make experiments and try conclusions in every thing:) and this is thought to be much more effectfull for all matters that pitch and rosin are good for, by reason of the salt temperature that it hath gotten by the salt water.

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A For to draw rosin out of the * Pitch-tree, it must be opened on the Sun side, not by giuing a slit or gash in the bark, but by cutting out a peece thereof, so that the tree may gape and lie bare two foot at the most: and from the earth, this wound to be at least a cubite. Neither doe they spare the entire bodie and wound of the tree, as they do in the rest: for there is no danger thereof, considering that the very chips of the wood being cut out, are full of liquor, and do serue to make pitch. But the nearer that the said ouerture or hole is made to the earth, the better is the rosin that issues forth: for if it be higher it is better. When this is don, all the humor afterwards runneth to the vicer or incision aforesaid, from euery part of the tree. The like it doth in the Torch pine. When it hath left running to the first hole, there is a second likewise made on another side, and so still is the tree opened euery way: vntill at length tree and all is hewn downe, and the very pith and marrow thereof serueth for Torch wood to burne. Semblably, in Syria they vse to plucke the barke from the Terebinth: yea, and they pill the boughes and roots too for Turpentine, how soeuer in other trees the rosin issuing out of those parts, is not counted good, in Macedonie the manner is to burne the male Larch, but the roots onely of the female for to draw out pitch. Theopompus wrate, that there is found in the territorie of the Apolloniars, a kind of minerall pitch, called Pistaspalum, nothing inferior in goodness to the Macedonian.

The best pitch in all countries, is that which is gathered from trees, standing vpon the North wind, and in places exposed to the Sunne-shine. As for that which commeth from shadowie places, it is more vnpleasant to the eie, and carieth besides a strong and stinking fauor. If it be a cold and hard winter, the pitch then made is the worse, there is also lesse store of it, & nothing is so well coloured. Some are of opinion, That the pitch issueth in more abundance out of trees in the mountains, also that it is better colored, sweeter in taste, more pleasant also in smell: namely, while it is raw pitch-rosin, and as it runneth from the tree: but if it be boiled, it yields lesse plentie of pitch than that which commeth of trees in the plain, and runneth all into a thin liquor in manner of whey, yea, and the very trees themselves are smaller. But both the one and the other, as well the mountain pines and pitch-trees, as those of the plaines, yeeld not so much pitch in a faire and drie season, as when the weather is rainy and full of clouds. Moreover, some there be of these trees that yeeld forth fruit (which is their rosin) the very same yere that immediately followeth their incision; others, two yeres after; yea, and some again in the third yere. As for the incision or open wound that is made, it filleth vp with rosin: for neither doth itoulder or vnte in manner of a skar, ne yet closeth the bark againe: for in this tree, being once diuided it will neuer come together and meet.

Among these trees, some haue reckoned one kind by it selfe named Sapim, because it is replanted and groweth of some of the sons or imps of the said trees, in manner as hath been shewed before in our treatise of nut-kernels. The neather parts of which tree they call Teda [i. Torch-wood:] whereas indeed this tree is no other than the Pitch-tree, brought to a more mild and gentle nature by transplanting. As for that which the Latines call Sapinus, it is nothing elsse but the wood or timber of these kind of trees, being hewed or cut downe, as well * herafter declare in place conuenient.

* Chap. 20 of his booke.

CHAP. XIII.

¶ Of the Ash, foure kinds thereof.

There be many trees besides that Nature hath brought forth, only for their wood and timber, and among them the Ash, which of all others, growes most plentifully in euery place. A tall tree this is & grows round, bearing leaves set in manner of feathers or wings; much ennobled by the praise and commendation that the Poet Homer giueth it, as also for the speare or lance of Achilles, made thereof. And in very truth, the wood serueth right well for many vses. As for the timber of the ash, growing vpon the Forrest Ida in Troas, it is so like the citron wood, that when the bark is off, a man may hardly discern the one from the other, inasmuch, as the merchants and chapmen are deceived therewith.

F The Greeks haue made two kinds of the Ash: the one runneth vp tall and euen without a knot: the other is lower, more rough and hard, and withall, of a more browne and dusky color: and the leaves resemble the Lawrell. In Macedony they haue an Ash, which they call Bumelia, which of all other is the tallest and biggest, the wood thereof is most pliable and bending. Others

thers haue put a difference betweene Ashes, according to the places: for that of the plaine and champion country, hath a more curled or frised graine than the other of the mountaines, but contrariwise, the wood of this is more compact and harder than the other. The leaues of this tree, according to the Greeks, are hurtfull, venomous and deadly to Horses, Mules, and such laboring garçons; but otherwise to beasts that chew the cud, they be harmlesse. Howbeit, in Italy if horses, &c. do broule of the leaues, they take no harme thereby. Moreouer, they be excellent good, and nothing so foueraigne can be found against the poison of serpents, if the iuice thereof be pressed forth and giuen to drinke, or to cure old vlcers, if they be applied and laid thereto in manner of a Cataplasme: nay, so forcible is their vertue, that a serpent dareth not come neare vnto the shadow of that tree, either morning or euening, nor withstanding at those times it reacheth farthest; you may be sure then they will not approach the tree it selfe, by a great way. And this am I able to deliuer by the experience which I haue scene, that if a man doe make a round circle with the leaues thereof, and enuiron therewith a serpent and fire together within, the serpent will chuse rather to go into the fire, than to flie from it to the leaues of the Ash. A wonderfull goodnesse of same Nature, that the Ash bloometh and flourisheth alwaies before that serpents come abroad, and neuer sheddeth leaues, but continueth greene, vntill they be retired into their holes, and hidden within the ground.

CHAP. XIII.

¶ Of the Line or Linden tree, two sorts thereof.

Great difference there is euery way between the male & female Linden tree: for, the wood of the male is hard and knottie, of a redder colour also, and more odoriferous than the female. The barke moreouer is thicker, and when it is plucked from the tree, it is stiffe, and will not bend. It beareth neither seed nor floure, as the female doth: which also is rounder and bigger in bodie, and the wood is whiter, more faire and beautifull by farre than is the male. A strange thing it is to consider, that there is no liuing creature in the world will touch the fruit of the Linden tree, and yet the iuice both of leaf and barke is sweet ynough. Between the bark and the wood of this tree there be thin pellicles or skins lying in many folds together, whereof are made bands & cords called Brazen ropes. The finest of these pellicanes or membrans serued in old time for to make labels and ribbands belonging to chaplets, and it was reputed a great honor to weare such. The timber of the Linden or Tillet tree will neuer be worm-eaten. * The tree it selfe is nothing tall, but of a meane height, howbeit the wood is very commodious.

CHAP. XV.

¶ Ten kinds of the Maple tree.

The Maple in bignesse is much about the Linden tree: the wood of it is very fine and beautifull, in which regard, it may be raunged in the second place, and next to the very Citron tree. Of Maples there be many kinds: to wit, the white, and that is exceeding faire and bright indeed, growing about Piemont in Italie, beyond the riuier Po, & also beyond the Alps, and this is called the French Maple. A second kind there is, which hath a curled graine running too and fro with diuers spots: the more excellent worke whereof, resembling the eies in the Peacocks taile, thereupon took also the name. And for this rare and singular wood, the countries of Istria and Rhætia be chiefe. As for that which hath a thicke and great graine, it is called Craffuenium of the Latines, and is counted to be of a baser kind. The Greekes distinguish Maples by the diuerse places where they grow. For that of the champion or plaine country (which they name Glinon) is white, and nothing cripped: contrariwise, the wood of the mountain Maple is harder and more curled, and namely, the male of that sort, and therefore it is in great request for most exquisite and sumptuous workes. A third sort they name Zygia, which hath a reddish wood, and the same easie to cleaue: with a barke of a sweet colour, and rough in handling. Others would haue it to be no Maple, but rather a tree by it selfe, and in Latine they call it Carpinus.

CHAP.

CHAP. XVI.

¶ Of the Besses, Wermes, and Nodosities, called Bruscum and Molluscum: Of the wild Fislicke or Bladder nut-tree called Staphylendron: also three kinds of the Box tree.

The bunch or knurre in the Maple, called Bruscum, is passing faire, but yet that wich is named Molluscum, excelleth it. Both the one and the other swell like a wen out of the Maple. As for the Bruscum, it is curled and twined after a more crawling and winding manner; whereas the Molluscum is spread with a more direct and strait course of the grain. And certes, if there might be planks hereof found broad enough to make tables, doubtlesse they would be esteemed and preferred before those of the Citron wood. But now it serueth only for writing tables, for painels also and thin bords in waincote work, to set out beds heads and footings, and such are seldome seen. As for Bruscum, there be tables made of it inclining to a blackish color. Moreouer, there be found in Alder trees such nodosities, but not so good as those, by how much the wood of the Alder it selfe is inferior to the Maple, for beauty and costlines. The male Maples do put forth leaues and flourish before the female. Yea, and those that grow vpon dry grounds are ordinarily better esteemed than those of moist and waterish places, in like sort as the athes.

Beyond the Alps there is a kind of bladder Nut-tree; whereof the wood is very like to the white white Maple, and the name of it is Staphylendron. It beareth certain cods, and within the same, kernels in tast like the Filbert or Hazell-nut.

Now for the Box tree, the wood thereof is in as great request as the very best: seldom hath it any grain cripped damask-wise, and neuer but about the root; the which is dudgein and full of work. For otherwise the grain runneth streight and euen without any wauing: the wood is sad enough and weighty: for the hardnesse thereof and pale yellow colour much fet by and right commendable. As for the tree it selfe, gardeners vse to make arbors, borders, and curious workes thereof. Three sorts there be of the Box tree: the first is called the French Box, it groweth taper-wise, sharp pointed in the top, and runneth vp to more than ordinarie height. The second is altogether wild, and they name it Oleastrum, good for no vse at all, and besides carrieth a strong and stinking sauer with it. The third is our Italian box, and so called. Of a sauage kind I take this to be also: howbeit by setting and replanting brought to a gentle nature. This spreadeth and brancheth more broad, and herewith a man shall see the borders and partitions of quarters in a garden, growing thick and green all the yeare long, and kept orderly with cutting and clipping. Great store of box trees are to be seen vpon the Pyrenæan hills, the Cytorian mountains, and the whole Berecynthian tract. The thickest and biggest Box trees be in Corfica, and they beare a lovely and amiable floure, which is the cause that the hony of that Island is so bitter: there is not a beast that will eat the fruit or grain thereof. The Boxes of Olympus in Macedonia are more slender than the rest, and but low of growth. This tree loueth cold grounds, yet lying vpon the Sun. The wood is as hard to burn as iron: it will neither flame nor burn cleare it selfe, nor serue to make charcole of.

CHAP. XVII.

¶ Of the Elme foure kinds.

Between these wild trees abovesaid, and those that bear fruit, the Elm is reckoned of a middle nature, in regard of the wood and timber that it affords, as also of the friendship & acquaintance that it hath with vines. The Greekes acknowledge two sorts thereof, namely, one of the mountains, which is the taller and the bigger; and the other of the plaines & champion, which is rather more like a shrub, the branches that it shooteth forth are so small and slender. In Italy men hold the Elmes about Atinum to be the tallest, and of those they prefer them which grow in dry grounds, and haue no water comming to them, before those by riuers sides. A second sort of them, which are not all out so great, they call the French Elmes. The third kinde be the Italian Elmes, thicker growne with leaues than the rest, and those proceeding in greater number from one stem. In the fourth place be ranged the wilde Elmes. The Atinian Elmes

* Pliny herein is deceived. For the Line Tree with vs is comparable to the highest Oakes in tallnesse.

Elmes aboute said beare no Samara (for so they cal the seed or grain of the Elme.) All the kind of them are planted of setts taken from the roots, whereas others come of seeds.

CHAP. XVIII.

¶ *The nature of trees as touching the place where they grow.*

HAving thus discoursed in particular of the most famous and noble trees that are, I think it not amiss to say somewhat of their natures in general. And first to beginne with the mountain high countries: the Cedar, the Larch, and the Torch-tree loue to grow among the hills; like as all the rest that ingender rosin: semblably, the Holly, the Box tree, the Malt-Holme, the Iuniper, the Terebinth, the Poplar, the wilde Ash, Ornus, the Cornell tree, and the Carpin. Vpon the great hill Apennine there is a shrub named Cotinus, with a red or purple wood, most excellent for in-laid works in Marquetry. As for Firs, the wild hard oaks (Robora) Chestnut trees, Lindens, Malt-holmes, and Cornell trees, they can away with hills and vallies indifferently. The Maple, the Ash, the Seruis tree, the Linden, and the cherry tree, delight in the mountains neere to waters. Lightly a man shall not see vpon any hills, Plum trees, Pomegranat trees, wild Oliues, Walnut trees, Mulberry trees, and Elders. And yet the Cornel tree, the Hafe, the common Oke, the wild Ash, the Maple, the ordinary Ash, the Beech, and the Carpin, are many times found to come downe into the plaines: like as the Elme, the Apple tree, the Peare tree, the Bay tree, the Myrtle, the Bloud shrubs, the Holme, and the Broome (which naturally is so good for to dry clothes) do as often climbe vp the mountains. The Seruis tree gladly groweth in cold places, so doth the Birch, and more willingly of the twaine. This is a tree which is meere French, and came first out of France: it sheweth wonderful white, and hath as fine and small branches or twigs, which are so terrible to the offenders, as wherewith the Magistrates rods are made for to execute justice. And yet the wood of this tree is passing good for hoopes, so pliable it is and easie to bend: the twigs thereof serue also for to make panners and baskets. In France they vse to boile the wood, and thereof draw a glutinous and clammy slime in maner of Bitumen. In the same quarters there loueth to grow for company the white thorn, which in old time they were wont to burne for torches at weddings, and it was thought to be the most fortunate and lucky light that could be deuised, because (as *Massurius* reporteth) the Romane shepheards and herdsmen who rauished the Sabine maidens, were furnished euery one with a branch thereof to make them torches. But now adaies the Carpine and Hazel are commonly vsed for such nuptial lights. The Cypress, walnut, Chestnut trees, and the Laburnum, cannot in any wise abide waters. This last named is a tree proper to the Alps, not commonly known: the wood thereof is hard and white: it beares a blossom of a cubit long, but Bees will not settle vpon it. The plant likewise called Iouis Barba, so handfome to be cut in arbors and garden works, which groweth so thicke and round withall, full of leaues, and those of a siluer colour, bares waterie places. Contrariwise, Willows, Alders, Poplars, and Osiars, & the Priver which is so good for to make dikes, will not grow well and prosper but in moist grounds. Also the Vacinia or Whortles, set and sowed in Italy for the Fowlers to catch birds withall, but in France for the purple colour, wherewith they vse to die clothes for their seruants and slaues.

To conclude, this is a generall rule, What trees foeuer will grow indifferently as well vpon hills as plaines, arise to be taller, bigger, and carry a fairer head to see to in the low champion grounds: but timber is better, and carries a more beautifull grain vpon the mountaines, except only Apple trees and Pyrries.

CHAP. XIX.

¶ *A diuision of Trees according to their generall kinds.*

Moreouer, some trees lose their leaues, others continue alwaies green. And yet there is another difference of trees before this, and whereupon this dependeth. For trees there be which are altogether wild and sauage: there be again which are more gentle and ciuill: and these names me thinks are very apt to distinguish them. Those trees therefore which are so kind and familiar vnto vs, as to serue our turns either with their fruit which they bear, or shade which they yeeld, or any other vertue or property that they haue, may be very aptly and fitly be called ciuill and domesticall.

CHAP.

CHAP. XX.

¶ *Of Trees that neuer shed their leaues: also of Rhododendron.*

AMong these trees and plants which are of the gentle kind, the Olive, the Lawrel, the Date tree, Myrtle, Cypress, Pines, Ivy, and the Oleander, lose not their leaues. As for the Oleander, although it be called the Sabine herb, yet it cometh from the Greeks, as may appeare by the name Rhododendron. Some haue called it Nerion; others Rhododaphne: it continueth alwaies green leaved, beareth floures like roses, and brancheth very thicke. Hurtfull it is and no better than poison, to Horses, Affes, Mules, Goats, and Sheepe; and yet vnto man it serueth for a countrepoyson, and cureth the venom of serpents.

CHAP. XXI.

¶ *What trees shed not their leaues at all: which they be that lose them but in part: and in what countries all trees are euer greene.*

OF the wild sort, the Fir, the Larch, the wilde Pine, the Iuniper, the Cedar, the Terebinth, the Box tree, the Malt-holme, the Holly, the Cork tree, the Yew, and the Tamariske, be green all the yeare long. Of a middle nature between these two kinds about named, are the Adrachne in Greece, and the Arbut or Strawberry tree in all countries: for these lose the leaues of their waterboughs, but are euer green in the head. Among the shrubs kind also there is a certain bramble or Cane or Reed, which is neuer without leaues. In the territorie of Thurium in Calabria, where sometime stood the city Sybaris, within the prospect from the said Citie, there was an Oke about the rest to be seen, alwaies green and full of leaues, and neuer began to bud new before Midsummer: where by the way I maruel not a little, that the Greek writers deliuered thus much of that tree in writing, and our countrymen afterwards haue not written a word thereof. But true it is, that great power there is in the clymat, in so much as about Memphis in Egypt, and Elephantine in the territorie of Thebais, there is not a tree, not so much as the very Vine, that sheddeth leaues.

CHAP. XXII.

¶ *The nature of such leaues as fall from trees: and what leaues they be that change colour.*

AL trees without the range of those before rehearsed (for to reckon them vp by name particularly were a long and tedious piece of work) do lose their leaues in winter. And verily this hath bin found and obserued by experience, that no leaues doe fade and wither, but such as be thinne, broad, and soft. As for such as fall not from the tree, they be commonly thick skinned, hard, and narrow: and therefore it is a false principle and position held by some, That no trees shed their leaues which haue in them a fatty sap or oleous humiditie: for who could euer perceiue any such thing in the Malt-holme? a drier tree there is not, and yet it holdeth alwaies green. *Timaus* (the great Astrologer and Mathematician) is of opinion, that the Sun being in the signe Scorpio, he causeth leaues to fall, by a certain venomous and poisoned infection of the aire, proceeding from the influence of that maligne constellation. But if that were true, we may wel and iustly maruell, why the same cause should not be effectually likewise in all other trees. Moreouer, we see that most trees do let fall their leaues in Autumne: & some are longer ere they shed, continuing green vntill winter be come. Neither is the timely or slow fall of the leafe long of the early or late budding: for we see some that burgen and shoot out their spring with the first, and yet with the last shed their leaues and become naked: as namely the Almond trees, Alnes, and Elders. And contrariwise the Mulberry tree putteth forth leaues with the latest, and is one of them that soonest sheddeth them again. But the cause hereof lies much in the nature of the soile: for the trees that grow vpon a leane, dry, and hungry ground, do sooner cast leafe than others: also old trees become bare before younger, and many of them also lose their leaues before their fruit be fully ripe: for in the Fig tree, that cometh and beareth late, in the winter Pyrry, and Pomegranate, a man shall see in the later end of the yere fruit

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only

only, and no leaues vpon the tree. Now as touching those trees that continue euer greene, you must not think that they keep still the same leaues, for as new come, the old wither & fall away: which hapneth commonly in mid-Iune about the Summer Sunne-stead. For the most part, the leaues in euery kind of tree do hold one and the same colour, and continue vniform, save those of the Poplar, Ivy, and Croton, which wee said was called also Cici [*id est*], Ricinus, or Palma Christi.]

CHAP. XXIII.

¶ *Three sorts of Poplar: and what leaues they be that change their shape and figure.*

OF Poplars there be found three sundry kinds, to wit, the white, the blacke, and that which is named * Lybica, or the Poplar of Guynee: this hath least leaues, and those of all other blackest: but now commendable they are for the fungous meazles (as it were) that come forth thereof. As for the white Poplar leafe, the leaues when they be yong, are as round as if they were drawn with a paire of compasses, like vnto those of Citron before named: but as they grow elder, they run out into certain angles or corners. Contrariwise, the Ivy leaues at the first be comered, and afterwards become round. All Poplar leaues are full of downe: as for the white Poplar (which is fuller of leaues than the rest) the said downe flieth away in the aire like to mossie chits or Thistle-downe. The leaues of Pomegranats and Almond trees stand much vpon the red colour. But very strange it is and wonderfull which hapneth to the Elme, Tillet, or Linden, the Olive tree, a Pea, or Willow: for their leaues after Midsummer turn about vpon the downe, in such sort, as there is not a more certaine argument that the Sun is entred Cancer, and returneth from the South point or Summer Tropicke, than to see those leaues so turned.

CHAP. XXIII.

¶ *What leaues they be that use to turne euery yeare. Of Palme or Date tree leaues, how they are to be ordered, and vnto. Also certain wonderfull obseruations about leaues.*

There is a certain general and vniuersal diuersitie & difference obserued in the very leaf: for commonly the vpper side which is from the ground, is of Greene grassie colour, more smooth also & polished. The outside or nether part of the leaf hath in it certain strings, sinues or veins, brawns and ioynts, bearing out like as in the back part of a mans hand: but the inside cuts or lines in manner of the palme of ones hand. The leaues of the olive are on the vpper part whiter and lesse smooth; and likewise of the Ivy. But the leaues of all trees for most part, euery day do turn and open to the Sunne, as desirous to haue the inner side warmed therewith. The outward or nether side toward the ground of all leaues, hath a certaine hoary downe more or lesse here in Italy, but in other countries so much there is of it, that it serueth the turn for wooll and cotton. In the East parts of the world they make good cordage and strong ropes of date tree leaues (as we haue said before) and the same are better, & seruie longer within than without. With vs these Date leaues are pulled from the tree in the Spring, whiles they are whole and entire, for the better be they which are not clouen or diuided. Being thus plucked, they are laid a drying within house foure daies together. After that, they be spread abroad and displayed open to the Sun, and left without doores to take all weathers both day and night, and to be bleached, until they be dry and white: which done, they be sluied and slit for cord-work. But to come again to other leaues, the broadest are vpon the Fig-tree, the Vine, and the Plane; the narrowest vpon the Myrtle, Pomegranat, and olive: as for those of the Pine and cedar, they be hairy: the Holly leaues and all the kindes of Holme be set with sharpe prickles. As for the Iuniper, in stead of leafe it hath a very pointed thorne. The Cypresse and Tamariske carrie fleshie leaues: those of the Alder be most thick of all other. The Reed and the Willow haue long leaues: the Date tree hath them double. The leaues of the Peare tree are round, but those of the Apple tree are pointed; of the Iuie comered: of the Plane tree diuided into certaine incisions; of the Pitch tree and the Fir cut in, after the manner of comb-teeth; of the wild

A hard Oke, watted and indented round about the edges, of the brier and bramble, sharpe like thornes all the skin ouer. Of some, they be stinging and biting, as of Nettles: of others ready to prick like pins or needles, as of the Pine, the Pitch tree, the Larch, the Firre, the Cedar, and all the sorts of Holly. The leaues of the Olive tree, and the Mast-Holme, hang by a short fleshe, the Vine leaues by a long. The Poplar or Aspen leaues doe shake and tremble, and they alone keep a whistling and rustling noise one with another. Moreover, in the very fruit it selfe, and namely in a certain kind of Apples, ye shall haue small leaues breake out of the very sides in the mids; in some single, in others double and two together. Furthermore, there be trees that haue their leaues coming forth about their boughs and branches, others at the very end and shoot of the twig: as for the wild Oke Robur, it putteth leaues forth of the trunk and maine stock.ouer and besides, the leaues grow thicker or thinner in some than in others; but alwies the broad and large leaues, are more thinn than others. In the Myrtle tree, the leaues grow in order by ranks; those of the Box tree turn hollow; but in the Apple trees they are set in no order at all. In Pyrries & Apple trees both, ye shall see ordinarily many leaues put forth at one bud, hanging at one and the same taile. The Elme, and the Tree-trifolie, are full of small and little branches. Call to addeh moreover and faith, That such as fall from the Poplar or the Oke, may be giuen as fodder to beastes; but he wils that they be not ouer drie and he faith expressly, that for kine and oxen, Fig-leaues, mast Holm leaues, and Iuie, are good fodder: yea and such kind of beastes may well broue and feed of Reed leaues and Bay leaues. Finally, the Seruise tree looseth her leaues all at once; others shed them by little and little one after another. And thus much for the leaues of trees.

CHAP. XXV.

¶ *The order and course obserued in Nature as touching plants and trees in their conception, flourishing, budding, knotting, and fructifying. Also in what order they put forth their blossomes.*

THE manner and order of Nature yeare by yeare, holdeth in this wise: first, trees and plants do conceiue by the meanes of the Westerne wind Fauonius, which commonly beginneth to blow about fixe daies before the Ides of Februarie: for this wind is in stead of an husband to all things that grow out of the earth, and of it they desire naturally to be conceiued, like as the Maies in Spaine, of which we haue written heretofore. This wind is that spirit of generation which breathes life into all the world; which the Latines call thereupon Fauonius, a fauendo, [i. e.] cherishing and nourishing euery thing [as some haue thought]. It blowes directly from the Equinoctial Sun-setting, and cuemore beginneth the Spring. This time, our rustical peasants call the Seasoning, when as Nature seemeth to goe proud or assaunt, and is in the rut and furious rage of loue, desirous to conceiue by this wind, which indeed doth viuifie and quicken all plants and feeds sowne in the ground. Now of all them conceiue not at once, but in sundry daies: for some are presently sped in a moment, like as liuing creatures: others are not so hastic to conceiue, but long it is first ere they retaine, and as long againe before their vitall seed putteth forth, and this is thereupon called their budding time. Now are they said to bring forth and be deliuered, when in the Spring they bloome, and that blossome breaketh forth of certain matrices or ventricles. After this, they become nourses all the while they cherish and bring vp the fruit and this time also the Latines call Germinatio, [i. e.] the breeding season. When trees are full of blossomes, it is a signe that the Spring is at the height, and the yeare become new againe. The blossom is the very ioy of trees, and therein standeth their chief felicitie: then they shew themselves fresh and new, as if they were not the same; then be they in their gay coats; then it seemeth they striue a vie one with another in varietie of colours, which of them should excell and exceed in beautifull hew. But this is not generall, for many of them are denied this pleasure, and enjoy not this delight; for all trees blossome not: some are of an heauie and sad countenance, neither cheare they at the coming of this new season and glad some Spring: for the mast-Holme, the Pitch tree, the Larch, and the Pine doe not bloome at all, they are not arrayed in their robes, they haue not their liueries of diuers colors to fore-signifie (as messengers and vaucoeuriers) the arriual of the new yeare, or to welcome and solemnize the birth of new fruits. The Figge trees likewise both tame and wild, make no shew of floures: for they are not

too soon bloomed (if they bloom at all) but they bring forth their fruit. And a wonderful thing **G** it is to see what abortive fruit these Figge-trees haue, and how it neuer cometh to ripenesse. Neither doe the Iunipers bloome at all. And yet some writers there be who make two kinds thereof: and they say, that the one flowreth, and bears no fruit, as for the other which doth not blossom, it brings forth fruit vpon fruit, and berrie vpon berrie, which hang two yeres vpon the tree before they come to maturitie. But this is false, for in very truth all Iunipers without exception haue euermore a sad looke, and at no time shew merie. And this is the safe and condition verily of many a man, whose fortune is neuer in the flower nor maketh any outward shew to the world. Howbeit there is not a tree but it buddeth, euen those that neuer blossom: And herein the diuerſitie of the soile is of great power: for in one and the same kind, such as grow in marish grounds, do shoot and spring first; next to them, those of the plaines; and last of all they of the woods and forests. And generally the wilde Pyries growing in woods doe bud later than any other. At the first coming of the western wind Faunus, the Cornel tree buddeth; next to it, the Bay, and somewhat before mid-march or the spring Equinoctiall, the Tillet or Linden, and the Maple, the Poplar, Elm, Willow, Alder, and Filberds or Hazell nut trees, bud with the first. The Palme also maketh haft and is loth to come behind. All the rest at the point and prime of the spring, namely the Holly, the Terebinth, the Palurus, the Cheston, and the Walnut-trees, or Mast-trees. Apple trees are late ere they bud, but the Corke tree longest of any other. Trees there be that put forth bud vpon bud, by reason that either the soile is exceeding battill and fat, or else the weather faire and pleasant; and this happeneth more to be seene in the blades of corne. But trees if they happen to be ouer rancke in new shoots and buds, they waxe wearie and grow out of heart.

Moreover, some trees there be that naturally do sprout at other seasons besides the spring, according to the influence of certaine starrs, whereof the reason shall be rendered more conveniently, in the third booke next ensuing after this. Meane time this would be obserued, That the winter spring of trees is about the rising of the Ægle-star: the Summer budding at the rising of the Dog-star: and a third, when the star Arcturus is vp. And for the two later, somewhat haue them verily to be common to all trees, but most evidently seene, in Fig-trees, Vines, Pomegranate trees: and they yeeld a cause, For that in Thessalie and Macedonie the Fig tree about these times putteth forth most plenteously, and in Egypt this reason is to be seene most apparently. As for all other trees, certaine it is, that when they begin once to bud, they hold on and shoot forward continually without intermission. The wild Oke, the Fir, and the Larch tree, haue their feuerall shoots in one yere, and spring at three sundrie times, giuing ouer between whiles; and therefore they put forth the sprouts between the scales of their barks: a thing vsually happening to all trees in their budding & breeding time: for after they be once conceiued, their rind or bark bursteth withall. Now their first budding is in the prime & beginning of the spring, and continueth much about 15 daies. They bud a second time in the month of May when the fun passes thorough the signe Gemini: by which time it is evidently to be seene, how the bud heads that came first, are driuen and thrust vp higher by those that follow after; & that appears more plainly by the encrease of the knots & joynts. As for the third budding, it is very short, namely at midsummer, and lasteth not aboue a fewenight: and euen then also may a man perceiue manifestly by the knots and joynts of the shoots how much they are put forth and grown. The Vine alone shooteth twice, to wit, when the first beginneth to burgen & put forth a grape; and a second time, when the formeth and digesteth or concocteth the same. As for those trees that blossom not, they haue no more to doe but only to bring forth their fruit, and so proceed to ripen it. Now there are some trees, which no sooner bud, but they shew also a blossom; and yet as hastily as they be that way, they take their leisure afterwards, and long it is ere their fruit come to be ripe and such are the Vines. Others again be as backward and slow both to bud and blossom; but they make speed to ripen their fruit, as the Mulberry tree, which of ciuile and domesticall trees is the last that buds, and neuer before all the cold weather is past; and therefore the is called the wisest tree of all others: but after that he begins once to put forth buds, she dispatches her busines out of hand, in so much as in one night she hath done, and that with such a force, that in the breaking forth a man may evidently heare a noise. Of those trees that conceiue in winter, about the rising of the Ægle-star, (as we haue before said) the Almond tree is the first that blossometh in the month of Ianuarie, and by March the Almond is ripe. The next that blossometh

A blossom after it, be the Peach Plum-trees of Armenia, then the Iubee trees called Tuberres, and the Abricots. As touching the former, they be meere strangers, but these Abricots are forced by Art and industrie of man. As for wild and sauage trees, by courte of nature the Elder flourishes first, and hath of all other most plentie of pith or marrow within, whereas the male Corneil hath none at all. But of domesticall and ciuile trees, the Apple tree beginneth to blossom, and soone after the Pyrry, Cherrie tree, and Plum tree, in so much as they seeme all to flower together. Next to them, is the Lawrell, anon after it, the Cypresse; and then the Pomegranat, and the Fig tree: Vines and Oliue trees do but then burgen and bud, when those other be in their flower: for in truth they conceiue late, namely, at the rising of the Vergilie or Brood-hen; for this is the proper star to the influence whereof these trees be subject: and it is Iune first and the summer Sun-stead, before the vine bloomes; and so it is with the Oliue tree, but that it cometh somewhat later. All trees be seven daies at the least in their blossoming, and some be longer ere they giue ouer, but none passe a fortnight; and done they haue euer by the eighth day before the Ides of Iuly, which are forerunners of the Etesian winds. Finally, some trees there are which do not knit nor shew their fruit immediatly vpon their blooming.

CHAP. XXVI.

¶ Of the Cornel tree. Also, what is the proper time wherein euery tree beareth: which trees be they that beare not, and which be reputed vnfruitful. Also of these trees which soonest lose their fruit. Last of all, what trees flow fruit before lease.

AS for the Cornel tree, it is about midsummer or the summer Sun-stead, before it putteth forth any fruit, which at first is white, afterwards red as blood. But the female of this kind beareth after Autumne, fower berries, and such as no beast will abide to tast. The wood thereof also is spongy, hollow, and good for nothing, whereas that of the male is counted among the hardest that be: so great difference there is in trees of one and the same kind. Moreover, the Terebinth, Maple, and Ash, yeeld their fruit or seed in harvest time: Vlnaluts, Apples, and Peares (vnlesse they be some winter fruits, or of the hasty kind) ordinarily are ready to be gathered in the Autumne. All mast trees be later ere they render their fruit, to wit, about the going downe of the Vergilie or beginning of the winter, haue only the Æsculus, which passeth not the Autumne. As for certain Apple trees and Pearre trees both, as also the Corke tree, their fruit is not to be gathered before winter begin. The Firre putteth forth a blossom of a yellow color like Saffron about mid-Iune or the summer sun-stead; but the Brood-hen list is downe before the fruit be ripe. The Pine, and Pitch tree, do bud before the Firre some fifteen daies, or thereabout, and it is winter first, and the foresaid Vergilie or Brood-hen is likewise set, before their fruit is ripe. Citron trees, Iunipers, and mast-Holmes, are counted trees that beare all the yere long, and the old fruits of the former yere tarieth on the tree vntill new come, and they hang both together. But aboue all other trees, the Pine is a wonder in nature, for a man shall euer find vpon it some of the fruit ready to be ripe, and some againe that will remaine vnto the next yere, and the third yere before it will be ready: and there is not another tree that is more forward and greedie (as it were) to put forth it selfe, and giue greater hope of increase, than it doth: for look in what month soeuer the Pine-nuts are gathered from the tree, in the very same others are in good forwardnesse of ripening, and in such sort the ordereth the matter, that euery month a man shall haue ripe fruit on her. Those Pine-apples or nuts which cleaue and open vpon the tree, be called Zamia; and well may they be so named, for vnlesse they be plucked, they hurt and corrupt the rest. The only trees that beare no fruit at all, that is to say, not so much as feed, are these, the Tamariske, good for nothing but to make Beesoms of; the Poplar, Alder, Atinian Elm, and the Alateriske, which hath leaues resembling the Holme, and partly the Oliue. As for such trees which neither at any time meare let or planted, nor yet beare fruit, they be holden for unfortunate, accursed, and condemned, in such sort, as there is no life of them in any sacrifice or religious seruice. *Crematius* writeth, That the (Almond) tree whereon Iadic *Phyllis* hanged her selfe, had neuer (after) greene leaues on it. Such trees as yeeld gum, after they haue put forth their bud, do cleaue and open: howbeit the gum that issueth out, neuer cometh to any thicknesse, vntill the fruit thereof be gathered. Young trees commonly beare not so long as

they

they shoot and grow. The Date tree, the fig tree, the Almond tree, the Apple tree, and the Pyrric, do some of all other let their fruit fall before it be fully ripe. Semblably, the Pomegranat tree, which is so tender besides, that with euery thicke and heauie dew, white frost, and foggie time, the will be bitten & shed the blossom which is the cause that folk vse to bend the boughs thereof downward to the ground, that both dew and rime may sooner fall off which lights vpon them, and otherwise would ouer-load and hurt them. The Pyrric and the Almond tree cannot abide close and cloudey weather, especially if the wind be Southerly, although no raine do fall: for in such daies, if they chance to blossom, they not only shed their flowre, but lose their fruit new knit. But the Sallow or Withie tree, is of all others most ticklish, and himselfe forgoes the seed or chatts that it beareth before it cometh to any ripenes: for which cause, called it is of *Homer* * Loose-fruit, or Spill-fruit. Howbeit the age ensuing (naught as it was) hath interpreted that Epithet of his, in another sense, according to the wicked experience they had of it, whereby it was found, that the seed thereof causeth barraineffe in women, and hindreth conception. But in this regard, Nature hath well done also to prevent this mischief and inconvenience, in that she hath not been very carefull to preserve the seed: and yet for the maintenance of the whole kind, she hath endued it with this gift, To grow very quickly, if a man do pricke into the ground but a cutting or twig thereof. And yet (by report) there is one Willow in Candie, and namely about the very descent of *Tupirus* caue, which is wont ordinarily to carie the graine or seed thereof untill it be full ripe, and then is it of a rough and writhen shape, of a wooden and hard substance, and withall, of the bignesse of a chiepe.

Moreover, some trees there be that proue barraine and fruitlesse by the occasion of the imperfection of the soile and territorie where they grow: and namely in the Isle Paros, there is a whole wood or copse that vntually is lopt and cut, but it neuer beareth any fruit. The Peach trees in the Island Rhodos blossom only, and otherwise are fruitlesse.ouer and besides, this difference of trees (that some be fruitfull and others barraine) ariseth of the sexe also, for commonly the males beare not: howeouer some affirme cleane contrary, and say, They are the male only that be fruitfull, and the female barren. Furthermore, it falleth out many times that trees be fruitlesse, either because they grow too thicke one by another, or else are ouercharged and too ranke with boughes and branches: but of such as do beare, some bring forth their fruit both at the sides, and also at the very tips and ends of their branches; as the Peare tree, Pomegranate tree, Figge tree, and Myrtle. As for others, they ste of the nature of corne and pulse; for the one *K* grows in the eare or spike alone, the other by the sides, & not otherwise. The Date tree onely (as hath been said before) containeth fruit within certain pellicles, and the same hangeth down in clusters after the manner of grapes. Other trees beare their fruit vnder the leafe for their safeguard and defence, except the Fig tree, which hath her Figs about the leafe, because it is so large and ouershadowie. Moreover, the leafe of the fig tree cometh forth after the Figge. One notable thing is reported of a kind of figge-trees in Cilicia, Cyprus, and Hellas, to wit, that they haue this propertie singular by themselves, To bring forth their perfect Figs vnder leafe, and their greene abortiue Figs that come to no prooffe, after the leafe. The Fig tree beareth moreover certain hastic Figs, which the Athenians call *Prodromos*, i. vant-couriers or forerunners, because they be long ripe before others. The Laconian Figge trees bring the fairest and greatest Figs.

CHAP. XXVII.

¶ Of trees that beare twice and thrice in one year. Also what trees sometime wax old: and of their ages.

IN the same countries aboue-named, there be Figge trees also that beare Figges twice in one year. And in the Island Cea, the wild Figge trees beare thrice in the same year: for the second increase is put forth on the first, and the third vpon the second: and by this third fruit, the Figges of the tame Figge tree receiue their maturitie by way of caprifigation: and those wild greene Figges of theirs come forth about the leafe. Moreover, there be some Pyrries and Apple trees that bring forth fruit twice a year: as also there be others of the hastic kind, which do beare both Peares and Apples betimes in the year. There is a kinde of Crab tree also or Wilding, that in like manner beareth twice a year; and the later fruit is ripe presently after

After the midst of September, especially in places lying well vpon the Sun. As touching Vines, there be of them also, that after a fort beare three times in the year, which thereupon men call *Infanas*, i. The mad or foolish vines: for whiles some of the grapes be ripe, others begin to swell and wax big, and a third fort againe are but then in the flower. *M. Varro* writeth, That in Smyrna by the sea side there was a vine that bare fruit twice a year, as also an Apple tree in the territorie of Confectia. But this is an ordinary thing throughout all the country about Tacapa in Africa, and neuer is it seen otherwise there, so fertile is the soile; but thereof will we write more at large hereafter in another place. As for the Cypresse trees, they saile not but come with fruit thrice in one year: and their berries be gathered in Ianuarie, May, and September, and all of a diuers bignesse, one from the other.ouer and besides, the very trees themselves are not laden with fruit after one and the same manner: for the Arbut or Strawberry tree is more plenteous in the head, and toward the top: the Oke, the Wal-nut-tree, Fig tree (and namely that which beareth the vsuorie great Figs *Mariscs*) are more fruitfull beneath. Generally, all trees the elder they are, the sooner they beare and make more haft to ripen their fruit; the rather also if they grow in a ground leane, and exposed to the Sun. Contrariwise, trees that be wild are later in bearing than other: and some of them neuer yield fruit fully ripe. Moreover, such trees vnder which the ground is tilled & laid hollow, haue their fruit sooner ripe, & are more fruitfull withall, than those that are neglected and not looked vnto. Besides all this, there is a difference in trees as touching bearing their fruit, according to the age: for the Almond tree & the Pyrric are, most fertile when they be old, as also mast trees, and a certain kind of fig-trees. Also others, the yonger they are, the more fruitfull they be; howbeit, later it is, ere their fruit be ripe: a thing most plainly to be obserued in Vines. For the better wine cometh from the elder Vines: but more plenty from the yonger. As for the Apple-tree, it cometh of all other soonest old, and in that age the fruit is nothing so good as in youth: for both lesser be the Apples, and also more worm-eaten, inasmuch as the very wormes will breed in them vpon the tree. The Fig is the fruit alone of all trees, that needeth some help of * Physicke to ripen. And this may be noted for a strange and miraculous thing in them, That the later figs bee in more price than the hasty and early ripe, and that there should be more reckoning made of preposterous and artificiall things beside the course of kind, than of the naturall. Also this is a generall rule, What soeuer tree is exceeding fruitfull, and beareth most, the same continueth least while, and soon waxeth old. Yea and some of them are to be seen to die out right, and that very quickly, because they inioyed so fauorable a season, to cause them so to spend themselves with bearing; as we may marke most easily in Vines.

CHAP. XXVIII.

¶ Of the Mulberry tree.

Contrariwise, the Mulberry tree lasteth long, and is very late ere it seemeth old. For why: it is not giuen greatly to beare fruit, neither is ouerladen with Mulberries. To conclude, look what trees haue a curled graine in the wood, as the Maple, Date-tree, and Poplar, they continue a long time before they decay. And in one word, such as haue their roots digged or deluded often and laid bare about, are not long liued, but soone age and decay.

CHAP. XXIX.

¶ Of wilde trees.

AS for wilde trees, they indure longest of all others. And generally, as carefull tending and looking to trees, maketh them more fertile: so there is nothing sooner bringeth age vpon them, than fruitfulness and much bearing. Hereupon it is likewise, that such trees both bud and also blossom sooner than others, yea, and ordinarily their fruit is ripe before the rest: in regard whereof, they are more subiect to the injury of the time & the weather, which causeth also diuers and sundry infirmities. Moreover, as we haue said already in the chapter of mast trees, there be many that bring forth fruits of different sorts: among which may be reckoned the Lawrell, with her variable floures and berries growing so thicke, and principally the barren of that kind which beareth nothing els, and therefore is esteemed of some the male. The Hazels also

* To wit, by caprifigation.

fo and Tulara trees, besides, their nuts do carry certain chats with a callous substance of skales G
joined one within another, but good for nothing.

CHAP. XXX.

¶ Of the Box-tree: the Greeke Beane or the Lotus.

All this Theophrastus reports
of the Box-tree
and not of
Buxus.

Among these is to be ranged the Box-tree, which bringeth forth the most varietie of all others. For it putteth forth a seed of her owne, also, a graine which they call Carthegon: besides, on the North side Missele, and on the South Hyphear: whereof wee will write a none more at large: so that otherwhiles a man shall find foure diuers things vpon the Box all together.

Moreover of trees, some be simple or single, to wit, such as from the root haue one trunk or body, and no more, and yet many boughes and branches; as the Oliue, Fig-tree, and the Vine: others be of a shrubs kind, and put forth many shoots from the root besides the main trunk, as the Rhamne, thorn Paliurus, and the Myrtle. In like manner the Hazell nut-tree. Howbeit, the better is the tree and more plentious in fruit, when it is well branched from the body, and hath not those suckers from the root: ye shall find some againe haue no principall stock at all, as wee may see in a kind of Box, and a certain Lotus beyond sea. Others be forked in twain, yea in fiue, immediately from the root: and ye shall meet with those that put vp many trunks out of the earth, but branch not into boughes, as namely, the Elders; as also with others that forke not, nor are diuided at all, howbeit, they be full of arms & boughs, as the Pitch-trees. Moreover, some there be which haue their boughes disposed in good order, as the Pitch-tree, Firre, or Deale: others againe be as disorderly, as the Oke, Apple-tree, and Pyrie. As for the Fir verily, where it is diuided into boughs, they grow directly vpright vnto heauen, and spread not in breadth about the sides. But a strange and wondrous thing it is of this tree, that if it be headed, or the tops only of those arms cut off, the whole dieth thereupon: but if they be lopped off close to the body, it continueth still aliue. Nay, in case it be cut vnder the place where the branches put forth, the stock or stump that is left, will take no harme by it, but remaine and liue: crop the head onely thereof, and the whole tree dieth. To proceed, some trees spread into arms immediately from the root, as the Elme: others branch only toward the top, as the Pine, and the Greeke Bean, which at Rome for the pleasant tast of the fruit, resembling cherries very much, although it be of a wild nature, they call Lotus. This tree is much planted about faire houses, in the court yards, especially because the boughs spread so large; for albeit the stock or body it selfe be but very short and small, yet it brancheth so, as that it yeeleth much shade: yea, and often times the boughes reach to the neighbor housen. But there is not a tree againe that maintaineth this shade a lesse while; for when Winter is once come, the leaves flee, and then it admitteth the warm Sun for it. Moreover, there is not another tree that beareth a fairer barke, nor more pleasant to the eye, nor that carrieth either longer boughes, and more in number than it, or stronger: a man that seeth them, would say they were so many trees by themselves. As touching the vie and commodities of this tree, the barke serueth to colour skins and leather: the root to die wooll. And as for the fruit or Apples that it beareth, they are a speciall kind by themselves: for all the world they resemble the snouts or muzzles of wild beasts, and many of the smaller sort seeme to hang to one L
that is bigger than the rest.

As concerning boughs of trees, some are termed blind, because they put not forth certaine cies or chits where they should bud, which happeneth sometime by a naturall defect, when they are not of validity to thrust out a bud; otherwhiles it is occasioned by some wrong and iniurie done, namely, when they be cut off, and in the place of the cut, there groweth as it were a callous skar that dulseth the vertue of the tree. Furthermore, looke what is the nature that forked trees haue in their boughes, the same hath the Vine in her cies and burgeons; the same also haue canes and reeds in their joints and knots.ouer and besides, all trees toward their root, and the nearest to the ground, are thicker than else where. Some run vp altogether in height, and therein shew their growth, as the Firre or Deale tree, the Larch, Date-tree, Cypress, Elme, and generally all that rise vp in an entire stocke, and are not diuided. Of those also that branch and put out many boughes, there is a kind of Cherry-tree that is found to beare armes like beames forty cubites long, and two foot in thicknesse square throughout the whole length.

CHAP.

A

CHAP. XXXI.

¶ Of the Boughes, Barke, and Roots of trees.

There are trees, that immediately from the root thrust out boughes and branches as do the Apple-trees. Some be covered with a thin rind, as the Lawrell and the tree: others with a thicke barke, as the Okes. In some a man shall find the barke euen and smooth, as in the Apple-tree, and fig-tree: the same in others is rough and rugged, as is to be seene in Oke and Date-trees. And ordinarily, all old trees haue more riuelled barks and furrowed, than the younger. In many trees the bark naturally doth breake and cleaue of the own accord, and namely in the Vine. From some it shaleth and falleth off, as from the Apple tree and the Arbut. The cork in the Poplar haue a fleshie and pulposus barke: the rind of the Vine and the Reed, is made in manner of a membrane or thin skin. In Cherry trees it is as slender as paper, and runneth into rolls: but Vines, Lindens, and Firs, are clad with tunicles and coats of many folds. In some again the rind is but single, as in the Fig-tree, and the Cane or Reed. And thus much of Barke.

There is as great difference in the root. For the fig-tree, the Oke, and the Plane, haue great store of roots and large spurs: contrariwise, in the Apple tree they are short and small: the firre and Larch haue one tap root and no more: for vpon that one main master-root they rest and are founded; howbeit, many small strings and petie spurs shoot out of the sides. In the Bay-tree the roots be more grosse and vnequally embossed, and likewise in the oliue, which also spredeth out into many branches. But those of the oke be of a carnos substance: and verily, all the kind of okes do root deep into the ground. Certes, if wee giue credit to Virgil, that sort of them which are called Efeuli, go down as deep into the earth with their roots, as they arise & mount aboue ground with their heads. The roots of the Apple-tree, Oliue, and Cypress, lie very ebbe, and creep hard vnder the sould of the ground. Moreover, there be roots that run direct and straight, as those of the Bay and Oliue: there be againe that wind and turne as they go, as those of the fig-tree. Some are all ouergrowne and full of hairy strings, as the firre-root and many others of wild trees that grow in Forrests: from which the mountains vse to pluck those fine fibers & small threds, wherewith they twist goodly faire paniers, couers for flaggons and bottels, and work many other vessels & pretty deuises. Some writers [as namely Theophrastus] hold opinion and haue put down in their books, that no roots goe lower into the earth, than that the Sunnes heat may pierce vnto them and giue them a kind warmth; the which is more or lesse, say they, according to the nature of the soile, as it is either lighter or lean, or massier, richer, and faster compact. But I take this to be a meete vntruth. This is certain, that we find in ancient writers, that a yong Fir, when it was to be transplanted and set again, had a root that went eight cubits within the earth; and yet it was not digged vp all whole, but broken in the taking vp, and left somewhat behind. The roots of Citron trees are biggest of all other, and spread most. Next to them are those of the Planes, Okes, and other Mast-trees. Some trees there be, the roots wherof like better & liue longer, the more ebbe that they lie within the vpper face of the ground, and namely, Lawrells; and therefore they spring fresh againe, and put forth better, when the old stock is withered and cut away. Others hold, that trees which haue short (stumped roots, do sooner decay, & liue lesse while. But deceived they are, and may be reproved by the instance of fig-trees, which liue least while, and yet their roots are longest of any other. I suppose this also to be as false, which some haue held and deliuered in writing, That the roots do diminish and decay, as the trees do waxe old; for the contrary hath bin seene by an aged oke, which by the violent force of a tempest was querthrowne, the root wherof took vp a good acre of ground in compass.

Moreover, a common thing it is and ordinary, to replant and recouer many trees that haue bin blown down and laid along; for they will reioine, knit againe, and reuiue, by means of the earth, euen as a wound doth unite by the folder of a callous cicatrice. And this is a most viuall and familiar practise obserued in the Planes, which by reason of their great heads so thicke of boughes, gather windes most, and are soonest subiect to their rage: if any one of them by that means be fallen, they lop their boughes, and discharge them of their weightie load, and then set them vpright again in their owne place, as it were in a socket, and they will take root and prosper. And in good faith, this hath bin done heretofore already in Walnut trees, Oliues, and many other, to the like purpose.

CHAP.

CHAP. XXXII.

¶ Of certaine prodigious trees, and presages observed by them. By what meanes trees grow of their owne accord. That all plants grow not euery where: and what trees they be that are appropriate to certaine regions, and are not elsewhere to be found.

WE read in Chronicles and records, that many trees haue fallen without wind and tempest, or any other apparent cause, but only by way of prodigie and presage of some future euent; and the same haue risen againe of themselves without mans helpe. This happened during the wars against the Cymbrians, to the great astonishment of the people of Rome, who thereupon gathered a fore-tokening of great consequence: for at Nuceria in the groue of *Iuno*, there was an old Elme fell, and after the head was lopped off, because it light vpon the very altar of *Iuno*, it arose of it owne accord; and that which more is, immediately vpon it put forth blossoms and flourished. And this was observed, That from that very instant, the majesty of the people of Rome began to take heart, reuiue, and rise againe, which had bin decayed and inseeded by so many and so great losses that the Romans had received. The like chanced (by report) neer the city Philippi, vnto a Willow tree which was fallen downe, and the head of it cut off cleane; semblably, to an Aspen tree at Stagyræ, neere vnto the colledge or publike place of Exercise there. And all these were fortunate presages of good luck. But the greatest wonder of all other was that of a Plane tree in the Isle Antandros, which was not only fallen, but also hewed and squared on all sides by the Carpenter; and yet it rose againe by it selfe, and recovered the former greenesse and liued, notwithstanding it bare 15 cubits in length, & foure elnes in thicknesse and compass.

All trees that we are beholden vnto the goodnesse of Nature for, we haue by 3 meanes: for either they grow of their owne accord, or come of seed, or else by some shoot springing from the root. As for such as we inioy by the art and industry of men, there be a great number more of deuises to that effect: whereof we will speake apart in a seuerall booke for that purpose. For the present our treatise is of trees that grow in Natures garden onely, wherein the hath shewed her selfe many waies after a wonderfull manner, right memorabile.

First and formost, as we haue shewed and declared before, euery thing will not grow in euery place indifferently: neither if they be transplanted, will they liue. This happeneth sometimes vpon a disdaine, otherwhiles vpon a pecuish forwardnesse and contumacie, but oftner by occasion of imbecillity and feeblenesse of the very things that are removed and translated; nay, one while the climate is against it, & eniuous, otherwhiles the soile is contrary therunto. The balm tree can abide no other place but Iury. The Assyrian Pome-citron tree will not beare elsewhere than in Syria. As for the Date-tree, it comes to grow vnder all climats; or if it be brought to that passe by transplanting, it refuseth to beare fruit. But say, that it fortune by some meanes, that the giuech come shew and apparence of fruit, she is not so kind as to nourish and reare vp to perfection, that which she brought forth, forced against her will. The Cinnamon shrub hath no power and strength to indure either the aire or earth of Syria, notwithstanding it be a neere neighbor to the naturall region of her nativity. The daintie plants of Amomum or Spikenard, may not away with Arabia, howbeit they be brought out of India thither by sea: for king Seleucus made triall therof: so strange they are to liue in any other country but their own. Certainly, this is a most wonderful thing to be noted. That many times the trees for their part may be intreated to remove into a forrain country, and there to liue, yea, and otherwhiles the ground and soile may be perswaded and brought to accord so wel with plants (be they neuer such strangers) that it will feed and nourish them; but vnpossible it is to bring the temperature of the aire and the climat to condescend thereto and be fauourable vnto them. The Pepper-trees liue in Italy; the shrub of Cassia or the Canell likewise in the Northerly regions; the Frankincense tree also hath been knowne to liue in Lydia: but where were the hot gleames of the Sunne to be found in those regions, either to dry vp the waterish humor of the one, or to concoct and thicken the gumme and Rosine of the other? Moreover, there is another marvell in Nature, well neare as great as that, namely, that shee should so change and alter in those same places, and yet exercise her vertues and operations otherwhiles againe, as if there were no change nor alteration

A ration in her. She hath assigned the Cedar tree vnto hot countries: and yet wee set it to grow in the mountaines of Lycia and Phrygia both. She hath so appointed and ordained, that cold places should be hurtfull and contrary to Bay-trees, howbeit, there is not a tree prospereth better, nor growth in more plenty vpon the cold hill Olympus, than it. About the streights of the Cimmarian Bosphorus, and namely, in the city Panticapæum, both *K. Mithridates*, and also the inhabitants of those quarters, vsed all meanes possible to haue the Lawrel and the Myrtle there to grow, only to serue their turns when they should sacrifice to the gods: it would neuer be, did they what they could: and yet euen then, there were good store of trees there growing of a warm temperature; there were Pomegranates and Fig-trees plenty; and now adies there be Apple-trees and Pyrries in those parts, of the best and daintiest sort. Contrariwise, ye shall not find in all that tract any trees of a cold nature, as Pines, Pitch-trees, and Firres. But what need I to goe as farre as to Pontus for to auerre and make good my word? Goe no farther than Rome, hardly and with much adoe will any Chestnut or Cherrie trees grow neere vnto it, no more than Peach-trees about the territory of Thufculum. And worke enough there is to make hazels and silbards to like there: turne but to Tarracina thereby, ye shall meet with whole woods full of Nut-trees.

CHAP. XXXIII.

¶ Of the Cypress tree. That oftentimes some new plants do grow out of the ground, which were neuer knowne to be there beforetime.

THe Cypress hath bin counted a meere stranger in Italy, & most vnwillling there to grow, as we may see in the works of *Cato*, who hath spent more words, and made oftner mention of the Cypress alone, than of all other trees whatsoeuer. Much ado there is with it beyond it come vp; and as hard it is to grow, and when all is done, the fruit is good for nothing. The berries that it beareth, be wrinkled, and nothing lovely to the eie; the leaues wherewith it is clad, bitter in tast, a strong and violent smell it hath with it, not so much as the very thade thereof is delectable and pleasant; and the wood but small & not solide, but of an hollow substance, in so much, as a man may range it among the kinds of shrubs. Consecrated is this tree to *Pluto*, & therefore men vse to set a bough thereof as a signe, before those houses wherein a dead corpse lieth vnder board. As touching the female Cypress, it is long ere shee beareth. The Cypress tree for all this, in the end growing vp to a pyramidall forme sharp pointed, is not rejected but much set by, if it were for nothing els but to stand between euery row and ranke of Pine-trees; howbeit, now adies it is ordered with cutting and clipping for to grow thick in borders about garden quarters along the allies, also to climbe vpon walls in manner of feeling; and being thus kept down, it is by this means alwaies small and tender. Moreover, therefore a drawne many winnats and borders about stony-works in colours: for so fine is the leafe, so short and green without, that it may be brought in a traile to winde about pictures either of hounds and hunters, or of ships and sailers, or any counterfeits and images whatsoeuer most daintily.

Two sorts there are of the Cypress tree. First that which runneth vp to a pyramidall point, winding upward as a round spire, which also is called the female. A sior the male, it sendeth out branches, and spreadeth broad: it is lopped also, and serueth in frames to beare vp vines. Both the one and the other is suffered to grow for perches, railes, and planks, to be made of their boughs when they are cut. Once in thirteen yeares there is made a fall, and not one of those but are sold for a Roman denier apiece. A wood thereof planted in this manner, is of all others most gainfull, and yeeldeth greatest profit: in so much, as in old time they were wont commonly to say, That one fall of such Cypress poles would yeeld a man a portion sufficient to giue with his daughter in marriage.

The Island Candie is the naturall country of the Cypress tree, howsoeuer *Cato* hath called it a Tarentine tree: haply, because it came thither first. In the Isle *Ænaria*, the Cypress trees spring againe after they be cut downe to the roots. But in Candie, looke what ground soeuer a man doth breake vp and plough, vlesse he sow or set it with some other thing, Cyresses will come vp, and presently shew aboue ground. In many places also of that Isle, they spring and grow of themselves, euen in ground otherwise untilld; and principally in the mountaines of *Ida*, and those which they cal the white Hills: vpon the very crests and tops whereof, which are alwaies

alwaies couered with snow, they are to be seen in greatest plenty. A wonderful thing; considering that in all other places they loue warmth, and without it, will not grow: and besides, when they haue met with a familiar ground vnto them, yet they care not much for it, but disdaine so kind a source, whereby a man may see, that not onely the nature of the soile, and the ordinarie power of the climat serueth much for these plants, but also certain sudden and temporarie impressions of the aire do wonderfully worke in this case: for some flowers there be, that oftentimes do bring seeds with them and ingender plants. The same rains do fall sometime after one certain manner, otherwhiles also in such strange sort, as men are able to giue no reason thereof: A thing that befell the country about Cyrene in Barbary, at what time as the herbe *Lasferpitum* (which beareth the gum Benioine) grew there first: as hereafter we will write more at large in our treatise of herbes. Moreouer, about the 430 yere after the foundation of Rome city, there sprung vp a very forest or wood nere vnto the same city, by reason of a certaine thick and glutinous shoure like to Pitch, that then fell.

CHAP. XXXIII.

¶ Of *Iuie*.

IT is said, that now the *Iuie* tree groweth also in Asia: and yet *Theophrastus* in his time deliuered the contrary, and a firm'd, that neither it was to be found there, nor yet throughout all India, but only vpon the mount Merus.ouer and besides, it is reported, that *Harpalus* did what he could to store the country of Media therewith, but all in vaine. And as for *Alexander the Great*, when he remained from out of India with victory, for the rareness thereof he would haue all his soldiers go in a sumptuous shew, wearing chaplets thereof vpon their heads: resembling herein prince *Bacchus*, in solemnities and high feasts of which god, the people of Thracia euen at this day are furnished from this tree, and do with *Iuie* fet out and garnish the heads of their Iuices, pikes, and iaculins, their mourninges also and targuets.

An enemy is *Iuie* doubtlesse to trees, and generally to all plants and sets what fouer: it cleaueh and breaketh sepulchres built of stone, it vndermineth city walls: good onely to harbour serpents, and most comfortable for their cold complexions: so that I cannot chuse but maruell much that it should be honored at all, and accounted of any worth. But to enter into a more particular consideration and discourse of *Iuie*, two principall kinds are found therof, like as of all other trees, to wit, the male and the female. The male is described to be a more massiue and greater body, to be clad with a harder and fatter leafe, and to shew a flower inclining to purple: and yet the flower of them both, the male as well as the female, doth resemble that of the wild Rose or Eglantine, saue that it hath no smell at all. These generall kinds containe each of them three particular sorts: for there is the black and the white *Iuie*, and a third besides named *Helix*, and yet we must admit other subdiuisions of these also: for of the white, there is one sort that beareth white fruit only, and another that hath white leaues withall: moreouer, of such as carry only white fruit, one kind hath big berries growing thick together, and bunching round in manner of grapes, which clusters be called of the Greeks and Latines *Corymbi*. A second sort there is of the white *Iuie* named *Selenitum*, which beareth smaller berries, and those not so close set and thick couched together. Semblably, it is to be said of the black: for there is an *Iuy* that beareth also a black grain or seed: another with a fruit of a Saffron colour, and hereof are the garlands made which Poets wear: some call it *Nysia*, others *Bacchica*: the leaues of it are not all together so black, but it beareth the greatest bunches and biggest berries of all the black kind. And verily of this *Iuie* there be some Greeke writers that make two sorts, according to the diuers colors of the berries: for the one they call *Erythranus* [i. the red.] & the other *Chrysofcarpos*, as one would say, the golden berry. *Iuie*. Now as touching the rampant or climbing *Iuie*, *Helix*, there be many and sundry sorts thereof, differing in their leafe especially: for first & foremost the leaues of this *Iuie* are small, cornered, and better fashioned than the rest, which indeed are but of a plain and simple making. There is a difference likewise in the length between every knot and ioint, but especially in this, that it is barren and beareth no fruit at all. And yet some there be, who attribute that to the age, and not to a severall kind of *Iuie* by it selfe, saying, that the same which at first was *Helix*, and clasped trees, in tract of time changed the leafe and became a very *Iuie* tree: but fouly they are deceiued, and disprooued plainly they may be by this,

That

A That of the said clasping *Iuie* *Helix*, there be many kinds, and three principall about the rest. The first, of grassie Greene colour, which groweth most common: the second, with a white leafe: and the third, called also the Thracian *Iuie*, which hath leaues of diuers colours. The foresaid Greene *Iuie* is fuller of leaues, and those finer and set in better order than in others: whereas the contrary is to be seen in the white kind: also in the third sort with variety of colours, some haue smaller and thinner leaues, couched likewise in good order, and thicker growing, whereas in the middle kind, no such thing may be obserued. ouer and besides, the leaues of *Iuie* are bigger or lesse, spotted also and marked, in which regard one differeth from another. Among the white *Iuies*, some be whiter than other. The Greene *Iuie* groweth most of all others in length: the white killeth trees, for by sucking and soking at the sap and moisture out of them, it feedeth and thriueh so well it selfe, that it becometh in the end as big as a tree. A man may know an *Iuie* being come to his perfection by these signes: the leaues are very big and large withall; the tree putteth forth yong shoots straight, whereas in others they be crooked and bend inward: the berries also stand in their clusters directly vpright. Moreouer, whereas the branches of all other *Iuies* be made like vnto roots, this hath boughes strong and sturdy about the rest; and next vnto it, the black kind: howbeit this property hath the white *Iuie* by it selfe, that amid the leaues it putteth forth armes that clasp and embrace the tree round on euery side: which it doth vpon walls likewise, although it cannot so well compasse them. And hereupon it is, that although it be cut asunder in many places, yet it continueth and liueth still and looke how many such arms it hath so many heads likewise of roots are to be seen, whereby it maintaineth it selfe safe and found; C and is besides of that force, as to suck and choke the trees that it claspeth. Furthermore, there is great diuersity in the fruit, as well of the white as the black *Iuie*. As for the rest, the berries of them are so exceeding bitter, as no bird will touch them. And yet there is one kind more of *Iuy*, which is very liffe and standeth alone of it selfe without any prop to beare it vp: and this of all others only, is therupon called *Cissos* or *Iuie* indeed. Contrariwise, *Chamae cissos*, [i. ground *Iuie*] is neuer knowne but to creep along the ground.

CHAP. XXXV.

¶ Of the Bind-weed or *Iuie* called *Smilax*.

D Like vnto *Iuie*, is that plant which they call *Smilax*, or rough Bind-weed. It came first out of Cilicia, howbeit more commonly it is to be seen in Greece: it putteth forth stalks set thick with ioints or knots, and those thrust out many thornie branches. The leafe resembleth *Iuie*, and the same is small, and nothing cornered: from a little stele that it hath, it sendeth forth certain pretty tendrils to clasp and wind about: the floure is white, and smelleth like to a Lilly; it beareth clusters coming nearer to those grapes of the wild vine *Labrusca*, than to the berries of *Iuie*; red of color, whereof the bigger contain within them 3 kernels or pepins apiece, the smaller but one, and those be hard and black withall. This *Smilax* is not vfed in any sacrifices or diuine seruice of the gods, nor serueth for garlands and chaplets: for that it is held to be dolefull and ominous, or of an vnlucky presage, by occasion of a certain yong lady or Damsell of that name, who for the loue of the yong gallant and knight *Crocus*, was turned into this shrub or plant, retaining still her name: which the ignorant people not knowing, but taking it for a kind of *Iuie*, sick not to make coronets therof; profaning by that means many times their high feasts and sacred solemnities: and yet who woteh not with what chaplets Poets are crowned, and what garlands prince *Bacchus* or *Silenus* vsed to wear? Of this *Smilax* are made certain manuell writing tables. And this property moreouer hath the wood thereof, That if a man hold it close to his eare, he shall heare it to giue a peep sound.

But to return againe to the *Iuie* indeed, it hath (by report) a strange and wonderful vertue to trie wines, whether they be delaid with water or no: for make a cup of *Iuie* wood, and put wine thereinto, all the wine will foke and run through, but the water (if any be mingled therewith) will tarry behind.

CHAP. XXXVI.

¶ Of Reeds, Canes, and other water shrubs.

I N this discourse touching plants that loue cold places, it will not be amisse to treat of those that grow in waters. Among which, the Reeds and Canes may be raunged in the first place:

Tt

for

* For Arrows
and Darts.
* For writing
pens.
* For Flutes
and Pipes.

for necessarie they be in time both of * war and * peace: they haue their vse besides, and are accepted among the * delightfull pleasures of this world. Moreover, in the Northern regions, the people vse therewith to couer and thatch their houses: and this kind of roofoe will last many ages, if it be laid with a thick coat, euen vpon high and stately houses. In other parts also of the world, they are wont with it to make their arch-roufes, and hanging floores of most sleight worke. As for Canes particularly, and those of Egypt by name, which haue a certaine resemblance of the Papyr-reed in Nilus, they serue for writing Paper. Howbeit those of Gnidus, and which grow in Asia along the lake or meere of Anai, be held for the best. As for ours here in Italy, they are of a more spongy substance and gristly matter, apt to sucke and drinke vpon any liqour. The same within-forth is full of holes and concavities, but conuerted aloft into a fine woody rind, and in time becommeth drie, fast, and hard. Apt it is to cleaue, and the cliffs euermore carry with them a very sharp edge; and besides, it is full of ioints. Now this woody substance being thus distinctly parted by knots, runneth alwaies euen and smooth, growing smaller and smaller vntill it proue sharpe pointed in the top: with a head consisting of a good thicke downe or plume, which serueth also to right good purposes: for either in stead of feathers they vse to stuffe beds therewith in common Innes; or when it is growne hard and hath a slimie callositie about it, they in Picardie and those Nether-lands do stampe it, and therewith calstret or calke the ioints of their ships, betwene the ribs and planks: and herein it hath no fellow, for it taketh faster hold than any glue, and for filling vpon any riits and chinks, no solder so strong, no pitch so sure and trustie. Of Reeds, the Easterlings make their shafts; and archers they be that fight their batrels and determine all quarrels. These shafts they arme with sharpe barbed arrow heads in manner of fish-hooks, which wound with a mischiefe, because they cannot be drawne out of the body againe: and to make these arrowes flie the faster and kill more presently, they fet feathers vnto them. Now say that a shaft be broken as it is fet fast in the body, that end without the flesh will serue againe to be shot: & so inured are the people in those parts to these kind of weapons, so practised withall in discharging of them so nimbly, that a man seeing how thick the shafts flie in the aire, would say they were a cloud of arrowes that shadowed the very Sun. And therefore when they goe to battell, they wish euer for faire weather and Sunne-shine daies. Windes and raine, as most aduerser vnto their warres, they cannot abide: then are they quiet and rest in peace, full fore against their wils, because their weapons at such a time wil not serue their turne. Certes if a man would fall to an exact reckoning and estimate of Æthiopi-ans, Egyptians, Arabians, Indians, Seythians, and Baſtrians, of so many nations also of the Sarmatians, and other East-countries, together with all the kingdomes of the Parthians, hee should finde, that the one moiety or halfe of the world hath been vanquished and conquered by the meanes of arrowes and darts, made of Reedes. The Candiots aboute all others, were so readie and perfect in this kinde of feat, that the ouerweening of their owne skill, and the confidence which they had in this manner of seruice, made them too bold, and was in the end their owne ouerthrow. But herein also, as in all other things, else whatsoeuer, Italie hath carried the name, and won the prize: for there is not a better Reed growing for to make shafts, than that which is found about the Rhene, a little riuier, running vnder Bononia: very full of marrow or pith; flie also it is and weightie withall; it curteth the aire, it flyeth away most swiftly; and last of all, it will hold the owne and stand in the weather so counterpoised, that no winde hath any power on it. And those Reeds in Picardie and the Low-countries, are nothing comparable yet of Candie, how highly soeuer they be commended for warre-seruice. And yet the Reeds that grow in India be preferred before them, and beare the name, which indeede some thinke to be of another nature, considering they bee so firme and bigge withall, that being well headed with yron, they serue in stead of Spears and Iauelins. In very truth, the Indian Canes for the most part, grow to the bignesse of Trees, such as we see commonly in Temples, standing there for a shew. The Indians doe affirme, that there is a difference amongst them also, in regard of sexe: and namely, That the substance and matter of the male, is more fast and massive: but that of the female, larger and of greater capacite within. Moreover, (if wee may beleue their words) the verie Cane betwene every ioint, is sufficient to make a boat. These great Canes do grow principally along the riuier Aceſine. All Reeds in generall, doe shoot and spring in great number from one root and principall stocke: and the more they bee cut, the better they come againe. The root liueth long, and without great iniurie offered vnto it, will not die: it also is di-
uided

A vided into many knottie ioints. Those onely of India, haue short leaues. But in all of them, the leafe springeth out of the ioint, which embracing the Cane, doth clad it round about with certaine thin membranes or tunicles, as far as to the middle space betwene the ioints; and then for the most part they giue ouer to claſpe the Cane, and hang downward to the ground. As well Reeds as Canes, spread their leaues like wings round one after another, on either side vpon the very ioints, and that in alternatiue course alwaies very orderly; so as if the one sheath come forth of the right side, the other at the next ioint or knot about it, putteth out on the left, and thus it doth throughout by turnes. From these nodosities, otherwhiles a man shall perceiue as it were certaine little branches to breake forth, and those bee no other but small and slender Reeds.

B Moreover there be many kindes of Reedes and Canes: for some of them stand thicker with ioints, and those are more fast and solid than others, & small distance there is from the same: there be againe that haue not so many of them, and greater space there is from the one to the other, and such Canes for the most part are of a thinner substance. Yee shall haue a Cane all full of holes within, called therupon Syringias; and such are very good to make whistles or small flutes, because they haue within them neither gristly nor fleshy substance. The Orchomenian Cane is hollow throughout from one end to the other, and this they call Auleticus, or the pipe Cane, for as the former was fit for flutes, so is this better for great pipes. Now you shall meet with Canes also that stand more of the wood, & haue but a narrow hole and concavity within; and this is full of a spongy pith or marrow within-forth. Some be shorter, some longer than other, and where you haue one that is thin and slender, you shall finde a felloe to it more grosse and thicker. That which brancheth most, & putteth forth greatest store of shoots, is called Donax, and is neuer known to grow but in marshes and watery places (for herein alioeth a difference) and preferred it is far before the Reed that cometh vpon in dry ground. The archers reed is a feuerall kind by it selfe (as we haue shewed before;) but for this sort, those in Candy haue the greatest spaces betwene every ioint, and if they be made hot, they are very pliable, and will bend and follow which way soeuer a man would haue them.

Moreover, Reeds are distinguished one from another by the leafe, not for the number, but the strength and colour. The leaues of those about Lacedaemon, * are stiffe and strong, growing thicker of the one side than of the other. And such as these are thought generally to grow about long standing pooles and dead waters, far vnlike to those about running riuers: and besides, to be clad with long pellicles, which claſpe and climbe about the Cane higher about the ioint, than the rest doe. Furthermore, there is another kind of Reeds that groweth crooked and winding trauers, and not vpright vnto any height, but creeping low toward the ground, and spreading it selfe in manner of a thrub. Beasts take exceeding great delight to feed thereof, and namely, when it is young and tender, for the sweet and pleasant taste that it hath. Some call this Reed, Elegia.

Ouer and besides, there breedeth in Italy also among the fens, a certain salt some, named * A-darca, sticking to the rind or vntoſt bark of Reedes and Canes, onely vnder the verie tuft and head: passing good it is for the tooth-ach, by reason of the hot and caustick quality that it hath like to Senue or Mustard-seed. As touching the Reed-plots about the Orchomenian lake, I must needs write more exactly, considering in what admiration they were in times past: for in the first place, they called that Cane which was the thicker and more strong, Characias; but the thinner and more slender, Plotia. And this verily was wont to be found swimming in the I. stands that stood in the said lake; whereas the other grew alwaies firme vpon the banks and edges thereof, how farre soeuer it spread and flowed abroad. A third sort also there is of Canes, which they called Auleticon, for that it serueth to make flutes and pipes of: but this commonly grew but every ninth yeare: for the said lake also kept that time iust, and increased not about that terme; but if at any time it chanced to passe that time and to continue full two yeares together more than ordinary, it was holden for a prodigious and fearfull signe. The which was noted at Chæronia, in that vnfortunate battell wherein the Athenians were ouerthrowne and defeated: and many times elfe is obserued to happen about Lebadia, namely when the Riuier Cephus ariseth so high, that he swelleth ouer his banks, and is discharged into the said lake. Now during that ninth yeare (whiles the inundation of the lake continueth) these Canes proue so bigge and strong withall, that they serue for hawking poles, and fowlers pearches: and

* Varietor Per-
ficilar, minus
Theroph. i. of
diuers colours

* Calamagrostis.

and then the Greeks call them Zeugitæ. Contrariwise, if the water hold not so long, but do fall G
and return back within the yere, then the Reeds be small and slender, named Bombyciæ. How-
beit the femals of this kind, haue a broader and whiter leafe, little or no down at all vpon them,
and then they are known by a pretty name and called Spadones, as one would say guded. Of
these Reeds were made the instruments for the excellent close musick within-house: wherein, I
cannot passe with silence, what a wonderfull deale of paines and care they tooke to fit them for
their tune, and make them to accord: inasmuch, as we are not to be blamed but born withall, if
now adaies we chuse rather to haue our pipes and hautboies of siluer. And in truth, to the time
of *Antigenes* (that excellent minstrell and plaier vpon the pipe) all the while that there was no
vse but of the plain musick and single instrument; the right time of cutting down & gathering
these Reeds for this purpose, was about September, when the signe *Arcturus* is in force: then
were they to haue a seasoning and preparation for certaine yeares, before they would serue the
turne, yea and then also much ado there was with them, and long practise and exercise they as-
ked, before they could be brought into frame and good tune: so as a man might wel say, that the
very pipes were to be taught their sound and note, by means of certaine tongues or quills that
struck and pressed one vpon another; and all to giue contentment and shew pleasure vnto the
people assembled at Theatres, according as those times required. But after that musike came
once to be compound, and that men sung and plaied in parts with more varietie and delight,
they began to gather these Reeds before mid-Iune, and in three yeares space they had their per-
fection and grew to their prooff; then were those tongues or holes made more wide and open,
for to quater and change the note the better: and of such are the flutes and pipes made, which
be vsed at this day. But in those times men were perswaded, that there was a great difference in
the parts of any Reeds for to serue these or those instruments: in such sort, as that ioint which
was next vnto the root, they held to be meetest for the Bale pipe that was fitted for the left hand,
and contrariwise for the Treble of the right hand, those knots that were toward the head & top
of the Reed. Howbeit of all others, by many degrees were those preferred which grew in the ri-
uer *Cephissus*. Now adaies, the hautboies that the *Tuscanes* play vpon at their sacrifices, be of
Box-wood; but the pipes vsed in plaies for pleasure only, are made of the *Lotos*, of *Asses* (shank-
bones, and of siluer. The best Faulconers Reeds wherewith they vse to chase foules, came from
Panhormus: but the Canes for angle-rods that fishers occupie, are brought out of *Africk* from
Abaris. The Italian Reeds & Canes be fittest for to make perches to lay our frames, & props
for to beare vp vines. Finally, as touching the setting of Reedes, *Cato* would haue them to be
planted in moist grounds, after they haue bin first delud & laid hollow with a spade; provided
alwaies that the osets stand; foot asunder, and that there be wilde Sparages among, wherof
come the tender crops for fallads; for those like well and fort together with the Canes.

CHAP. XXXVII.

¶ Of the Willow or Sallow, eight kinds thereof: and what trees besides the Willow are good for
bindings. Also of Briers and Brambles.

Moreouer (after the opinion of the said *Cato*) it is good to plant Withies also about riu-
ers, and neere to Reeds; for surely there is not more profit arising from any other tree of
the waters, than from it; howsoever the Poplars are well liked and loued of the vines, and
do nourish the good wines of *Cæcubum*; howsoever the *Alders* serue in stead of rampiers and
strong fences against the inundation and ouerflowing of riuers, withstanding their forcible e-
ruptions; howsoever they stand in the waters as mures and wals to fortifie the banks, or rather
as sentinels to watch and ward in the borders of country farms; and being cut down to the root,
do multiply the rather, and put forth many shoots and imps as heires to succeed. And to bigin
withall, of Sallows there be many kinds: for some there be, that in the head beare perches of a
great length to prop and make trails for vines to run vpon; and the rind or skin as it were pilled
from the wood, is as good as a belt or thong to binde or gird any thing withall. Others againe
there are, and namely the red Willows, which carry twigs and rods that are pliable and gentle
to wind as a man would haue them; fit also for buildings. Ye shall haue of these Others, some that
are very fine & passing slender, wherof are wrought pretty baskets, and many other dainty deu-
ises; others also that are more tough and strong, good to make paniers, hamperes, and a thousand
other

- A other necessary implements for country houses, and to fit the husbandmen. Being pilled, they
are the fairer and whiter, more smooth also and gentle in hand, whereby they are excellent good
for the more delicate sort of such wicker ware, and better far than stubborn leathers; but princi-
pally for leaning chairs, wherein a man or woman may gently take a nap, sitting at ease and re-
posse most sweetly. A willow, the more that it is cut or lopt, the better spring will it shoot at
root, and beare the fairer head. Let that which you cut or fired, be so little & short withall, that
it resemble a mans fist, rather than a bough, the thicker will it come again: a tree no doubt that
would not be fit in the lowest rank, but be wel regarded, how soeuer we make but baser reckoning
thereof; for surely there is not a tree for reueneue and profit, more safe and certain; for cost, lesse
chargeable; and for injury of weather, in better security. Certes, *Cato*, among the commodities
that commend a good farm or manor, esteemeth it in the third place, and preferreth the increase
and benefit thereby, before the gain that groweth from oliue rows, corn fields, & good meadows.
Yet hereof we must not infer, that we are not furnished with many other things which will serue
for bands to bind withall; for we haue certain sorts of Spart or Spanish broom, we haue Poplars,
Elmes, the Sanguine shrubs, Birch, clouen Reeds, leaues of Cane; as for example in *Liguria*:
the cuttings also of the very Vine, and Briers, for their sharp prickles be cut away, to tie withall;
yea and the *Harrell* wands also, so they be written and twined: wherein a man may fee a wonder-
full property, That a wood should be stronger for to bind withall, when it is crushed and bruised,
than whilst it was entire and sound. All these (I say) are good for bands, and yet the willow hath
a gift therein beyond all the rest. The Greek willow is red, and commonly is fluen for to make
withs. The American Osier is the whiter, but more brittle, and soon will crack, & therefore it is put
to that vse of binding sound and whole as it groweth, and not clouen through. In Asia, they
make account of three sorts of willows: the black, which they employ to wind and bind withall,
so tough and pliant it is; the white, wherewith husbandmen make their wicker paniers and bas-
kets, with other such vessels for their vse; as for the third, it is the shortest of all other, and they
call it *Helix* or *Helice*. With vs also here in Italy, there be as many kinds, & those distinguished
by their severall names; the first, which is of a deep purple colour, they call the free orer or wil-
low; and that is so good for bands: the second, which is more thin and slender, is named *Vitellina*,
[or *Vitellana* rather, for the yellow colour of the yolke of egges,] for the bright hew that it
hath: the third that is smallest of all three, is the French willow.
- D To come now to the brittle Rushes that grow in marsh grounds, which serue to thatch hou-
ses and to make mats; and the pith whereof when the rind is pilled, maketh wicke for watch-
candles, and funerall lights to burne by a dead corps whilst it lieth above ground, they cannot
iustly be reckoned in the ranke either of shrubbes, or Brier-bushes, and Brambles, we need of tall
plants growing vp with stems and stalks, no more than among Hearbes and Weeds creeping a-
long the ground; but are to be counted a severall kind by it selfe. True it is, that in some places
there are to be found rushes more stiffe, hard, and strong, than in others. For not onely mariners
and watermen in the riuier Po do make sailes thereof, but fishermen also of *Africk* in the maine
sea, howbeit they hang their sailes betwene the masts, from mast to mast, after a preposterous
manner contrary to all other. The Mores also do couer their cottages with Bulrushes; and sure-
ly if a man looke neerly to the nature of them, they may seeme to serue for that vse which the
E Papyrus-reeds in the netherland of *Egypt* are put vnto, about the descent and fall of the riuier
Nilus.

As touching Brambles, they may go among the shrubs of the water: so may the Elders also;
which consist of a pungenous kind of matter, & yet cannot wel be counted among those plants
which bee termed Fencels-gyant: for surely the Elder standeth more vpon the wood than they
do. The shepherds are verily perswaded, that the Elder tree growing in a by-place fare out of
the way, and from whence a man cannot heare a cock crow out of any town, maketh more shrill
pipes and louder trumpets than any other. The Brambles beare certaine berries like the Mul-
berries, euen as the sweet Brier of another kind, which they call *Cynosbatos* or the Eglantine,
carrieth the resemblance of a Rose. A third sort there is of brambles, which the Greeks call *Idea*,
of the mountain *Ida*. This is the Rapis; smaller it is and more slender than the rest, with lesse
prickles vpon it, and nothing so sharpe and hooked. The floure of this Rapis being tempered
with honey, is good to be laied to bleared and bloud-shotten eyes; as also to the wild-fire, or dif-
ease called *Saint Anthones fire*. Being taken inwardly, and namely drunk with water, it is very
comfor-

comfortable to a weake stomacke. The Elder beareth certain blacke and small berries, full of a grosse and viscous humor, vfed especially to die the haire of the head black. If they be boiled in water they are good and wholesome to be eaten as other pot-herbs.

CHAP. XXXVIII.

¶ *Of the iuice or humor in trees. The nature of their wood and timber. The time and manner of felling and cutting downe trees.*

Trees haue a certaine moisture in their barks, which we must vnderstand to be their very bloud, yet is it not the same nor alike in all: for that of the Fig trees is as white as milke, and as good as rendles to giue the forme to cheefe. Cherry trees yeld a glutinous and clammy humor, but Elmes a thin liquor in manner of spittle. In Apple trees the same is fattie and viscous; in Vines and Pyrries waterish. And generally, those trees continue and liue longest, that haue such a glewy moisture in them. In summe, there are to be considered in the substance and body of trees, like as of all other liuing creatures, their skin, their bloud, flesh, sinues, veins, bones, and marrow. For in lieu of their hide is the barke. And I assure you, a strange and marvellous thing it is to be obserued here in the Mulberry, that when Physitians seek to draw the foresaid liquor out of it, at seuen or eight a clocke in a morning, if they scarifie or lightly cut the bark with a stone, it issueth forth, and they haue their desire: but if they crush or cut it deeper in, they meet with no more moisture than if it were stark dry. In most trees next to the skin lieth the fat: this is nought else but that white sap which of the colour is called in Latin Album. As it is soft in substance, so is it the worst part of the wood; and euen in the strong oke, as hard as otherwise it is, ye shal haue it soon to putrife and rot, yea and quickly be worm-eaten. And therefore if a man would haue sound and good timber, this white must be alwaies cut away in the squaring. After it followeth the flesh of the tree; and so the bone, which is the very heart and beist of the wood.

All trees whereof the wood is ouer dry, beare fruit but each other yeare, or at leastwise more in one yeare than another, as namely the Oliue tree: a thing obserued more in them than in those that haue a pulpos and fleshy substance, as the Cherry tree. Neither are all trees indifferently furnished with store of the said fat or flesh, no more than the most fierce and furious beasts. As for the Box, Cornel, and Oliue trees, they haue neither the one nor the other, ne yet any marrow at all, and but very little bloud. Semblably, the Seruis tree hath no heart, the Alder no carnositie, (and yet both of them are stored wel enough with marrow, which is their pith) no more than canes or reeds for the most part. In the fleshy substance or wood of some trees there are to be found graine and veine both. And easie it is to distinguish the one from the other: for commonly the veins be larger and whiter; contrariwise the grain, which the Latines call Pulpa, runneth streit and direct in length, and is to be found ordinarily in trees that wil easily cleaue. And hereupon it commeth, that if a man lay his eare close to one end of a beame or piece of timber, he shal heare the knocke or pricke that is made but with a pen-knife at the other end, be the piece neuer so long, by reason that the sound goeth along the streit grain of the wood. By this means also a man shall find when the timber doth twine, and whether it run not euen, but be interrupted with knots in the way.

Some trees there be that haue certain hard bunches bearing out and swelling like to kernels in the flesh of a Swines necke: and these knobs or callosities haue not in them long grain and broad veine, as is aboue said, but only a brawny flesh (as it were) rolled round together: And to say a truth, when such knurres and callosities as these be, are found either in Citron or Maple trees, men make great account of them, and set no small store by that wood. All other sorts of Tables, when the trees are clouen or sawne into planks, are brought into a round compasse with the grain: for otherwise, if it were slit ouerthwart to make them round against the grain, it would soon breake out. As touching the Beech, the graine of it runneth cross to two contrary wayes like combe teeth; but in old time the vessels made of that wood were highly esteemed. As for example, *Manius Curius* hauing subdued his enemies, protested, and bound it with an oath, That of all the booty and pillage taken from them, hee had not reserved any thing for himselfe, but only a cruet or little Euer of Beech wood, wherein he might sacrifice vnto the gods.

There

A There is no wood but stothet aloft the water, and waueth in length: like as that part which is next to the root is far more weighty, setleth faster downe and sinketh. Some wood hath no veins at all, but consisteth only of a meere grain, streight and small in maner of threds, & such commonly is easie to be clouen. There is again wood that hath no such direct graine, and that will sooner breake out than cleaue; and of this nature is the Ollue and Vine-wood. Contrariwise, the whole body and woody substance of the Figge tree is nothing but flesh. The Mast-holme, Cornel, Oke, Tretrefolie, Mulberry, Ebony, and Lotus, which haue no pith and marrow within, as is before said, are all heart. All wood for the most part turneth to a blackish colour. The Cornel tree is of a deep yellow, whereof are made the faire Bore-speare flaues, which thine againe, and be studded (as it were) with knots, and chamfered betweene both for decencie and handfomnesse. The Cedar, Larch, and Iuniper wood is red.

CHAP. XXXIX.

¶ *Of the Larch tree, the Firre, and the Sapine: the manner of cutting or falling such like trees.*

There is a female Larch tree which the Greeks call *Ægis*: the wood whereof is of a pleasant colour, like to hony. Painters haue found by experience, that it is excellent good for their tables, both for that it is so euen and smooth, not apt besides to chink and cleaue, as also because it will endure and last for euer. And that part they chuse which is the very heart of it, and next the pith, which in the Fir tree the Greeks call *Leufon*. In like sort the heart of the Cedar is hardest which lieth next to the pith or marrow aboue named (much after the manner of bones in the bodies of liuing creatures) when the muddy carnositie is scraped off and taken away. The inward part also of the Elder by report is wondrous hard & tough, and they that make thereof stauces for Bore-speares prefer it before any wood whatsoever. For it standeth only vpon skin and bone, that is to say, of the rind and heart.

As touching the falling and cutting downe of trees, to serue either in temples or for other vses, round and entire as they grow, without any squaring; as also for to barke them, the onely time and season is, when the sap runs, and that they begin to bud forth: otherwise you shal neuer be able to get off their bark: for bark them not, they will rot and become worm-eaten vnder the said barke, and the timber withall waxe dusky and blacke. As for the other timber that is squared with the axe, and by that means rid from the barke, it would be fallen or cut downe between mid-winter and the time that the wind Favonius bloweth: or, if we be forced to vse the timber before, and to prevent that time, trees may be fallen at the setting of the star Arcturus, or of the Harp-star before it. Finally, the utmost and last time thereof is at the summer Sun-set. But forasmuch as most men be ignorant of these seasons, and know not when these starres aboue named do either rise or fall, I will hereafter shew the reason both of the one and other in place conuenient. For this present, as touching the time of felling trees, the common fort make no more scruple, but thinke it sufficient to obserue, that no trees which are to be hewne square for carpenters work be cast down and laid along before they haue borne their fruit. As for the hard and sauge Oke, if it be felled in the spring it will be subiect to the Worme: but cut it down in mid-winter, it will neither warpe, ne yet cleaue and chink: being otherwise subiect vnto both, namely, as well to cast and twine, as to rift and gape: a thing incident to the Cork wood, be it cut down in as good a season as is possible. Moreover, it passeth to see how much the age of the Moon auaileth in this case: for it is commonly thought that timber would not be fallen but in the wain and namely in the last quarter, from the 20 day of the Moon, till the thirtieth. And this is generally receiued among all good workmen, That the best time to cut downe any timber, is in the conjunction of the Moon with the Sun, euen in the very day of the change, before the sheweth new. Certes *Tiberius Cæsar* the Emperor gaue order to fel the Larch trees that came out of Rhætia, to repaire and to edifie the bridge that serued to represent the shew of a nual battell vpon the water (which fortuned to be consumed with fire) iust at the change of the Moon. Some say, that we must precisely obserue the point of the conjunction, and that the Moon withall be vnder the earth, when such trees should be felled: which cannot be but in the night. But if it fall out besides, that this conjunction or change of the Moone, and the last day of the Winter Sun-stead meet together at one instant; the timber then cut downe will last a

world

Theophrastus writeth this of the Cornel trees.

world of yeares. Next vnto it is that timber which is fallen in the daies and signes aboute re-
hearted. Others affirme moreover, that the rising of the Dog-star would be considered and cho-
sen for this purpose: for at such a time was that timber felled which fered for the stately hall
or palace of *Augustus*. Moreover, for to haue good and profitable timber, the trees would be
cut down that are of a middle age, for neither yong poles nor old runts are fit for durable build-
ding. Furthermore, there be that hold opinion, that for to haue the better timber, the trees
should haue a kerk: to the very heart and pith round about, and to let it stand an end fill, that
all the humor by that means might run out, before they be ouerthrowne and laid along. And
verily a wonderfull and miraculous thing is reported in old time, during the first Punickewar
against the Carthaginians, namely, that all the ships of that fleet which was conducted by Ge-
nerall *Duellius* the high Admirall, were shot into the sea and vnder saile, within fixty daies after
the timber whereof they were built was cut downe in the wood. And *L. Piso* hath left in writ-
ting. That against king *Hiero* there were 220 ships made & furnished in 45 daies after the tim-
ber grew. Also in the second Punick war, the *Armado* which *Scipio* imploied, was set afloate and
bare saile forty daies after the fall of the timber. See how forcible and effectuell in all things
is the season and opportunitie of time duly taken, especially when need driueth to make speed
and hasten apace.

* Sapine or
Carpinus

Cato the chiefe and only man of all others for experience and knowledge in every thing, in
his treatise of all kind of timber to be imploied in building, giues these rules following. Make
thy pressing plank especially of the black * Sapine or Horn-beam tree. *Item*, Whensoever thou
meaneest to stoke vp either Elme, Pine, Walnut tree, or any other whatsoever for timber, see
thou dig it out of the ground, in the wane of the Moon, and that in the afternoon, and take heed
in any wise that the wind be not South. *Item*, The right season to fell a tree for timber, is when
the fruit is full ripe. *Item*, Beware in any case, that thou neither draw forth of the ground, nor yet
square a tree when the dew falleth. And a little after: Beware thou meddle not with timber
trees but either at the change or full of the Moon. And in no hand, neither stoke it vp then, nor
hew it hard to the ground. But within foure daies after the full Moone, plucke vp trees hardly,
for that is the best time. *Item*, Be well aduised, that thou neither fell, square, nor touch with the
ax, any timber that is black, vntill it be dry. And meddle not with it, if either it be frozen or
the full of dew. *Tiberius* the Emperor aboue named obserued likewise the change of the Moon, for
cutting the haire both of head and beard. And yet *M. Varro* gaue a rule, That to prevent bald-
nesse and the shedding of haire, the Barber should be sent for alwaies after the full Moone.

But to come again vnto our timber trees: The Larch and Fir both (but the Fir especially) if
they be cut down, bleed a long time after, and yeeld abundance of moisture. Indeed, these twain
of all others be the tallest, and grow most streight and vpriight. For Mast-poles and crosse faile-
yards in ships, the Fir or Deale is commended and preferred before all others, for the smoothnes
and lightnesse withall. The Larch, the Fir, and the Pine haue this propertie common to them
all, To shew the graine of their wood running either parted in foure, forked in twaine, or single
one by one. For fine carpentry and Ioiners feeling within house, the heart of the tree would be
clouden or rent. The quarter timber, or that which runneth within house, the heart of the tree would be
more pleasant to be wrought than the rest. They that be skillfull woodmen, and haue experi-
ence in timber, will soon find at the first sight the goodnes of the wood by the very bark. That
part of the Fir tree which groweth next to the earth is without knots, even and plain: the same
is laid to foke and season in the water, and afterwards the bark is taken off, and so it cometh to
be called *Sapinus*. The vpper part is knotty, and harder than the nether, and the Latins name
it *Fuſterna*. In sum, what tree soeuer it be, that side which regardeth the North is more strong
and hard than the other. And generally, the wood of those trees that grow in moist and shadie
places is worse: contrariwise, that which cometh from ground exposed to the Sun-shine is
more fast and massive, and withall endureth a long time. And herupon it is, that at Rome the Fir
trees that come from the nether sea side out of Tuscane, be in better request than those from
Venice side, vpon the coast of the vpper sea.

Moreover, there is great ods between Firre trees, in regard of diuers Countries and Nations
where they grow. The best are those of the Alps and the Apennine hills. Likewise in France
there are excellent good Firs vpon the mountains Iura and Vogesus: as also in Corſica, Bithi-
nia, Pontus, and Macedonia. A worse kind of them grow in Arcadia and about the mountaines
reere

A neare Aenea. The worst be those of Pernassus, & Euboea: for in those parts they be full of boughs
and grow twined, besides, they some doe putrifie and rot.

As for Cedars, the best simply be those that grow in Candy, Affricke, and Syria. This vertue
hath the oile of Cedar, That if any wood or timber be thoroughly anointed therewith, it is sub-
iect neither to worne nor moth, ne yet to rottenesse.

The Juniper hath the same propertie that the Cedar. They proue in Spaine to be exceeding
big and huge, the Berries also great of all others. And wherefoeuer it grows, the heart there-
of is more found than the Cedar.

A general fault and imperfection there is common to all wood, When the graine, and the
knots run into round balls: and such they call in Latin *Spirae*. Also in some kind of timber, like
B as in marble also there be found certaine knurs like kernils, as hard they be as naille heads, and
they plague sawes, wherefoeuer they light vpon them. Otherwhiles they fall out to be in trees,
by some accidental occasion, as namely, when a stone is got into the wood, and enclosed within
it, in case the bough of some other tree be incorporat or vnited to the foresaid wood. There
flood a long time a wild Oliue in the market place of Megara, vpon which the hardie and vali-
dant warriors of that citie vsed to hang and fasten their armor, after some worthy exploit per-
formed: which in tract and continuance of time were ouergrown with the bark of the said tree, and
quite hid. Now was this a fatal tree vnto the same citie and the inhabitants thereof, who by way
of Oracle were forewarned of their wooll destiny and vtter ruin, which was to happen. When
that a tree should be with yong, and deliuered of harnesse: which Oracle was fulfilled when this
C tree was cut downe, for within the wombe thereof were found the mourrions, jambriers, or
griues, of braue men in times past. To conclude, it is said, That such stones so found in trees be
singular good for a woman with child, to carie about her, that the may goe her full time.

CHAP. XL.

¶ Of diuers sorts of timber. Of some trees of extraordinary bignesse. What trees
they be that neuer be worne, eaten, nor decay and fall. What wood doth
endure and continue alwaies good.

THE greatest tree that to this day had euer been knowne or seene at Rome, was that, which
being brought with other timber for the rebuilding of the foresaid bridge called Nau-
macharia, *Tiberius Caesar* commanded to be landed and laid abroad in view for a singular
and miraculous monument to all posteritie: and it remained entire and whole, vntill the time
that *Nero* the Emperour built his stately Amphitheatre. This peece of timber was of a Larch
tree: it contained in length 120 foot, and carried in thicknesse euery way two foot, from one end
to the other. Whereby a man may guesse and iudge the incredible height of the whole tree be-
sides, to the very top. Such another tree there was to be seen in our daies, which *M. Agrippa*
left for the like singularity and wonder of men, in those stately porches and cloisters that hee
made in *Mars* field: and it continued still after the building of the muster place and treasurers
hall named *Diliberitorium*. Shorter it was than the former by 20 foot, and caried a foot and half
in thicknesse. As for the Fir tree, which serued for a mast in that huge ship, which by the com-
mandement and direction of *C. Caligula* the Emperour transported and brought out of Aegypt,
that Obelisk which was erected and set vp in the Vatican hill, within the cirque there, together
with the foure entire stones which bare vp the said Obelisk as supporters, it was seen of a won-
derfull and inestimable height aboue all others: and certaine it is, that there was neuer knowne
to floate vpon the sea a more wonderful ship than it was. Se receiued 120000 Modij of Lentils
for the very ballast; he tooke vp in length the greater part of the left side of Hostia harbour:
for *Claudius* the Emperour caused it there to be sunk, together with three mighty great piles or
dams founded vpon it, and mounted to the height of towers, for which purpose there was
brought a huge quantity of earth or sand from Puteoli. The maine bodie of this mast contained
in compasse 4 fadom full. And a common by-word it is, current in euery mans mouth, that
F Fir mast for that purpose, are usually fold for eight hundred Sesterces apeece, and more monie:
whereas for the most part planks which are set together and serue in stead of boats, ordinarily
cost but forty. Howbeit, the kings of Egypt and Syria, for default and want of Fir (haue vsed by
rep ort) in stead thereof Cedar wood about their shipping. And verily, the voice goes of an ex-
ceeding

ceeding big one which grew in Cyprus, and was cut downe for a mast to serve that mighty gal- G
leace of king *Demetrius*, that had eleven banks of oares to a side, a hundred and thirtie foot it
was high, and three fathome thicke. And no marvell, since that the pyrats and rousers, who haunt
the coasts of Germanie, make their punts or troughs of one entire peece of wood and no more,
wrought hollow in manner of a boat, and some one of them will hold thirtie men.

To proceed now vnto the sundry natures of wood. The most masse and fast wood, and there-
fore the weightiest of all other, by judgment of men, is that of the Ebene and the Boxe: both
small trees by nature. Neither of them twaine swimms above the water, no more will the Corke
wood, if it be barked, nor the Larch. Of all the rest, the faddest wood is that of Lotus, I meane
that which at Rome is so called. Next to it, is the heart of Oke, namely, when it is rid of the
white pappie wood: the heart (I say) which comes neare to a black color, and yet the Cytillus or
Tetrifolia is blacker, and seemeth most to resemble the Ebene. Howbeit, you shall haue some
who affirme that the Terebinthos of Syria be blacker than it. There was one *Therides* a famous
Turner, who was wont to make drinking cups, mazers, and bowles of the Terebinth, which is a
sufficient prooffe, that the wood is fine and hard. This wood alone of all others, loucheth to be oil-
ed, and surely the better it is for the oile. But a marvellous prety device there is to set a passing
faire blacke color, and a shining glosse vpon it, with Walnuts and wild Peares, namely, boiling
thes together, and making thereof a mixture and composition to giue the said tincture. All
these trees abouement haue a sad and fast wood. Next to them in that respect is the Cornell
tree: and yet I cannot properly range it in the order of timber trees, so small and slender it is.
Neither is the wood thereof in manner good for nought else but for spokes in cartwheels, also
to make wedges to cleaue wood, and tough pins, that will hold as fast well neeres vpon spikes. I
In like sort, the Mast-helm, the Oliue both wild and tame, the Chestnut tree, the Hornbeam, and
the Poplar, be of an hard substance, and meet for this purpose. The wood hereof hath a curled
graine like the Maple, and surely would be as good timber as any, but for often lopping the
boughs, which gudgeth and deminisheth the strength. Moreover, many of them there bee, and
the Oke especially, so hard, that vntil it be soaked first in water, it is impossible to bore a
hole into them with an auger, or to pluck forth a nail if it be once set fast, water them as much
as you will. Contrariwise, the Cedar will not hold a nail. The wood of the Linden tree seemes
of all other to bee most soft, and hottest withal: for prooffe whereof, this reason men doe alledge,
because it sooneft turnes and dulls the axe edge. Of a hote nature also are the Mulberrie tree,
the Lawrell, and the Yvie, and in one word, all those that serue to strike fire with. This experi-
ment was first found out by spies, that goe between camp and camp, by shepheards also in the
field: for hauing not flint euermore readie at hand to smite and kinde fire withall, they make
shift for to rub and grate one wood against another, and by this attrition there fly out sparkles,
which lighting vpon some tinder, made either of drie rotten touchwood, or of bunts and wither-
ed leaues, very quickly catch fire, and burne not out. And for this intent, there is nothing bet-
ter than to strike the Yvie wood, with the Bay. In this case also the wilde Vine (I mean not La-
brusca) is much commended: and it climbeth and runneth vpon trees in manner of Yvie.

The trees that grow in watric grounds be coldest of all others: but such be toughest and
therefore best to make bucklers & targuets, the wood whereof, if it be cut, comes quickly to-
gether, and closes vp the gash againe, and in that regard, much adoe there is to pierce it thorough
with any weapon whatsoeuer. And of this sort are Fig trees, Willowes, Lindens, Birch, Elder,
Ash, and Poplar. Of all these, the Fig tree and the Willow be lightest, and therefore fittest for
that purpose. These trees last rehearsed, be good for caskets and foffers: wicker baskets also and
prettie paniers, which be made of winding twigs. Their wood besides is faire & white, straight
also and easie to be grauen. The plane wood is soft and gentle, but moist withall, and so is the
Alder. Elme likewise, Ash, Mulberry, and Cherry-tree wood, is pliable, but drier and more pon-
derous. The Elme, of all kinds of wood, will keep straight and stiffe best, and not warp at all: &
because it twines and casts not, it is passing good for hinges and hooks, for sawne bords for led-
ges in dores and gates, so as this regard be had of exchange, that the vpper end of the bord that
grew toward the head of the tree, be fitted to the nether hinge or hooke of the dore; and con-
trariwise the butt end, serue the higher. The Date tree and the Corke, haue a soft and tender
wood. The Apple tree, Pear tree, and Maple, haue as sad and masse, but brittle it is, like
as all wood that goeth with a crosse and frilled grain. And look what tree soeuer is naturally hard
and

A and tough, the wild and the male of the same kind, haue their wood more churlish than other-
wise it is in the rest. Semblably, those that beare no fruit, are of a faster and firmer wood than
the fruitful: vntil it be that that the males be bearers and the female barren, of which sort are
the Cypresse and Cornell trees. The wood of Cypresse, Cedar, Ebene, Lotus, Box, Yewgh, Ju-
niper, and the Oliue both sauage and gentle, is neuer worme-eaten, ne yet rotteth for age. As for
all other trees, long it is before the decay, to wit, the Larch, the Oke, the Corke tree, Chestnut
and Walnut tree. The Cedar, Cypresse, and Oliue wood, neuer doth chinke or cleaue of it self,
vntil it be by some accident.

It is commonly thought, that the Box, the Ebene, the Cypresse, and the Cedar wood, is euer-
lasting and will neuer be done. An euident prooffe thereof as touching all these sorts of timber,
by the judgment and choise of so many men, was to be seene in that famous temple of *Diana* in
B Ephesus: for al a fira to their helping hand and contributed toward that work, which in foure
hundred yeres and not before, they brought to an end & finished. The beames, rafters, and spars
that went to the making of the rouse, were by the generall voice of the whole world, of Cedar
timber. As touching the statue or image it selfe of the goddesse *Diana*, it is not certainly known
of what wood it was: all writers, save only *Mutianus*, report that it was of Ebene. As for him, a
man who had been thrice Consul of Rome, and one of the last who vpon their owne fight of
the said thing, wrote thereof, auoucheth that it was made of Vine wood; and that, howsoeuer
the temple was ruined and rebuilt againe no lesse than seven times, yet the foresaid image was
neuer altered nor changed. Who saith moreover, that *Cannius* choise that wood for the best (for
so he named the workman that cut and carued it.) And I much maruel therat, considering that
C by his saying this image was of greater antiquity than that of olady *Mercuria*, much more than of
prince *Bachus*. He adds moreover and saith, that this statue was embawmed within, by reason
of the precious oile of Spiknard, which was distilled into it at many holes: by means of which
medicaine liquor, the wood was nourished, and the joints held close and fast together where-
at I cannot chule but maruell againe very much, that considering the statue was so small, it should
haue any peece or joint at all. Now as touching the leaues of the dores belonging to this tem-
ple, they were by his report, of Cypresse wood: and continued still fresh and new to the eye, not-
withstanding it is foure hundred yeres well neare since they were made. Where, by the way
this is to be noted, that these dores stood foure yeres glewed in the claue. And verily, this wood
D was chosen for that purpose, because among other properties, the Cypresse alone hath the gift,
to looke alwaies shining and polished, and neuer loseth the glosse and beaury. And for to proff
this, we need not to goe farre: Looke but vpon the emage of *Verginius*, in the Capitol, made of
Cypresse wood, doth it not endure still faire and trim? and yet was it dedicated and consecra-
ted in that temple, in the year after the foundation of Rome, 551.

A famous and memorable temple there is of *Apollo* at Vica, where the beames and maine
peeces of timber, made of Numidian Cedars, remaine as whole and entire as at the first day
when they were set vp, which was when the citie was first founded: by which computation, they
haue continued already 1188 yeres. Moreover, it is said, that at Saguntum a citie of Spaine,
there is a temple of *Diana* still standing, a little beneath the citie: and yet as king *Burchum* mine
Author saith, 200 yeres before the ruine and destruction of Troy, the same men that brought
E the image of the said *Diana* from the Island Zacynthus, founded the temple abovesaid. For the
antiquity and religion whereof, *Amiball* made some conscience to demolish it, and would not
once touch it: and therein are to be seene at this day the beames and rafters of Juniper, found and
good. But above all other, memorable is the temple of the said goddesse *Diana* in Aulis, which
was built many hundred yeres before the Trojan war: but what kind of timber was employed
about the Carpentrie thereof, is not well knowne. Howbeit, this we may boldly resolve vpon,
that the more odoriferous any wood is, the more durable also it is and euerslasting.

Next to these trees aboue rehearsed, the wood of the Mulberrie tree is most commended,
which in tra of time as it grows to be old, waxes also blacke. Moreover, some kinds of wood
as they be more lasting than other, so they continue better being employed in one kind of work,
than they do in another. The Elme timber will well abide the aire and the wind. The wild Oke
Robur loucheth to stand within the ground, and the common Oke is good in the water: let it be
F used aboue ground to take the aire and the weather, it will cast, warpe, and cleaue too bad. The
Larch wood agreeth passing wel with water works, and so doth the black Alder. As for the Oke
Robur,

Robur, it will corrupt and rot in the sea. The Beech will doe well in water, and the Walnut tree likewise: but to stand within the earth, they are principall good, and haue no fellow. And for the Iuniper, it will hold the owne, being laid vnder ground, but for building aboue in the open aire, it is excellent good. The Beech and the Cerus wood rot quickly. The final Oke called Efculus cannot abide the water. The Cherrie tree wood is firme and fast: the Elme and the Ash are tough: howbeit, they will soone settle downward and sag, being charged with any weight, but bend they will before they break: and in case before they were fallen, they stood a while in the wood, after they had a kerse round about, for their superfluous moisture to run out vntill they were well dried, they would be the better and sure in building. It is commonly said, that the Larch wood if it be put into ships at sea, is subject to wormes: like as al other kinds of wood, vnllesse it be the wild and tame Oliue. For to conclude, some timber is more readie to corrupt and be marred in the sea, and others againe vpon the land.

CHAP. XLI.

¶ Of wormes that breed in wood.

OF vermine that eat into wood, there be 4 kinds. The first are called in Latine Tereidines: a very great head they haue for the proportion of the body, and with their teeth they gnaw. These are found only in ships at sea, and indeed properly none other be Tereidines. A second sort there be, and those are land wormes or mothes, named Tineæ. But a third kind resembling gnats, the Greeks tearme by the name of Thripes. In the fourth place be the little wormes: whereof some are bred of the putrified humor and corruption in the very timber: like as others againe engender in trees, of a worme called Cerales: for hauing gnawed and eaten so much, that he hath rounge enough to turne him about within the hole which he first made, hee engendred this other worm. Now, some wood there is so bitter, that none of these wormin will breed in it, as the Cypress: others likewise so hard, that they cannot eat into it, as the Box. It is a general opinion, that if the Firre be barkd about the budding times, at such an age of the Moon as hath been before said, it will neuer putrifie in the water. Reported it is by those that accompanied Alexander the great in his voyage into the East, that in the Isle Tylos lying within the red sea, there be certain trees that serue for timber to build ships, the which were known to continue two hundred yeares: and being drowned in the sea, were found with the wood nothing at all perished. They affirmed moreover, that in the same Island there grew little plants or shrubs, no thicker than would wel serue for walking stauies to cary in a mans hand, the wood whereof was masse and ponderous, striped also and spotted in manner of a Tygres skin: but so brittle withall, that if it chanced to fall vpon a thing harder than it selfe, it would breake into fitters like glasse.

CHAP. XLII.

¶ Of timber good for Architecture and Carpentrie: what wood will serue for this or that worke: and which is the strongest and surest timber for rooves of building.

WE haue here in Italic, wood and timber that will cleaue of it selfe. For which cause our Maister Carpenters giue order to befeame them with beafts dung, and so to lie a drying, that the wind and piercing aire should not hurt them. The joists and planks made of Firre and Larch, are very strong to beare a great weight, although they be laid in length ouerthwart. Contrariwise, the Rafter made of the wild Oke Robur, and Oliue wood, will bend, & yeeld vnder their load: whereas the other named before, do resist mainly & withstand, neither will they easily break, vnllesse they haue much wrong: nay sooner do they rot, than faile otherwise in strength. The Date-tree wood also is * tough and strong, for it yeeldeth not, but curbeth the contrarie way. The Poplar setteth and bendeth downward: whereas the Date-tree contrariwise liues vpward archwise. The Pine and the Cypres are not subject either to rottenesse or worne-eating. The Walnut tree wood foone bendeth, and is saddle-back as it lieth, (for thereof also they often vse to make beames and rafters) but before that it breaketh, it will giue warning by a cracke, which saued many a mans life in the Island Antandros, at what

A time as being within the common baines, they were skared with the crack that the floore gaue, and ran forth speedily before all fell. Pines, Pitch trees, and Allar, are very good for to make pumps and conduit-pipes to conuey water: and for this purpose their wood is boared hollow: lying buried vnder the ground, they will continue many a yeare found and good: let them be vncovered without any mould and lie aboue ground, they will quickly decay. But if water also stand about the wood, a wonder it is to see how they will harden therewith and endure. Firre or Deale wood, is of all other surest and strongest for rooues about head: the same also is passing good for dore leaues, for bolts and barres also in all feelings and wainfoot or whatsoeuer it bee, whether Greekish, Campaine, or Sicilian, it is best, and maketh very faire worke. A man shall see the fine shavings thereof run alwaies round and winding, like the tendrills of a vine, as the

B Ioyner runneth ouer the painels and quarters with his planer. Moreover, the timber of it is commendable for coaches and chariots: and there is not a wood that makes a better and stronger joynt with glew, than it doth in so much, as the found plank will sooner cleaue in any other place, than in the joynt where it was glewed.

CHAP. XLIII.

¶ Of glewing timber: of rent, clouen, and saven painell.

Great cunning there is in making froen glew, and in the feat of joyning with it, as well in regard of feelings and wainfoot made of thin bound and painell, as of marquetry & other inlaid workes: and for this purpose, Ioyners doe chuse the millesse threadie grain that is most streight, which some call the Fertill vine, because ordinarily it breedeth threadies, and yee shall see it branching and curled, as if it shed teares and those trickling down. In euery kind of wood whatsoeuer, the crisped graine will not take glew and beare a joynt. Some wood it is impossible to glew and joyne, with peeces of their owne kind, much lesse of other wood: as the hard Oke Robur. And lightly ye shall not haue peeces of a diuers nature, knit and vnite well in hard Oke. And no more than if a man should go about to glew & join stone & wood together. The Seruise tree wood cannot in any wise fort in a joynt with the Cornel wood: no more can the Horn-beame and the Box: after them, the Tillet or Linden wood may hardly away with his societie. To speake generally, whatsoeuer wood is gentle and apt to bend, (such as we call plant) the same is good and easy to be wrought to any work that a man would haue: to which, you may put the Myrtle and wild Fig-tree. Durable and handsome withall, either to be cut, lquared, clouen or saven, are all those kinds of wood which be by nature moist. As for drie peeces of timber, they giue not way so fast to the saw, as Greene: and yet you must except the Oke and the Box wood, which although they be Greene, do stiffely withstand the saw-gate, choking and filling vp their teeth euen, by which meanes the slit is hindred, and the worke goeth not forward: which is the cause also that the sawers draw vp & let downe the saw twice, before the teeth send from them any dust into the pit, As for the Ash, it is most easie to be wrought, put it to what vse you will, any dust into the pit, As for the Ash, it is most easie to be wrought, put it to what vse you will, and makes the fairest worke: and namely for horsemens stauies, better it is than Hazell, lighter than the Cornel, and more gentle and pliable than the Seruise wood. The French white Ash, it will bend well for cart-thills and tellies. The Elme would be very like vine-wood, but that it is more ponderous and heauie. The Beech is easie to be wrought into any form, brittle though it be and tender: yet thereof are made fine trenchers, thin shindles, and such like, as will wind and bend euery way: and therefore it is the only wood commendable for to make prettie caskets, panners, and boxes. The mast-Holme also may be cut into fine thin foile or leaues like plates, and these also are of a daintie and pleasant colour: but singular good is the wood thereof for such things as fret and weare with rubbing, and namely, the axle trees in wheeles, and as the Holme is fit for this purpose in regard of the hard wood, so the Ash likewise, because it is so lyth & pliable in which two respects, the Elm is chosen before them both. Moreover, the wood of these trees before named, are notable to make many prettie rooles that serue artizans in their daily worke: and therefore it is commonly said, That the wood of the wild Oliue, Boxe, mast-Holme, Elme, and Ash, are excellent good for awgre-handles and wimble flockes. Of the same also are made mallets, but beetle heads of the bigger sort, of the Pine and Holme. A great reason why these kinds of wood are the more tough and harder, is when the trees haue their right season, and be cut down in their best time, rather than too soon and before they be come to maturity.

Thus it hath beene knowne that doore-hinges and hookes made of Oliue wood (which other-
wife is most hard) if they haue rested any long time, and not beene worne by shurting, and open-
ing too and fro, haue put forth fresh buds, as if they had growne still in the plant. As for the
dore-barrs and bolts, *Cato* would haue them made of Holly, Bay-tree, and Elme. The handles
and helmes of rusticall tooles, mattocke steeles, and spade trees, *Hyginus* willetth they should bee
either of Hornbeam, Holme, or Cerrus. For fine painell in fret-woke, for feeling also and o-
uerlaying other wood, these are the chiefe, the Citron, Terebinth, Maple of all sorts, Box, Date
tree, Huluer, Holme, Elder root, and the Poplar. The Alder tree likewise (as hath beene said)
affordeth certain swelling bunches & hard knots, which may be cut and clouen into most daintie
flakes and precious leaues, as faire and pleasant to the eie for their damask branch, as either
Citron or Maple: setting which three aside, there be no knurs and nodosities in any tree worth
ought and of account.

Moreover, yee shall haue trees ordinarily in the mids toward the heart, carie a more crisped
and curled wood; and the neerer it is to the but or root end, the finer is the graine, more bran-
ching also, and the streaks winding in and out. Loe, from whence first came the superfluous ex-
pence to couer and feeke one wood with another! See how those trees which for their very wood
were of no price, are become more costly and dearer, when they serue as a bark to clau other!
that one tree forsooth by this means, should be so sold many & sundry times at a feuerall price.
Thus haue been deuiled (I would not els) thin leaues of wood, like gold or siluer-foile. And yet
that is not all: for there is come vp of late a deuise, to paint and die in sundrie colors the hornes
of beastes, to cut and saw their teeth into thin plates: and whereas at first there was fret-works on-
ly inlaid and fet out with Iuorie here and there, soone after it came to passe, that the wood was
couered all ouer therewith. Neither hath the ror and wastfull prodigality of the world staid
there, but proceeded farther, euen to search into the deepe sea for that, which might serue in
stead of wood and timber. Thus the tortoise shel hath been cut into flakes and leaues, for want
forsooth of wood vpon drie land. And now of late daies, certaine monstrous spirits, during the
Empire of *Nero*, haue found out a deuise to disfigure the Tortoise shel also with paintings, that
it might be sold the dearer when it lookt like wood. Thus means are wrought, that the price of
beds should be raised and set vp by this meanes: thus they would haue the Terebinth wood to
bee excessive deare and about the worst: thus must the Citron wood be enhaunted to an higher
rate; and thus the Maple is counterteited, Tortoise shells are foisted in the place and bought
for it. To conclude, of late daies the curiositie of men was such, that they could not content
themselves with rich and costly wood; and now for to beautify and fet out their wood, Tortoise
shells must needs be bought, there is no remedie.

CHAP. XLIIII.

¶ The age of trees: what kind of trees they be that are of least continuance, Semblably,
of Mistle, and the Priests called Druides.

I f a man would consider the hidden corners of the world, and the inaccessible desarts that
be in it, he might by infallible arguments conclude and resolve, that there be some trees that
haue continued time out of mind, and liued infinitely. But to speak of their age only that are
known (euen by the testimony of ancient records, and those faithfully deliuered vnto vs) there
are to be seen standing or growing at this day about Linternum (a towne in Campaine) certain
Oliue trees, that *Scipio Africanus* (the first of that name) planted long since with his owne hand.
In the same place also there is a Myrtle tree of a rare and admirable greatnesse; and vnder it, a
cave or hole in the ground, wherein (by report) there lieth a dragon that keeps the ghost and
soule of the said *Scipio*. And at Rome, in the court-yard belonging to the chappell of goddesse
Diana Lucina, there is yet to be seen a Lote tree standing before the said chappell, built in the
year of the Anarchie, what time as Rome stood desolate of all magnifirares, and that was 369
yeares after the foundation of the citie: but how much more ancient this tree is than the said
temple, God knoweth: for elder it is without all question, considering that of the groue or tuft
of trees there growing, which the Latines call *Lucus*, the said goddesse *Diana* tooke her name
* *Lucina*. Now it is 450 yeares or thereabout, since that time, and so old it is doublelesse. Ano-
ther Lote tree there is and elder than that, but the age thereof is likewise vncertain: known it is
by

* *Græcia Latine
dicitur Lucina
sibi nomine
Lucus*. Ouid.

A by the name *Capillata*, [i. haire:] so called, because the haire of the vestall Nuns heads is vsu-
ally thither brought, & there consecrated: and yet is there a third *Lotus* at Rome in the court-
yard and cloister about the temple of *Vulcan*, which *Romulus* built for a perpetual monument
and memoriall of a victorie, and defraied the charges out of the tenths of the pillage and spoile
that he wone from his enimies; and this tree is at least full as old as the citie of Rome, if it bee
true that *Maffurius* writeth. The roots thereof, passing along the street where the Burgoyes vse
to keep their residence, doe reach as farre as the stately market-place or Hall of *Cæsar*. There
grew by it a Cypresse tree also of the same age, the which by an ouersight and careless neglect,
fell downe no longer since then the last yeare of *Nero* the Emperour. But why should wee long
hereupon? there is an Holme growing in the Vatican, elder than Rome it selfe, with a plate of
brasse vpon it engrauen in Tulcan letters, containing an inscription or title: whereby it appea-
reth, that euen in those daies the said tree for antiquity, was worthy of peoples deuotion. More-
ouer, it will knowne, that the Tyburtines are more ancient than the Romans, and their citie
Tybur founded many a yeare before Rome; and yet certain it is, that there be yet three Holmes
there remaining alie, elder than Tyburinus himselfe, their first founder: vpon which trees (as the
voice goeth) he obserued the flight of birds, and thereby tooke his auspices and warrant from
the gods to build the said citie. And (by report) the sonne he was of *Amphiarauus*, who died at
Thebes an hundred yeares before the Troiane warre. Writers there be who affirme, that both
that Plane tree which growth before the temple of *Apollo* at Delphos, was set by king *Agamemnon*
owne hand: as also another in the second groue of Caphys in Arcadie. Furthermore,
C at this day, there be trees neere vnto the freight of Callipolis, sometime called *Hellefontus*,
ouer-against the citie of the Lians, where old Troy stood, growing close vnto the tombe or sepul-
chre of *Protesilaus*: which euery fourteen yeeres so soon as they are shorn vp so fall only as they
may seeme to discouer and see the citie Ilium, immediately begin to wither and fade, and after-
wards spring againe and grow anew vnto that age and height afore said. Hard by the citie of I-
lium, there be certain Okes also (as folke say) neer vnto the tomb of *Ilius*, which were then plan-
ted or set of acornes, when Troy began to be called Ilium. It is reported moreover, that the O-
liue tree remains yet alie at Argos, vnto which *Argus* tied lady *Io*, after she was transformed
or turned into an Heifer. About *Heraclæa* in Pontus, there be certain altars erected to the ho-
nor of *Iupiter* surnamed *Stratius*, ouer which there stand two Okes, both set by the hands of *Her-
cules*. In the very same tract there is an haue, ennobled and renowned by the name of *Amysus*
the K. of the Bebycians there slaine. His tombe, from the very day of his sepulture, hath been
ouershadowed with a Bay tree (planted there and then for that purpose) which the people of
that country doe call The raging or mad Lawrell; for pluck but a branch or twig thereof be it
neuer so small, and carie it into a ship, all the mariners and passengers within, will fall a braw-
ling, and neuer agree vntill it be cast out and throwne away out of the vessell, that was brought
thither from the tree afore said. Of a certain region we haue before written, called *Aluocrene*,
lying in the way between *Apamia* and *Phrygia*; & there the peasants of that country can shew
you that very Plane tree, on which *Marsus* the musitian hung himselfe in a melancholly mood
for that he was outmatched in his owne cunning and professed skill, by *Apollo*: and furly like
it is, that euen then he made choise of that tree for the bignes: ouer and besides, in the Ille *Delos*,
there is a Date tree to be seen, which hath remained there euer since that the said god *Apollo*
was borne and reared there. The wild Oliue tree at *Olympia* (wherof *Hercules* ware the first co-
ronet or gurland) is kept and tended still with great deuotion. The very same Oliue tree also
(by folks saying) continueth this day at Athens, which sprung vp at the very time that *Minerva*
and *Neptune* strove together about giuing the name to the citie Athens. And thus much of
long-liued trees.

Contrariwise, Pomgranat trees, Fig trees, and Apple trees, liue a very short time: & of these,
the haile kind or Ienitings, continue nothing so large as those that bear and ripen later: neither
yet those that carie sweet fruit, last so well as they that bring forth sower. The Pomgranat tree
also, with the more pleasant fruit, is shorter liued than the other. The like is to be said of Vines,
and namely, such as bear greater burden of grapes & yeeld most wine. Howbeit *Græcians* saith,
That there haue been vine trees known to liue three score yeeres. It seems also, that trees which
come vp in waterish and moi st places, are not of any long continuance, but soone die. In deed
Bay trees, Apple trees, and Pomgranat trees, do age & looke old quickly; howbeit they spring
fresh,

fresh again from the root. Well then, the Oliue trees hold out life and liue very long; for after the common opinion and agreement of all writers, they continue ordinarily 200 years. There is a little hill named Carne within the territory of Tusculum, not far from Rome city side, clad and beautified with a goodly groue and tuft of Beech trees, soeuen and round in the head, as if they were curiously kept, cut, and shorne artificially with garden sheares: which groue was consecrated in old time to *Diana*, by the common consent of all Latium, which did their deuotions there. In it there was one especial faire tree about the rest, which *Pasipenna Crispus*, a man in our daies of great authoritie (as hauing been twice Consul in his time, & reputed an excellent O-
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erator, who also afterward mounted to higher place of reputation by marrying *Agrippina* the Emperesse, by which match he became father in law to *Nero* the Emperor) cast a fancie and extraordinary liking vnto: in so much as he was wont not only to take his repose and lie vnder it, to sprinkle and cast wine plentifully vpon it, but also to clip, embrace, and kisse it otherwise. Necre adjoining as a neighbour to the said groue, there is an Holme, which of it selfe alone is much renowned: it beareth in compasse about the butt therof 35 foot, and sends out ten monstrous big armes from the bodie, which may grow well enough for as many trees, and those euery one so great as it is wonderfull. Surely this one tree alone (a man would say) resembled a whole wood.
 Moreouer, there is nothing more certaine than this, that Iuice killeth trees. The like is to be said (in some sort) of the Mistletoe, although it is generally thought, that the harme thereby is not so soon felt. And this you must thinke, that this Mistletoe is not to be taken for the fruit of a tree, and therefore as great a wonder it is in nature, as any other: for some things there be, that not willing to grow out of the earth, engender in trees, & hauing no proper place of their own habitation to seat themselves in, sojourn as it were & make their abode with others, and of this nature is the Mistletoe. Also, in Syria there is a certain hearbe named * *Cadyats*; which windeth about, not trees onely, but also very bushes and thornes: likewise, all about the pleasant vale Tempe in Thessalie, you shall haue a kind of Ferne called *Polypodie*, to doe the same foole, the Pulse named *Dolychos*, which is Fafels or Kidney beanes, and the wild running-laced Thyme, *Serpillum*. Semblably, that which the Greeks call *Phaunos*: the very same, that after a man hath cut and pruned the wild Oliue, engendreth thereupon. The like is to be said of *Hippopheston* which groweth vpon the Fullers thorne or thistle: it beareth certaine little heads and hollow knobs with nothing in them, small leaues, and a white root; the iuice whereof is singular good to euacuate and purge the bodie, for the diuersion of ill humors, in the falling sicknesse. But to returne againe to Mistletoe, there be three kinds thereof. For that which groweth on the Firre and Larch tree, is called *Stelis* in Euboea, and *Hyphear* in Arcadia. And as for that which properly is Mistletoe indeed, most men are of opinion, that it groweth fast to the common Oke, the wild Robur, the Holme, wild Plumtree, and the Terebinth, and not lightly on any other trees. Howbeit, in greatest plenty it is seen vpon the Oke, and that is named *Dryos Hyphear*. A difference there is in the *Hyphear* and Mistletoe, on what tree sooner they are found (except the Holm and common Oke) in regard of the fauor, which is strong and stinking in the one more than the other. The leafe of them both hath no pleasant smell, and in the Mistletoe it is bitter, clammy, and viscidus besides. Of the two, *Hyphear* yet is the better to feed sheep and such cattell fat: only at the first it purgeth yll humors, and makes them to scoure apace, but afterwards it fatteth them; I mean such as were able to bear the said purgation. But in case any of them were deeply tacked and infected with the rot, or other inward consuming disease, they can neuer endure the taking of the said *Hyphear*, but they die vpon it. The only fit time for this kind of curing them, by the way of purging, is in Summer, and that for 40 daies space together. There is moreover, by mens saying, another difference in Mistletoe: for that which groweth vpon trees, shedding their leaues in winter, loseth also his owne leaues; but contrariwise, it continueth alwaies green vpon such trees as hold their leaues all the yeare long. Moreover, set or sow this Mistletoe what way soeuer you will, it will neuer take and grow: it comes onely by the mewting of birds, especially of the Stocke dove or Quois, and the Blackbird, which feed thereupon, and let it passe thorough their body. And this is the nature of it: vnlesse it be mortified, altered and digested in the stomacke and belly of birds, it will neuer grow. It exceedeth not at any time a cubit in height, notwithstanding it be alwaies greene and full of branches. The male beareth a certaine graine or berry: the female is barren and fruitlesse. But sometimes neither the one nor the other beareth at all.
 Neer

* Sometime
 this for *Cal-
 thea*, or *Cuscuta*
 & *Doder*.

A Now as touching Birdlime, it is made of the berries of Mistletoe, gathered in haruest time before they are ripe; for if they should tarry till to take shoures of rain, wel might they thrise and increase in bignesse, but their strength and vertue would be gon clean, for ever making any such glew or birdlime aforesaid. Being so gathered, as is before said, they must be laid abroad a drying, and when they be once dry, they are braied or stamped, and so put in water to steepe, and let to putrifie for the space of 12 daies or thereabout. This one thing yet in the whole world is the better for putrefaction, and serueth to good purpose. When this is done, the said berries thus putrified and corrupt, are beaten or punned once again with mallets, in running water; by which means when they are husked and turned out of their skins, the fleshy substance within, becometh glutinous, and will stick too, in manner of glew. This is the way to make birdlime
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for to catch poore birds by their wings, entangled therewith; which toulers vie to temper and incorporate with the oile of Walnuts, when they list to set limctwigs to take foule.
 And forasmuch as we are entred into a discourse as touching Mistletoe, I cannot ouerpasse one strange thing thereof vsed in France: The *D. uida* (for so they call their *Diuijors*, Wife-men, & the state of their Clergy) esteeme nothing more sacred in the world than Mistletoe, and the tree whereupon it breeds, so it be on Oke. Now this you must take by the way, The priests or Clergy men chuse of purpose such groues for their diuine seruice, as stood only vpon Okes; nay, they solemnise no sacrifice, nor perform any sacred ceremonies without branches & leaues thereof, so as they may seem well enough to be named thereupon *Dryidæ* in Greek, which signifieth as much as the Oke priests. Certes, to say a truth, whatsoeuer they find growing vpon that tree over and besides the own fruit, be it Mistletoe or any thing else, they esteeme it as a gift sent from heauen, and a sure signe by which that very god whom they serue giueth them to vnderstand, that he hath chosen that peculiar tree. And no marvel, for in very deed Mistletoe is passing season and hard to be found vpon the oke; but when they meet with it, they gather it very devoutly and with many ceremonies: for first and foremost, they obserue principally, that the Moon be iust six daies old (for vpon that day they begin their months and new yeares, yea and their feuerall ages, which haue their revolutions euery thirty yeares) because she is thought then to be of great power and force sufficient, and is not yet come to her halfe light and the end of her first quarter. They call it in their language *All-Heale*, (for they haue an opinion of it, that it cureth all maladies whatsoeuer) and when they are about to gather it, after they haue well & duly prepared their sacrifices and festiual cheare vnder the said tree, they bring thither two yong bullocks milk white, such as neuer drew in yoke at plough or wain, and whose heads were then and not before bound by the horn: which done, the priest arised in a surplesse or white vesture, climbeth vp into the tree, and with a golden hooke or bill cutteth it off, and they beneath receiue it in a white foldiers cassock or coat of armes: then fall they to kill the beasts aforesaid for sacrifice, mumbling many orations & praying devoutly: that it would please God to blesse this gift of his to the good and benefit of all those to whom he had vouchsafed to giue it. Now this persuation they haue of Mistletoe thus gathered, That what living creatures soeuer (otherwise barren) do drink of it, will presently become fruitful thereupon: also, that it is a foueraign countrepoison for singular remedie against all vermine. So vaine and superstitious are many nations in the world, and oftentimes in such frivolous and foolish things as these.



THE SEVENTEENTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS

SECVNDVS.

CHAP. I.

¶ The wonderfull prices of some Trees.



AS touching the nature of all those trees which of their owne accord doe grow, as well vpon the main land as the sea coast, we haue already treated sufficiently. It remaineth now to discourse of those which (to speake more properly) are made rather and forced by art and wit of man, than otherwise come by nature and of themselves. But before I enter into this treatise, I cannot chuse but marvel how it is come to passe, That those trees which for necessity & need we haueing taken from the wilde and brute beasts, and possessed in common with them (considering that men maintaine fight and scamble with them for the fruits that fall, yea and otherwiles with the fowles of the aire, about those which hang vpon the tree) should grow to so excessive a price, as to be esteemed among the principall delights of this world; And that this is so, appeareth by that most notable example (in mine opinion) of *L. Crassus* and *Cn. Domitius Aenobarbus*. This *L. Crassus* (a right renowned Orator of Rome as any one of his time) had a stately and sumptuous dwelling vpon mount Palatine: howbeit that house of *Q. Catulus* (who defeated in battell the Cimbrians, together with *C. Marius*) went beyond it a faire deale in magnificence, and stood likewise within the pourprife of the same mount. But the goodliest and fairest Pallace knowne in that age, was that of *C. Aquilius* a Gentleman or Knight of Rome, situate vpon the hill of Ofiers, called Viminalis: in regard whereof there went a greater name of him, than for all the skill he had in the Ciuill Law, which was his profession. Yet of all those three, *Crassus* onely was challenged and reproched for that foresaid house of his. And in this manner is the storie deliuered: *Crassus* and *Domitius* (great personages both, and descended from most noble Houses in Rome) after they had bene Consuls, happened also to be chosen Censors together: and this fell out to be in the six hundred sixty two year after the foundation of the city: but during this Magistracie of theirs there passed many a foule day and bitter fit betwene them; so dissanent were their natures, and their conditions so farre vnlike. Now it fortuned vpon a time, that *Cn. Domitius* (as hee was hot and hasty man by nature, and carried an inward hatred besides in his heart, which soone is kindled and set on fire, yea and most insatiable, vpon emulation and enuy betwene Concurrents, such as they two were) reprooued *Crassus* verie sharply for his excessiue in expence, and namely, That any Censor of Rome should dwell in so stately and sumptuous a Pallace as he did; and euer and anon made offer to buy the House, and pay him downe right for it an * hundred Millions of Sesterces: whereat *Crassus* (being a man quicke of spirit, and of a prompt and present wit, finely conceited withall, and not to seeke for a ready answer) tooke him at his word, and accepted of the offer; refusing only six trees that grew about his house. Tush (quoth *Domitius*, replying againe) take those Trees away, and take all, if they be gone, I will none of the house though I might haue it for a single denier. Then *Crassus* hauing gotten the vantage and start of him, rejoyced and came vpon him thus: Tell me now I pray you good *Domitius*, whether of vs twaine giueth a scandalous example to the world? Whether am I my selfe (I say) offensive, and deserue to be taxed and noted by mine own Censorship, who can be contented to liue quietly and louingly among my neighbours in mine owne house, and that house which came to me by way of inheritance from my father;

A father; or you rather, that for six trees bid 100 millions of Sesterces? Now, if a man be desirous to know, what these trees might be? truly they were no other but six *Lote* trees, very faire and beautifull indeed, but therewas nothing in them commendable, saue only their spreading and casting a goodly shade. And verily, *Cecina Lareus*, a Nobleman and principal citize of Rome, vied many a time and often (I remember well) to shew me when I was a yong man, those trees about his house. And since our speech hath bin of such trees as liue very long, these I wrote wel, continued for the space of 180 yeres after *Crassus* death, to the great fire that *Nero* caused to be made for to burne Rome; fresh and green they were with good keeping, and looked yong still, like to haue liued many a faire day more, had not that prince hastened the vntimely death euen of trees also (as well as of citizens.) Now lest any man should think, that all the sumptuositie of *Crassus* consisted only in those trees, and that the furniture otherwise of his house was but mean and simple, and could minister vnto *Domitius* no matter of such contesting and reproofe, disposed as he was to quarrel and find fault: know he thus much, That the said *Crassus* had before that time set vp in the open hall of that house, foure goodly pillars of Hymettian marble; which in the yere of his Edilship were brought abroad to rich and beautifie the Theatre, the Stage and Shew-place of the solemne plaies by him set out: for as yet there had not bin in publicke place at Rome any marble pillars seeme how lately is come vpon this excessive expence in rich & glorious building, so common in these daies. See (I say) how in those times, faire trees beautified pallaces more than any thing els; in so much, as *Domitius* for the want of six trees only, would not stand to the price that himselfe first made, no not to buy his very enemy out of house and home with it: but no marvel if trees were accounted of so highly, seeing that our ancestors in old time thought not seem to take otherwhiles their syngames from them. Thus that braue and valiant foilder came to be named *Frontinus*, who (maye the beare of *Annibal*) swum ouer the riuier Vulturinus, with a chaplet of green leaues (answerable to his name) set vpon his head, and performed many feats of arms and worthie exploits against him. Thus they of the noble *Licinian* family had for their addition *Stolens* (i. the vnprofitable water-shoots that putt forth from the root or tree it selfe, and neuer proue or come to any good.) And why so? For that one of the said house deuised the means to clesne trees & vines of such superfluous twigs (the practise & feat of cutting which a way, is called Pampinatio) and therupon was one *Licinius* first surnamed *Stolus*. Moreouer, our predecessors in ancient time made good statutes and ordinances for the maintenance of trees: and expressly provided it was by the laws of the 12 Tables at Rome, in these words, *That whosoever made wilfull waste, and cut downe any trees growing in another mans ground, should be peined in the court for a trespass done; & forfeit for every such tree, 25 pound of brasse money.* But what should we thinke of this? Did these law-makers throw ye, suppose or imagine that other wilde trees would euer haue growne to that high reckoning about named, and which now they are come vnto, who valued fruitfull trees at no greater price, and set the penalty for the trespass, so low? But neuer marrell we any more hereat, considering to what a proportion Apple-trees, and such like are risen vnto. For there be many of them here about the city of Rome. In the villages neere adioining, which are set for a yearly rent of 2000 Sesterces; and one of them yeeldeth more profit and reuenue by the yere to the owner, than a pretty ferm in times past of good domaine, to the land-lord. Hereupon came the inuention of grafting trees: for this purpose haue we such bastard fruits intermingled one with another, of sundry kindes, as if Apples and other fruits were not for poore men to eat, but grew only for the rich. Hence forward now therefore will we shew the right, perfect, and absolute manner how to order and cherish them, that it may appeare by what means especially, such annuall commodity can be made of them, as is before said. For the better performance of which discourse, I meane to leaue the common and ordinary way; neither will I handle the vsuall and vulgar manner of that point in husbandry, wherein every man is perfect, and whereof no man maketh question: but deliuer such matters onely, as be vncertaine and doubtfull, whereby oftentimes folke are deceived and beguiled. For to break my head or buse my brains in needlesse trifles, and therein to affect a kinde of curiositie, was neuer my manner yet, nor is it any part of my meaning and intention now. But before I doe enter into particulars, my purpose is to treat in generallitie of this matter, and touch briefly the consideration of heauen and earth both, so farre forth as may concerne in common all kindes of trees whatsoeuer.

CHAP.

CHAP. II.

¶ Of the nature of the Skie respectiue vnto trees: and what quarter thereof they should regard.

Trees generally do like best that stand to the Northeast wind: for it nourisheth them well, causeth them to spread thick and grow euery way in length and breadth, and withall maketh the timber more fast and strong. But in this rule most men doe erre, and be much deceiued; for in vnderpropping vines, the forks would not be set opposite against that wind to hinder the blast thereof: a point that is to be obserued in regard of the North wind only. Moreover we find by experience, that if trees haue a kindly winter and cold season in their due time, their wood will be more firme, and so likewise will they bud and shoot out best: otherwise, if the warm Southerne winds blow vpon them much, ye shall haue the trees proue soft and feeble, and their blossoms come to nothing, blooming as they do before time: for if it chance that presently after their floures be fully out, and ready to shed, there fall any floure of raine, the fruit is quite gone for that yeare. And as for Almond trees and Pearre trees, if it be but close and cloudy weather only, without any raine, or the wind stand South when they floure, sure they be to lose their fruit. Certes, a glut of rain in May, at what time as the Brood-hen star called Virgilie doth arise, is exceeding hurtfull to Vines and Oliue trees: for then is the very season of their knitting or conception. Then be the foure decreetorie or criticall daies, that giue the doome of Oliue trees, either to good or bad: this is the Southerly point of filthy, foule, and glowmie weather, whereof wee haue spoken before. Moreover, all manner of graine feeleth the inconuenience of Southern wind at the time of their ripening. Well may come make hast and ripen sooner, but it shall neuer haue the kind maturity and perfection as it ought. As for the cold pinching black frosts and Northern winds, which blow out of season, come they early or come they late, they be hurtfull all. But if the wind stand Northeast in winter, there is nothing so good generally for all fruits of the earth. And verily, a good shower now & then during that time, wil do no harm, and that men wish for rain then, the reason is euident: for why? trees with bearing of fruit, are drawne dry and haue lost their naturall moisture, with shedding their leaves they be poore and feeble, so that it is kind for them to be hungry then, and to haue a greedy appetite to new food, which is raine. Now if the winter be open and warm withal, that so soone as the trees haue don bearing, they rest not between, but conceiue again presently vpon it (that is to say, bud & spurt anew, yea, and fall afresh to blossome, whereby they haue another euacuation that way also, to spend their sap and radicall moisture) we find by experience, that there is nothing in the world so bad for them. Nay, if many such yeres come together, immediately one after another, the very trees themselves will die; for who can looke for better, when they are thus pined and famished? He then whose euer he was that said, Husbandmen were to wish for fauie winters: surely he was no friend thence to trees, nor neuer praised for them: neither are wet Mid-summer good for Vines. But in truth, That winter dust should cause plentiful harvest, was a word spoken in a braverie, and proceeding from a pregnant wit and jolly spirit: for otherwise, who knoweth not, that euery man (wishing well to trees and corn indifferently) praieth, that snow might lie long vpon the ground? The reason is, for that not only it keepeth in & encloueth the vitall breath & foule (if I may so say) of the earth, ready to exhale out and vanish away, yea, and driueth it back again into the blade and root of corn, redoubling thereby the force and vigor thereof: but also because it both yeeldeth moisture and liqueur thereunto gently by little and little, and the same withall fine, pure, and passing light: considering, that snow is nothing els but the some or froth of rain-water from heauen. This humor therefore, not falling forcibly all at once to drown the root, ne yet washing away the earth from it (but distilling drop-meale a little at once, in that proportion and measure as thirst requireth and calleth for it) nourisheth all things, as from a teat or pap; nourisheth (I say) and neither drencheth nor ouerfloweth them. The earth also for her part, by this means well foked, swelleth and houcheth as it were with a leauen, and lieth thereby more light and mellow: thus being full of iuice and moisture it selfe, & not barren, but well replenish with seeds sown, and plants suckled, thus continually in her womb; when the open time of the spring is once come to discharge her, she sheweth her selfe fresh and gay, and willingly entertaineth the warme weather of that season.

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A By this meanes especially, we see how come liketh well vpon the ground, and thriue in apace euery where, vnlesse it be in climates where the aire is alwaies hot, as in Egypt. For continuance and ordinarie custome alone effecteth the same there, which the season of the time, & moderate temperature of the aire elsiwhere. And in one word, be the place whatsoeuer, passing good it is to keep away the thing that is hurtfull. For in the most parts of the world it happeneth, That when either corn is winter-proud, or other plants put forth and bud too early, by reason of the mild and warme aire; if there follow any cold weather vpon it, all is nipped, blasted, and burnt away. Which is the cause, that late winters do harme vnto the wild trees all in the forest. The more paine and sorrow likewise such trees abide, by reason of their owne thicke branches shading one another, and not easily admitting the warme Sun; and destitute they are besides of mans helping hand to cure them: for growing as they do in wild and desert forreits, impossible it is to lap and wrap them about with wreaths and thum-ropes of straw, and to cherish and defend them when they beyong tender. Wel then, to conclude this matter, Winter raine principally is seasonable and good for all plants; and next to it the dewes and showers that fall immediately before their sprouting time: a third sort also there be of showers that come when fruits hang on the tree, and are in their growth, yet not too soon, namely, before they be strong and able to abide some hardnesse.

As touching trees which be late-ward and keep their fruit long ere they ripen, such also as require store of nourishment and more food still, as namely, the Vine, the Oliue, & Pomegranat trees; it is good for them to be watered with raine in the later end of the yeare. And to say a truth, euery kind of tree requireth a seuerall rain by it selfe, in due season, for that some ripen their fruit at one time, and some at another: so as a man shall see ordinarily the selfe same flowers, to hurt one sort, and to help another; yea, and that diuers effect is to be seen in trees & fruits of the same kind, as for example, in Pyrries: for the late-ward of them call for raine at one time, and the hasty or forward at another, and yet indifferently all doe require alike the seasonable showers of winter, as also those before budding time. In which regard, the winds Northeast are better than the Southern, and such winters be most kindly. Semblably, by the same reason the Mediterranean or mid-land parts of any country are for this purpose preferred before the maritime or sea-coasts (as being for most part colder) the high & hilly regions before the plaines and vallies; and last of all, the night rains are held to be more profitable than those that fall by day time: for lands new sowne, and any yong plants, inioy more benefit by such showers in the night, for that the Sun commeth not so presently vpon them againe to dry and drinke vp all the moisture.

Hereunto ought to be annexed the consideration of Vine-yards, hort-yards, and Groues, as touching their situation, and namely, what part of the heauen they should regard. Virgil condemned altogether the planting of any trees, respectiue to the West: some haue chosen that quarter before the East. And this haue I obserued, that in most mens opinion, the South is best. But if I should speak what is mine own conceit indeed, there can no general and infallible rule be giuen concerning this point, for to hold alwaies. All our skill and art herein must be directed by the nature of the soile, the disposition of the climat and temperature of the aire. In Africke although it be nothing profitable for Vine-yards to be planted so as they look into the South, yet kind it is & whole some for the Vine-planter and husbandman, by reason that all Africke lieth vnder the Meridionall or South climat. And therefore he that shall set vines there, either into the West or North (howsoever Virgil alloweth not of the West) shall make an excellent medley between the temperature of that aire and the nature of soile together. As for the North no man seemeth to make any doubt or question, but that vines so planted, wil proue right well. And verily there are not found any vines to prosper better, or to beare more fruit in all Italy than that tract which lieth on this side, and vnder the Alpes: and there for the most part the Vineyards are so planted.

Moreover in this case the winds would be much considered, for in Languedoc or the prouince of Narbone, in Liguria and part of Tuscanie, they are reputed vnskillfull husbandmen that plant any vine-yards directly vpon the Northwest wind: but it is counted contrariwise a special point of prouidence and good husbandry, to cast it so as the said wind may flanke it on the side. For this is the wind, which in those quarters qualifies and tempereth the excessive heat of the summer: howbeit, many times, so violent and blustering he is, that hee beareth downe before him the

the rooffe of many a house, and carrieth it cleane away.

CHAP. III.

¶ The societie of the skie and aire with the earth, respectiue to trees.

SOME men do force the skie for to be obedient & conformable to the earth: as namely, when planting in dry grounds, they haue regard to the East and North: and contrariwise, when in moist places they respect the South. Moreover, it falleth out, that they be driuen otherwhiles to follow the nature of the very Vines, and thereby to be ruled: whereupon, in cold ground they plant such as be of the hasty kind, and soone ripen their grapes: to the end that they may come to their maturity and perfection, before cold weather comes. As for such Vines and trees bearing fruit, as cannot abide dews, those they set in to the East, that the Sun may soon dispatch and consume the said dew: but look what trees do loue dewes, and like well therewith, those they will be sure to plant against the West, or at leastwise toward the North, to the end they may inioy the full benefit thereof. All others againe (grounding in manner vpon natural reason only) haue giuen counsell to set as well Vines as Trees, into the Northeast. And Democritus verily is of this mind, that such fruits will be more pleasant and odoriferous.

CHAP. IIII.

¶ The quality of sundrie regions.

AS touching the proper seat of the Northeast wind, and of all other winds, we haue spoken already in the second booke: and our purpose is in the next following, to treat of the rising and falling of signes and notable stars, of other Astronomical points also concerning heauen. Now in the mean time for this present, it is sufficient, that in the former rule of the North wind, we seem to rest and resolute vpon the apparent and euident argument of the wholesome and healthfull climate of the heauen: forasmuch as we see, that euermore all such trees as stand into the South, soonest shed their leaves: the same reason also is to be giuen of those that grow vpon the sea coasts: and albeit in some places the winds blowing from thence, and the very aire of the sea be hurtfull, yet in most parts the same are good and profitable. Certaine plants and trees there are, which take pleasure to be remot from the sea, and ioi to haue the sight of it only a farr off: set them neerer to the vapors and exhalations ascending from thence, they will take harm and mislike therewith. The like is to be said of great riuers, lakes, and standing pooles. As for those which we haue spoken of, they either burn their fruit with such mists, or refresh and coole such as be hot with their shade, yea, & take joy and prosper in the frost and cold. And therefore to conclude this point, the surest way is, to beleue & trust vpon experience: thus much for this present, concerning the heauen: our next discourse will be of the Earth and Soile, the consideration whereof is no lesse difficult to be handled than the other.

First and foremost, all grounds are not alike good for trees and most kinds of corne. For neither the black mould (such as Campain standeth vpon much) as in all places best for Vines; or that which furneth and sendeth vp small and thin mists: neither is the red veine of earth any better, howeouer there be many that commend it. The white earth or chalkie marle, the clay also within the territory of Alba and Pompeij, for a vineyard, are generally preferred before all other countries (although they be exceeding fat, which in that case is otherwise vially reiect-ed.) On the other side, the white sand about * Ticiunum likewise, the blacke mould or grit, in many places, as also the red sandy ground, although it be well mingled & tempered with fat earth are all of them nothing to the purpose for increase & fruitfulness. And herein must men take heed, because oftentimes their judgement may faile when it goeth but by the ciefe: for we must not straight waies conclude, that the ground is rich & battell, when we see goodly faire & tall trees to grow, vntill it be for those trees only: for where that we meet with any, higher than the Fir: & is there a tree again that possibly can liue where it doth: No more is rank grasse & plentiful forage a true token alwaies of a good ground: for there is no better pasture nor grafting to be found than in Almaine; and yet dig but the Greene fount and the thinnest coat of turfe that may be, ye shall presently come to barren sand vnder it: ne yet is it by & by a moist ground, that hath vpon it deepe grasse and hearbes shooting vp in height: no more verily, than a fat

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A and rich soile is knowne by sticking to one fingers, as appeareth plainly in all sorts of clay. And verily, no earth doth fill vp the trenches euen againe, out of which it was cast, that thereby a man might find out whether the ground be sad, or hollow: and generally all sorts thereof will cause yron to rust that be put into it. Moreover, there is no weighing of earth in ballance, to know by that means which is lighter or heavier: for who could possibly euer set down the iust weight that earth should haue? Again, the ground that is cast vp into banks by the ouerflow of great riuers is not alwaies commendable: seeing that some plants there be that decay, if they be set in water. And say that some such bank were ground good enough, yet it continueth not so long, vntill it be for Willows and oifiers only. But if you would know a rich ground indeed, one of the best arguments and signes therof is this, when you see it to bring forth a thick & strong haulme or straw, such as usually groweth in that noble territorie Laborine within Campaine; which is of that bignesse, that the people of the country vie it for fwell in stead of wood. Now, this ground, so good as it is, where & whensoever we haue found it, is hard enough to be tilled, and requireth great labour and husbandry, putting the poore husbandman to more paines in manner with that goodnesse of it, than possibly he could haue with any defects and imperfections thereof. For euen the hot earth, called by the name of Carbunculus, which vseth to burn the corne sown thereupon, may be helped & remedied (as it is thought) by setting it with plants of poore & hungry vines. The rough grauell stone which naturally will crumble as grit, many writers there bee that allow and commend, for vines. As for Virgil, he findeth no fault with the ground that beareth fern and brake, for a Vineyard. The earth that is brackish, and standeth much vpon saltpetre, is thought to be more found for many plants than others, and in regard of vermine that vie to breed therein, much safer also. Neither do high banks and hills remaine vntilled and naked for want of good husbandry, if so be a man haue the cast of it, to care & breake them vp skillfully. As for the plaines, they are not all of them exposed to the Sun or subiect to the wind more than need requireth. And to speake of frosts, mists and fogs, there be Vines (as we haue said already) which are nourished and fed with them. And to conclude, hereby we may see, that in euery thing there is some one deep secret or other, wherein it behooueth each man to employ his spirit and set his mind for to search them thoroughly and find them out: what shall we say then to this, That oftentimes those things which haue bin approved by long experience and many obseruations, become otherwise, and change their vsuall manner? In Thessalie about Larissa, the whole region, by reason of a lake that was let out and drained drie, proved much colder: and the Oliues which there grew before, left bearing and died all, vpon it. In like sort, neere vnto Enos, the Vines were all scorched and burnt, by occasion, that the course of the riuier Ebrus was brought neere vnto them, an accident that beforetime neuer befell vnto them. Semblably, about the citie Philippi, the whole country being made drie by sluices and trenches artificiall, altered withall the whole disposition of the aire and weather, and changed the very habite of the heauen about their heads. But in the territory of Syracusa, the forsaie Coloniers that thither came to inhabit and practise husbandry, by ridding the ground from all the stones, marred all the corn in the country, so mirie and durie it was by that means, vntill such time as they were driuen to lay the stones againe where they had them. In Syria, the husbandmen goe lightly on with their plough, & take no deep stich in making their furrowes, for feare of the stony rocke lying ebb vnder the good ground, which in Summer season will burne all their graine and seed sowne there. Now, there be certain parts of the world, where a man shall fee one and the same effect to proceed both of extreme heat, and also of excessive cold. Thracia is exceeding cold, and thereby plentifull in corne. Africke and Egypt be as hot, and yet come not after it for fertillie in that kind. In Chalcia, an Island belonging to the Rhodians, there is one place about the rest so fruitful, that the Barly which was sowed in the due time & season of the yere, they mow once, and presently put it into the ground againe, which will be ready to be cut downe the second time, with other corne in harvest. In the Venetian tract within the realme of Naples, the grauellie ground is thought meetest for Olive trees, & therein they bear most plentifully: contrariwise, about Baetica in Spaine, the fittest soile is best for that purpose. The excellent grape that makes the good Punice wine, ripeneth soon vpon the very rockes: but the Cacube Vines stand soaked & drenched (as it were) in the marsh low grounds of Pomptinum. See what a difference and diuersitie there is in causes, to make this variety in sundry plots of ground: *Celsus Testis* being conuicted before the Censors, and there pleading his cause, affir-

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med openly, that the plaines of Roſea were the very fat of Italy, and reſembled the kell or leafe G of a fed and franked ſwine: wherein (quoth he) if a man leſt forks or props to day, they will be ouergrowne and couered with graſſe by to morrow. But ſurely, this ground is good for nothing but paſture. Yet notwithstanding, Nature would haue vs ſtill to learne and grow ſkilfull euery day more than other: and for that intent ſhe hath laid open the defects and imperfections of the ground, euen there, whereas the commodities thereof be neither ſo certain, nor ſo well knowne. And therefore let vs in the firſt place ſpeake of thoſe faults for which the earth is blamed.

CHAP. V.

¶ *Sundry ſorts of earth.*

IF a man would know which is a lean, hungry, & bitter ground, there is no better experiment and prooſe thereof, than by the blackiſh, milking, and vnkind herbs growing thereupon: as, when they come vp ſcorched and burnt, they ſhew a cold ſoile: alſo, when they ſeem ill-fauoured and vnpleaſant to the eie, the earth no doubt is ſoked and drowned in wet. As for red ſandy ground and clay, you need go no farther than to your owne eie-ſight. And ſuch ſoiles as theſe be, is of all other, hardeſt to be wrought and tilled, they ſo clog and load both the harrow teeth and the plow-ſhares, with huge and heauie clods. Howbeit, the ground that is thus churliſh to be cared and huſbanded, is not alwaies bad and naught for increaſe. But it ſareth cleane contrary with the pale and wan aſhie earth, as alſo with the white ſandy ſoile: for the barren ground is ſoon found by a thicke and callous cruſt that it hath, euen at the firſt dent of culter or ſtroke of mattocke.

Cato ſeteth down briefly, as his maner is, all the defects and faults of ground in theſe words: *Take heed* (quoth he) *of a rotten ground, and ſee that you ſtir it neither with cart, nor touch it with beaſt.* What ſhould we thinke his meaning by this term of his, that he ſhould feare rotten ground ſo much, as to forbid in a manner to tread and goe thereupon? Let vs call to mind the rottenneſſe that is in wood: and thereby ſhall we find thoſe faults that he abhorreth and deteſteth ſo much in the earth. In good faith, by rotten earth hee vnderſtandeth dry, ſpongieous, and full of holes, rugged, hoary, eaten, old, and hollow. So as in that one ſignificant word (*Carioſa*) hee ſaid more than could be expreſſed poſſibly by any multiplicity of language whatſoever: for if a man would rip vp to the quicke the imperfections that are in grounds, he ſhould find, that ſome pieces thereof of it that may be termed truly old and ouerworne, not for any age (for who can ſay K properly, that earth is ſubiect to old age) but by reaſon of their naturall defects: in regard whereof, a ground may be weake, feeble, barren, and no longer good for to bring forth any thing. The ſame *Cato* iudgeth, That ground to be principall which lieth at the foot of an hill, and runneth forth in manner of a plaine, into the South, which is the very ſituation of all Italy: and by a blackiſh and ſwart earth, which he calleth [*Pulla*], he meaneth a gentle, tender, and mellow ſoile. And this we will determine to be the beſt limply both for worke or tillage, and alſo for gaine and increaſe: now let vs (if ye pleaſe) ſtand a little vpon this word *Tenera* [*i. Tender*] which he ſeteth in this ſence: you ſhall find a marvellous ſignification thereof: and that he implieth thereby, as much as your heart can wiſh to be in a ground. That is it, which is ſo temperate in fertility, L that is it which to be wrought is to gentle, ſoft, pliable, and mellow: neither wet, nor yet dry and thirſty. Now doth this ground ſhine againe after the plough-ſhare, reſembling that veine of earth, which *Homer*, the very fountain and ſpring of all good wits, reported to haue bin engrauen by a * god, in the armour (of *Achilles*): adding moreover, that the ſaid earth looked black withall: wherein hee obſerued a wonderfull piece of workmanſhip, notwithstanding it was wrought in gold. This is that ground, I ſay, which being new broken and turned vp with the plough, the ſhrewd and buſie birds ſeek after, and goe vnder the plough-ſhare for it: this is it, that the very Rauenſes follow the plough man hard at heeles for, yea, and are readie for greedineſſe to pecke and ynder his very feet. And here, in this place I cannot chuſe but relate the opinion that is current among our riotous and delicate gallants: which ſome other thing alſo making for our purpoſe, in the diſcourſe of this argument which wee haue in hand. Certes *Cicero*, a man reputed (as he was no leſſe indeed) for a ſecond light of all good learning and literature. Better are eſteemed (quoth hee) the ſweet compositions and ornaments which taſt of earth, than of faſſion: where note by the way, that this great *Clarke* choſe to viſe the word

* Vulcan.

of

A of taſt rather than of ſmell, in ſuch odoriferous perfumes and mixtures. Well, to ſpeake at a word, ſurely that ground is beſt of all other, which hath an aromaticall ſmell and taſt wiſh it. Now if we liſt improuer to be better inſtructed, what kind of ſauour and odour that ſhould be, which we would ſo gladly find in the earth; we may oftentimes meet with that ſcent, euen when ſhe is not ſtirred with the plough, but lieth ſtill and quiet, namely, a little before the ſun ſetting, eſpecially where a rainbow ſcemeth to ſettle & pitch her tips in the Horizon: alſo, when after ſome long and continuall drought, it beginneth to rain; for then being wet and drenched therewith, the earth will ſend vp a vapor and exhalation (conceiued from the Sun) ſo heavenly and diuine, as no perfume (how pleaſant ſoever it be) is comparable vnto it. This ſmell there muſt be in it when you ere it vp with the plough: which if a man find once, he may be aſſured it is a right good ground; for this rule neuer faileth ſo far (to ſay a truth) it is the very ſmell and nothing elſe, that will iudge beſt of the earth: and ſuch commonly are new broken grounds, where old woods were lately ſtocked vp: for all men by a generall conſent, do commend ſuch for excellent. Moreover, the ſame ground for bearing is held to be far better, whenſoever it hath reſted between, and either lien ley or fallow; whereas for vineyards it is cleane contrary: and therefore the more care and diligence is to be employed in chuſing ſuch ground, leaſt wee approoue and verifie their opinion, who ſay, That the ſoile of all Italie is alreadie out of heart and weary with bearing fruit. This is certaine, that both there and elſewhere, the conſtitution of the aire and weather, both giueth and taketh away the opportunitie of good huſbandrie, that a man cannot otherwiſe do what he would: for ſome kind of grounds there is ſo fat and ready to reſolute to B to mire and dirt, that it is impoſſible to plough them and make good worke, after a ſhower of raine. Contrariwiſe, in Byzantium a territory of Africke, it is far otherwiſe: for there is not a better and more fruitful piece of ground lieth without more than it is, yielding ordinarily 150 fold: let the ſeaſon be dry, the ſtrongest teeme of oxen that is, cannot plough it: ſhall there be a good ground ſhower, one poore aſſe, with the help of a ſilly old woman drawing the plough-ſhare at another ſide, will be able to goe round away with it, as I my ſelfe haue ſeen many a time and often. And whereas ſome great huſbands there be, that teach vs to enrich and mend one ground with another, to wit, by ſpreading fat earth vpon a lean and hungry ſoile; & likewiſe by caſting drie, light, and thirſtie mould, vpon that which is moiſt and ouer-fat, it is a meere follie and waſtfull expence both of time and traualle: for what fruit can hee euer looke to reape from D ſuch a mingle mangle of ground?

CHAP. VI.

¶ *Of the earth which Britaine and France loſe ſo well.*

THe Brittaines and Frenchmen haue deuifed another meanes to manure their ground, by a kind of lime-ſtone or clay, which they call *Marga* [*i. Marle*]. And verily they haue a great opinion of the ſame, that it mightily enricheth it & maketh it more plentiful. This *marle* is a certaine fat of the ground, much like vnto the glandulous kernels growing in the bodies of beaſts, and it is thickened in manner of marrow or the kernell of fat about it.

CHAP. VII.

¶ *The diſcourſe of theſe matters continued according to the Greekes.*

THe Greekes alſo haue not ouerpaſſed this in ſilence: for what is it that they haue not meddled withall? The white clay or earth wherewith they viſe to marle their grounds in the territory of Megara, thoſe onely I mean which are moiſt and cold, they call *Leucargille*. Theſe marles (all the kind of them) do greatly enrich France and Britaine both, and therefore it would not be amiſſe to ſpeak of them more exactly. In old time there were two ſorts thereof, and no more: but of late daies (as mens wits are inuentiue euery day of one thing or other) they haue begun to find out more kinds, and to viſe the ſame: for there are now diuers marles, the white, the red, the Columbine, the clay ſoile, the ſtony, and the ſandy: and all theſe are but two in nature, to wit, either hard and churliſh, or elſe gentle and fat. The triall of both is knowne by the handling and a twofold viſe they yeeld: either to beare corne onely, or elſe for graſſe and paſture alſo. The ſtony or grauelly ſoile is good only for to nourish corne; which if it be white F

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withall,

withall, and the pit thereof found among springs or fountains, it will cause the ground to be infinite fruitfull, but it is rough in handling, and if it be laid too thick vpon the lands or leyes, it will burn the very ground. The next to it is the red marle, called also Capnumargos, which hath intermingled in it a certaine small stony grit full of sand: This stony marle the manner is to break and bruiſe vpon the very lands; and for the first yeares, hardly can the straw be mowne or cut downe for the said stones. Lighter is this marle than the rest by the one halfe, and therefore the carriage thereof into the field is least chargeable. It ought to be spread and laid thin, & some thinke that it standeth somewhat vpon salt. But both the one and the other will serue well for fifty yeares, and the ground enriched thereby, will (during that time) yeeld plenty as well of corne as grasse.

CHAP. VIII.

¶ Sundry sorts of Earth and Marle.

OF those marles which are found to be fat, the white is chiefe, and thereof be many sorts. The most mordant and sharpest of them all, is that whereof wee spake before. A second kind there is of chalkish clay, which our gold-smiths vse (called Tripela:) this lieth a great depth within the earth, in so much as many times men are driuen to sinke pits 100 foot deep, for it; and those haue a small and narrow mouth aboue, but within-forth and vnder the ground they be digged wider, by reason that the veine thereof runneth many waies, in manner of other metall mines. This is the marle so much vsed in Britain: the strength thereof being cast vpon a land, will last 80 yeares, and neuer yet was the man known that herewith marled the same ground twice in all his life time. The third kind of white marle, is that which the Greekes call Glischromagor: it is no other than the Fullers chalkie clay mixed with a viscous and fatty earth. The nature of it, is to breed grasse better than to beare corne: for after one crop of corne is taken off the ground in harvest, before seed time is come for winter grain, the grasse will be so high growne, that a man may cut it down and haue a plentiful after-math for hay; and yetal the while that it hath corn vpon it, you shall not see it to beare any grasse besides. This marle continueth good 30 yeares: if it be laid ouer-thick vpon a land, it choketh the ground in manner of * Cumine. The Columbine marle, the Gauls call in their language, by a name borrowed of the Greeks, Pelias, (i. Doue or Pigeon marle:) it is fetched out of the ground in clots and lumps, like as stones be hewed out of quarries: with Sunne and the frost together, it will resolute and cleaue into most thin slates or flakes. This marle is as good for corne as for herbage. As for sandy marle, it will serue the turn for want of other: yea and if the ground be cold, moist, and weedy, the husbandman will make choice thereof before other.

The Vbians, vpon my knowledge, vse to enrich their ground and make it more battle (though their territory otherwise be most fertile) with any earth whatsoever: provided alwaies that it be digged vp three foot deep at least, and laid a foot thick; a deuise that no other country doth practise: howbeit this soile and manner of manuring, continueth good not about ten yeares: the Heduans and Pictones, haue forced their grounds and made them most plentifull, with lime-stone, which is found also by experience to be passing profitable for vines and oliues.

To come now to the ordering of this piece of husbandry: the ground ought to be ploughed first, before marle of any sort be cast vpon it; to the end that the medicinable vertue & substance thereof, might the sooner and more greedily be receiued into it. Now forasmuch as marle is at the first ouer-rough and hard, not so free in the beginning as to resolute and turne into blade or grasse, it had need of some compost or dung to be mingled with it: for otherwise, be it neuer so rich, it will rather do harm than good to the ground, by reason that it is yet strange and not acquainted therewith; and yet help it this way as well as you can, it will not bring forth any plenty the first yeare after it is laid on. Last of all, it skilleth much to consider the nature of the ground, which you mean to marle: for the dry marle, forthewell with a moist soile; and the fatty, hit-teth that which is dry and lean. But when the ground is of a middle temperature between both, it mattereth not whether you vse the white gold-smiths chalker, or the Columbine-marle, for either of them will serue well enough.

CHAP

CHAP. IX.

¶ The use of ashes vpon lands: of Dung: what graue or pulse sowne, doth make the ground more plentifull, and what burneth it.

THE people dwelling beyond the Po, make such account of ashes for to enrich the grounds withall, that they prefer it before horn-muck, and such likewise dung (because they take it to be very light) they burne also into ashes for that purpose. Howbeit (as we haue said before) in one and the same corn-land, they vse not ashes and mucke both at once: no more doe they cast ashes in hortiards for to nourish young trees, nor in fields, for some kind of corn. Some are of iudgement, that grapes are fed with dust: who also do cast dust vpon them when they begin to bloome, yea and bestow dust vpon the roots as well of Vines as of other trees. Certain it is, that in the prouince of Narbon they vse so to do, and they are assuredly persuaded, that grapes ripen better and the vintage cometh the sooner thereby: because in those parts dust doth more good than the Sun.

As for mucke, there be diuers sorts thereof, and in old time much vse there was of it: for in Homer we read, that long ago the good old king [Laertes] was found laying soile and dung vpon his land with his own hands. The first that deuised mucking of grounds, was (by report) *Agamemnon* a king in Greece: but *Hercules* divulged the practise thereof among the Italians, who in regard of that inuentor immortalized their *K. Stercorius* the son of *Faunus*. *M. Varro* esteemeth the dung of Blackbirds (gathered out of their bartons where they be kept in mew) aboue all others.

He highly magnifieth and extollet it also, for that it bringeth forth good forage to feed kine, oxen, and swine withall: avouching for certaine, that they will become fat beefe and pork with no mean reason. We must thinke well therefore and hope the best of the world now adaies, since that our ancestors and forefathers so long ago had so great bartons and pens, that the dung of foules there kept, was sufficient to help their hard and hungry grounds. In the second degree of goodnesse, *Columella* rangeth Pigeons dung gathered out of Doue-cotes: the third place hee giueth to that of Hens, and other land pullen, reiecting altogether the dung of water-fowle. Howbeit all other Authors (setting these two aside) attribute with one voice and consent vnto the excrements of mans body, the greatest praise for this purpose. Some of them prefer mans vrine, and namely, when the haire of beast-hides haue bin soaked therewith and a quicke-lime together in the Tanners pits. Others vse vrine alone by it selfe, only they mingle water with it againe, but in greater quantitie a good deale, than they (whose vrine it was) did put to the wine when they drinke it and good reason too, for more need there is now to correct and repress the malice thereof, considering that besides the marie malignitie of the wine it selfe, mans bodie hath giuen and imprinted into it, a strong and vsuall quality. Thus you may see how men labour, strue, and try conclusions, to feed and enrich the very ground, the best way they can deuise. Next vnto the ordure and vrine of mans body, the filthy dung of swine is most commended; only *Columella* condemneth it. Some praise the mucke of any foure-footed beast whatsoeuer, so they were fed with Tree-trifolie, called *Cytisus*. Others prefer the dung of Pigeons before any other, in the second place that of Goats, thirdly of sheepe; then of kine and oxen, and lastly of cart-jades, mules, asses, and such like. Thus you see as well what difference there was in times past, between this dung and that; as also what were the rules (so faire as I can guess and learne) whereby they went, in the vfe and ordering thereof: for, to say a truth, the old way is best, when herein as well as in other matters.ouer and besides, the practise hath bin already seen in some of our prouinces (where there is so great store of cattell bred) to riddle and sift their dung ouer their ground through sieues, in manner of meale; and so in process of time it loseth not only the stinking sent and ill-fauored sight that it had, but also turneth into a pleasant smell, and looketh lovely withall. Of late, found it hath been by experience, that Oliue trees doe like and prosper verie well, if the ashes of lime-kills especially be laid to their roots. *Varro*, among many other precepts, addeth and saith, That corne grounds would be manured with horse-dung, because it is the lightest; but meadowes require compost that is heavier, and namely, made by beasts that haue barley for their prouender; for that such soile bringeth plentie of grasse. Some there beca' so, that preferre the dung made by horses, before the mucke of kine and Oxen; likewise sheeps treading, before Goats dung; but Asses mucke before all other, because

* Cymini.
Turash. reads
Siginini, & mea
neth thereby
shards of pots
sers wooke and
such like rub-
bills.

they eat and chew their meat most leifurely. But daily experience teacheth the contrary, and testifieth againſt the one and the other. And thus much as touching compoſt of mucke.

Furthermore, all men are of opinion, that nothing is better for the ground, than to ſow Lupines therupon, provided alwaies, that before it coo, it be turned into the ground by the plough, ſpade, or two-piked yron forke; alſo when it is cut down, to make it into wads or bottles, and ſo to bury them at the roots of trees, and vines eſpecially. In countries where there are no cattell to better the lands, it is thought good to manure the ſame in ſtead of beaſts dung, with very hawme, ſtraw, and ſerne. *Cato* hath a deuſe to make an artificiall mucke or compoſt of litter, lupine ſtraw, chaffe, beane ſtalks, leaues and branches both of Maſt-holm and oke. He ſaith moreover to the ſame purpoſe: Weed out of the ſtanding corn * Walwort [otherwiſe called Dane-wort] and Hemlock; alſo from about oſter-plants, plucke vp ranke weeds, or ground Elder; alſo Reeke or Sea-graffe, and dead leaues or branches lying rotten vnder trees: when thou haſte ſo done, ſrew, and lay a courſe of them vnder ſheep where they be folded. *Item*, If the Vine begin to decay and wax leane, burne the ſthreads and cuttings of the owne, and turne the aſhes vnder ground hard to the roots thereof. *Item*, where thou meaeneſt to ſow any wheat or ſuch like bread-corn, draw thy ſheep thither, and there fold them. He ſaith moreover, that the fowing of ſome graine is as good as a dunging to the ground: for theſe be his very words, The fruit it ſelfe of the earth is a baling to the earth; and namely, Lupines, Beans, and Vetches, for they muck the lands; like as on the contrary ſide, Chiches do burne the ground, both becauſe they are plucked, and alſo for that they ſtand vpon ſalt. Semblably doth Barley, Foengreek, Enuile, and generally all kind of pulſe which are pulled and not mowne downe. *Item*, Take heed (quoth *Cato*) that you ſet no pepins or kernels, where you meane to ſow corne. As for *Virgil*, he is of opinion, that the fowing of Line-feed for flax, likewiſe of Otes and Poppies, do burne corne-ground and pill it out of heart. He alſo giueth rules as touching mucke-hills, That they ſhould be made in the open aire, within ſome hollow place where it may gather water; that they be covered ouer with ſtraw and litter, for feare they ſhould dry in the Sun; and laſt of all, that they haue a good ſtrong ſtake of Oke pitched and driuen in about the mids thereof, for ſo there will no ſnakes nor ſuch like ſerpents breed and ingender therein. Moreover, as touching the ſpreading of mucke, and mingling it with the mould of a land, it is exceeding good to do it when the winde ſetteth full Weſt, ſo that the Moon then be paſt the full and in the Waime. But this rule many haue miſtaken and not conſtrued aright, ſuppoſing that they ſhould ſo do when the Weſtern wind Fauonius beginneth to riſe, and namely in the moneth of Februarie only; whereas indeed moſt countries require this point of huſbandry in other moneths as wel. But looke what time ſoeuer you liſt to do it, be ſure in any hand that the wind do then blow from the Equinoctiall point of the Weſt, and that the moone then be in the waime, and drie withall. Haue regard to theſe rules and obſervations, you will wonder to ſee the effects thereof, and what increaſe the earth thereby will yeeld.

CHAP. X.

¶ The planting and ſetting of trees: the manner how trees do grow, by a ſion ſlued and plucked from the root.

Now that we haue already ſufficiently treated of the conſiderations as well of the aire and ſkie, as of the earth, belonging vnto plants and trees; me thinks it were to good purpoſe to diſcourſe of the induſtry and artificiall meanes that men haue viſed to make trees grow: and verily we ſhall find no fewer kinds of them that come by mans hand, than of ſuch as nature it ſelfe hath brought forth; ſo kind and thankful we haue bin to her, as to make recompence in this behaile. Firſt and formoſt therefore this is to be noted, That all trees do grow either of feed ſowne, or of branches growing to the tree and couched in the ground, or of an old ſtocke from whence new imps may ſpout: alſo, either of a ſlip or ſprig plucked from another tree, and ſo laid in the ground; or of a young ſhoot, twig, impe, or ſion, engraſſed in the very trunk of a tree, ſlit and clouen for that purpoſe. For I cannot chuſe but maruell much at *Trogus*, who was verily perſuaded, That about Babylon the leaues only of Date trees being ſet or ſowne, would proue trees. Now whereas there be ſo many deuſes aboueſaid for to nourish trees, this you muſt vnderſtand, that ſome trees there be which will grow by many of theſe waies before ſpeci-

fed,

A ſied, and others by them all. And verily the moſt part of this knowledge hath bene taught by Nature her ſelfe; for firſt of all, we haue learned by her for to ſow feed, by occaſion that we haue ſeen ſome to fall from trees, which being recciued by the ground, haue chitted, taken root, and liued. And in very truth, ſome trees there be that grow no otherwiſe, as Cheſtnut, and Walnut-trees, excepting onely thoſe that being cut downe, doe ſpring new again from the root. Of ſeed alſo (although the ſame be ſare unlike to others) thoſe alſo will grow; that are vſually planted otherwiſe, as for example, Vines, Apple trees, and Pyrries: for in theſe the ſtone and pepin with-in, ſerueth in ſtead of the ſeed; and not the fruit it ſelfe, as in thoſe before rehearſed, the kernels whereof, the fruit ſare ſowne. Medlars likewiſe may come vp of ſeed. But all the ſort of theſe that ſpring after this manner, be late ere they be come forward, and flow in growth: they turn alſo to a degenerate and baſtard nature, and had need to be graſſed anew ere they be reſtored to their owne kind; which is the caſe of Cheſtnuts alſo otherwiſe. Howbeit there be others for them againe, which (ſow or ſet them what way you will) neuer grow out of their owne kind; and ſuch be Cypreſſes, Date trees, and Lawrels: for the Lawrell commeth vp by ſowing, by ſetting, and planting, after ſundry ſorts. The diuers kinds whereof, we haue deſcribed already. Of all which, the Lawrell Auguſta with the broad leaues, the common Bay tree alſo that beareth berries, as alſo the wild kind named *Tinus*, be ordered all three after one and the ſame fort. The manner whereof is this: the Bayes or berries thereof, be gathered dry in the moneth of January when the Northeaſt wind bloweth: they are laid abroad thin to wither, one apart from another, & not in heaps, for feare they ſhould catch a heat. This done, ſome put them afterwards in dung; and being thus prepared and ready for to be ſowne, they ſteep them in wine. Others take and lay them within a large basket or twigen panier, trample them vnder their feet in a brook of running water, vntill they be pilled and rid of their outward ſkins: for otherwiſe their ſkin is of ſo tough and moiſt a ſubſtance, that it would hardly or not at all ſuffer them to come vp & grow. After all this, in a plot of ground wel and thoroughly digged once or twice ouer, a trench or furrow muſt be made a handfull deepe, and therein the berries ought to be buried by heaps, to wit, twenty or thereabout together in one place; and all this would be done in the moneth of March. Lawrels alſo will grow, if their branches or boughes be bedden from the ſtocke and laid within the ground: but the Triumphall Lawrell will come vp no other way but by ſetting a graffe or impe cut from it. As for the Myrtle, all the ſorts thereof within Campaine, come of berries D ſowne; but we at Rome vie to interre only the boughes of the Tarentine Myrtle, growing ſtill to the body, and by that means come to haue Myrtle trees. *Democritus* ſheweth another deuſe alſo to increaſe Myrtles, namely, to take the faireſt and biggeſt berries thereof, & lightly to bruife or bray them in a mortar, ſo that the grains or kernels within be not broken; & then to beſmeare with the batter or ſtamped ſubſtance thereof, a courſe cord made of Spart or Spaniſh broome, or elſe hempen hurds, and ſo lay it along within the ground. Thus there will ſpring thereof, a marvellous thicke way or wall (as it were) of young Myrtles: out of which, the ſmall twigs you may draw which way you will, yea, and plant them elſewhere. After the like manner, ſolke vie to ſow thorns or brambles for to make hedges & mounds, namely, by anointing ſuch another hempen rope with bramble blacke-berries, and interring the ſame. As for Bayes thus ſowne, when they come once to beare a dark and blackiſh leaſe Myrtles alſo, when their leaues be of a wine colour, to wit, of a deep red (which commonly happeneth when they be three yeres old) it will be time to remoue and tranſplant.

Among thoſe plants and trees that are ſowne of ſeeds, *Mage* maketh much ado, and is ſouly troubled about thoſe trees that beare nuts, & ſuch like fruit in ſhells: for to begin with almonds firſt, he would haue them to be ſet in a ſoft clay ground that lieth into the South; & yet he ſaith againe that Almonds trees loue a hot and hard ſoile; for in a ſoft or moiſt ground, they will either die or elſe wax vnfruitfull. But aboute alſo, he giueth a rule to chuſe Almonds for to ſet or ſow, that be moſt ſhoked, and eſpecially ſuch as were gathered from a young tree; alſo he ordaineth, that they ſhould be well ſoked or inſufed in ſoft beaſt ſherne or thin dung, for three daies together: or at leaſtwiſe in honied water, a day before they be put into the ground. *Item*, they ought (by his ſaying) to be ſet charily with the ſharp and pointed end pitched downward, and the edge of the one ſide to turne into the Northeaſt. Alſo that they muſt ſtand three and three together in a triangle, for ſooth, ſo as there be a handbreadth iuſt between euery one. Moreover, that euery tenth day they ought to be watered, till they be ſhot vp to a good bigneſſe. Now to come vnto

X x 3

Walnuts,

walnuts, they be laid along within the earth, with this regard, that they do ly vpon their ioints. **G** As for pine nuts, there would be six or seuen of their kernels put together into pots that haue holes in them, and so buried in the ground: or else they should be ordered after the manner of the Bay tree, which commeth of berries bruised, as hath been shewed before.

The Citron tree will grow of seed, and may be set also of sprigges or twigs drawne to the ground from the tree, and so couched. Seruis trees come of the grains thereof sowed of a quick-fer plant also with the root, or of a slip plucked from it. But as the Citron trees lye in hot grounds, so these Seruises loue cold and moist.

As concerning feminaries and nourish-gardens, Nature hath shewed vs the reason and manner thereof, by certaine trees that put forth at the root a thick spring of yong shoots or fions; but lightly the mother that beareth these imps, killeth them when the hath done, with her shade and dropping together. And this is euident to be seene in Lawrels, Pomegranate trees, Planes, Cherry trees, and Plum trees: for standing as these imps doe, a number of them without all order vnder their mother stocke, they be ouershadowed and kept downe so, that they mislike and neuer come to prooffe. Howbeit some few there be of this sort, that are not so vnkinde to their yong breed, as to kill them with the shadow of their boughs, and namely Elmes & Date trees. This would be obserued by the way, that no trees haue such yong imps springing at their feet, but they only whose roots for loue of the warm sun and moist rain, spread aloft and ly ab within the ground. Moreover, the manner is not to set these yong plants presently in the place where they must remaine and continue for altogether, but first they are to be bestowed in a piece of ground where they may take nourishment, to wit, in some nurse-garden for the nones, vntill they are grown to a good stature, and then they are to be removed a second time to their due place. And a wonder it is to see, how this transplanting doth mitigate euen the sauage nature of the wildest trees that are: whether it be that trees as well as men are desirous of nouelties, and loue to be trauelling for change; or that as they go from a place, they leaue behind them their malicious qualities, and being vied to the land, becometh tame and gentle like the wild beasts; especially when such yong plants are plucked and taken vp with the quicke root. Wee haue learned of Nature also another kinde of planting like to this: for we see that not only water shoots springing out of the root, but other sprigs slipped from the stocke, lye and doe full well: but in the practise of this feat they ought to be pulled away with a colts foot of their owne, so as they take a quicke parcell also of their mothers bodie with them, in manner of a fringe or border hanging thereto. After this manner they vse to set Pomegranate, Filbert, Hazell, Apple, and Seruise trees; Medlars also, Ashes, and Figge trees; but Vines especially: marie, a quince **K** ordered and planted in that sort, will degenerate and grow to a bastard kinde. From hence came the inuention, to set into the ground yong sprigs or twigs, cut off from the tree. This was at first practised with foot-fets for a prick-hedge, namely, by pitching down into the earth, Elder, Quince-cuttings, & brambles; but afterwards men began to do the like by those trees that are more fit, and nourished for other purposes, as namely Poplars, Alders, and the Willow, which of all others may be pricked into the ground with any end of the cutting or sprig downward, it makes no matter whether, for the smaller end will take as well as the bigger. Now all the sort of these are bestowed and ranged in order at the first hand, euen as a man would haue them and where he list to see them grow, neither need they any remouing or transplantation at all. But before we proceed any further, to other sorts of planting trees, it were good to declare the manner how to order feminaries, seed-plots, or nurse-gardens.

For to make a good peppinier or nurse-garden, there would be chosen a principal and special peece of ground: for oftentimes it falleth out, yea and meet it is, that the nurse which giueth sucke should be more tender ouer the infant, than the owne naturall mother that bare it. In the first place therefore, let it be found and drie ground, howbeit furnished with a good and succulent elemental moisture, and the same broken vp and afterwel digged ouer and pouer with mattock and spade, and brought to temper and order, so as it be nothing coy but ready to receiue in manner of plants that shall come, and to entertain them as welcome guests, & withall, as like as may be to that ground vnto which they must be removed at last. But before all things this would be looked to, that it be rid cleane of all stones, surely fenced also and paled about, for to keep out cockes and hens and all pullen: it must not be full of chinkes and cranies, for feare that the heat of the sunne enter in and burne vp the small filaments or strings and beard of the

new

A new roots: and last of all, these pepins or kernels ought to stand a foot and a halfe asunder: for in case they meet together and touch one another, besides other faults & inconueniences, they will be subiect to womes: and therefore I say there would be some distance between, that the ground about them may be often harrowed and raked, to kill the vermin, and the weeds plucked vp by the heeles that do breed them. Moreover, it would not be forgotten to proun the yong plants when they are but new come vp: to cut away, I say, the superfluous sprigs vnderneath, and vntill they betimes to the booke. *Cato* giueth counsel to sticke forks about their bedes mans height, and lay hurdles ouer them, so as the Sun may be let in vnderneath: and those hurdles to couer and thatch ouer with straw or holme, for to keepe out the cold in winter. These are yong plants of Pearre trees and Apple trees nourished: thus Pine nut trees, thus Cypresses which do **B** likewise come vp of seed, are cherished.

As for the grains or seeds of the Cypres tree, they be exceeding small, and so small indeed, that some of them can scarce be discerned well by the eye. Wherein the admirable worke of Nature would be considered, to wit, that of so little seeds should grow to great and mightie trees, considering how far bigger are the cornes of Wheat and Barley (to make no reckoning nor speech of Beans) in comparison of them. What should we say to Pearre trees and Apple trees? what proportion or likenesse is there between them, and the pretty little pepins whereof they take their beginning? Marcell wenot, that of so slender and small things at the first, they should grow so hard, as to checke and turne againe the very edge of ax and hatchet: that frames and stocks of presses should be made thereof so strong and rough, as will not shrinke vnder the heauiest poise and weights that be: that Mult-poles comming thereof should be able to beare saile in wind and weather: and finally, that they should afford those huge and mightie Rams and such like engines of batterie, sufficient to command towers and battils, yea, and beat downe strong walls of stone before them? Lo what the force of Nature is! I see how powerfull shee is in her works! But it passeth and exceedeth all the rest, that the very gum and liquor distilling out of a tree, should bring forth new plants of the same kind, as we will more at large declare in time and place convenient. To returne then againe to the female Cypres (for the male as hath bin said already bringeth forth no fruit) after that the little balls or pills (which be the fruit thereof) be gathered, they are laid in the Sun to dry, during those moneths, which we haue before shewed, and being thus dried, they will breake and cleaue in sunder. Now, when they are **D** thus opened, they yeeld forth a seed which Pismires are very greedy of. Where another wonder of Nature offereth it selfe vnto vs, That so small a creature as it should eat and consume the seed which giueth life and being to so great and tall trees as the Cypres. Well, when the said feed is gotten, and the plot of ground laid euen and smooth, with cylinders or rollers, it must be sowne of a good thickeesse in the moneth of April: and fresh mould sifted and strewed ouer with riddles an inch thicke and no more: for if this grain be buried ouer-deep and forcharged, it is not able to break through against the weight of the earth, but in stead of rising vp, the new chit turneth and bendeth backward vnder the ground. And hereupon it is that folke forbear either to go at all vpon it, or else they tread very lightly. Being thus sowed, it must be gently watered for three daies following, after the Suns setting, (that the earth may drinke equally in all places) vntill the sprouts appeare aboue ground. Now, after they haue had a yeares growth, they be transplanted and re-planted againe in rewes: for by that time they are come to a span or nine inches in height: but great care must be had that the time be temperate, that is to say, that the weather be fresh and faire without any wind. Certes a wonderful thing it is to be spoken, that all the danger or security of this tree, standeth vpon the choice of that only day wherein it is replanted: for let there fall neuer so small a rain or dew, may let the wind blow neuer so little, it is a great hazard whether it will die. For euer after it is warished and safe enough, howbeit it cannot abide a glut of rain at any time following. Moreover, as touching Iubebes, they are likewise set of their graines in the moneth of April. But that kinde of Peaches or Abricots which be called Tuberes, loue better to be grafted either vpon a skeg or wilde Plum-stocke, or Quince, or else vpon the wild Hart-Rhamme, called Calabriculum, [or Spina Cervina.] To knit **F** vpon this discourse, the fruit Sebesten and the Seruises may be grafted and planted both vpon the same kind of stocke: and looke what will beare the one, is apt to receiue the other.

CHAP.

CHAP. XI.

¶ The manner of translating or replanting out of one seminarie or nource, vnto another. How Elmes are to be planted. Also as touching trenches.

Some would haue vs to remoue plants out of one seminarie into another, before they be set indeed where they should be for to continue: which me-thinkes is a matter of more toile and curiositie than needefulle, howeouer they make promise, that by such transplanting, the leaues will proue larger and broader.

Now for Elms, their seed or grain is to be gathered about the * Calends of March, when it beginneth to turn yellow, and before the leaues break forth. After it hath bin dried in the shadow for two daies, it is to be sown thick in a plot of ground well broken vp and laid hollow beforehand, and then must there be mould scarced ouer through a fine riddle, to the same thicknesse as we haue appointed for the Cypres. In case no raine do fall in due time, it ought to be watered by hand. After one yere, the plants that come herof must be taken vp out of the trenches and ranges wherein they came vp, and translated directly into the Elme plots where they are to grow: with this care & good regard, that they stand a foot at least euery way distant one from another. As for the male Elmes, vnto which Vines are wedded, because they are without seed, it is better they were planted in the Autumne: and for that they want seed they would be set of plants. Here with vs about Rome seld they vse to replant them again in their groue-plots when they be five yeares old, or as some would haue it, so soon as they be come to 20 foot in height. The manner whereof is this, in a trench or ditch called * Nouenarius, 3 foot deep in the ground, and as many broad, or rather more, they are set: which done, for three foot in height euery way about the foot of each tree from the ground as it stands, there must be banks raised of some earth, after the manner of those seats which they call Arule in Campanie. As for the spaces between tree and tree, they ought to be set out and disposed according to the nature and situation of the place, and as the ground will giue leave. In the champion and plain country, those would be planted that are of a drier nature, and likewise in a thinner course. As for Athes and Poplars, because they make halt to spring, lease, and bud out betimes, it is meet that their plants likewise were set and ranged with the first, that is to say, about the * Ides of Februarie: for they also grow of plants, and may well be replanted.

Now for the order of setting trees either in groues, hort-yards, or vine-yards, wee ought to follow the vsuall manner of chequer row, called Quincunial, which is not so common, but it is also as necessarie: not only good to admit all kinds of winde to passe betwene, but also faire and pleasant to the eye, considering, that which way fewer a man looks, there offer to his sight both the allies, and reues, directly ranged in order.

The Opiets or Wich-Hazels are sown of seed after the same manner as Elme: in like sort also are they to be remoued & transplanted out of their nource-plots, as if they were wild, drawn from the very foreests.

Moreover, about all things this would be considered, that a tree to be remoued ought to be translated either into the like ground from whence it came, or else into a better. For we must take heed how we remoue plants out of warme grounds, & where the fruit is early ripe, into others that be colder or late in ripening. Semblably, out of cold & hard places, they would not be translated into warm, mellow, and forward. Item, if it be possible, let the trenches be cast and digged so long before, that a good thicke green fount be ouergrowne against the time that you mean to plant. *Mago* is of opinion, that the said trenches should stand made a yere before at the least, that they might be fully seasoned with the Sun, and receiue all rain, winde, & weather thoroughly. But in case it fall out otherwise, that the opportunitie thereof be ouerslipped, or our leisure will not serue, he would haue fires to be made in the midst of them two monthes before, and in no case any trees to be set but after shoures of rain. And if the ground be rough or hard, and standing vpon the cley, the ditches ought (according to *Mago*) for to be three cubits deepe euery way: and if they be to plant plum trees, he would haue them be a hand-bredth more, or spanne in depth, and digged on euery side hollow, and vaulted in manner of a founaine, with a narrower mouth in the top. In a blacke veine of ground, by his direction, it is sufficient that they be two cubites and a hand-bredth or spanne deepe, and made foure-square in man-

A ner of a quadrangle. In the measure and proportion of these ditches, the Greeke writers doe accord in one, saying, that they ought not to be more than two foot and a halfe deepe, nor wider than two foot bare also, that in no place it must be vnder a foot and a halfe deepe, for that in a moist soile, we shal come ordinarily neer to water about that skantlin, and not before. But *Cato* is of another judgment, If (quoth he) the place be waterish, let the trenches be three foot broad in the mouth, but in the bottom not about a foot and a hand-bredth, but let they be foure foot deepe: prouided alwaies, that they be * paced beneath with stones and for want thereof, laid with green willow bastions, and for default of them, with vine cuttings, or such toulle, so that they lie halfe a foot thicke. But considering the nature of trees whereof we haue before written, I think it not amisse to adde somewhat of mine owne, namely, The more ebbe that any roots of trees creepe vnder the ground, the deeper they must be set into the earth, as for example, the Ash and the Oliue tree: for they and such other like ought to stand foure foot deepe. As for all the rest, it skils not, if they goe no deeper than 3 foot, for that is thought sufficient. [Stocke me vp this root here (quoth *Pappius Censor* a Roman in General, in a brauery, when he meant to terrifie the Pretors of the Præcinctus.) Whereby it is plain that the more secure & safe way in his judgment was rather to cut the stocke and maister Root indeed, than slightly to pare away those bare roots that appeare naked about ground, for that might be done, and the tree neuer the worse for it.] Some there be that would haue round pebble stones laid in the bottom of such ditches, which might as well contain and keep water, as let it forth and giue issue thereto: whereas broad flat stones would not so doe, but besides, hinder the root that it should not goe downe and take hold of the earth. For to keep therefore a meane betwene, it were good in mine opinion, to lay grauell vnder the root.

Moreover, there be diuers men of this mind, that a tree should not be remoued, either vnder two yeares old, or about three: whereas others make no question to transplant them after the first yere, without more ado. *Cato* alloweth not of translating a tree, vnlesse it beare in thicknesse more than 3 fingers. And verily, so exactly hath he written hereof, that he would not haue forgotten, to make in the barke of trees the South side, before they were taken vp, in case, hee had thought that it was material to the replanting of them, that they should stand just in the same position and accustomed coast of the heauen, as they did before, for feare lest that side which regarded the North, if now it should be opposed against the South, might cleaue and rift with the heat of the Sunne, not vsed thereto: and contrariwise, the parts which looked Southward, might now by the Northern winds, be elunged and congealed withall. Now there be some that affect a cleane contrarie course, and namely, in the Fig tree, and the Vine, exchanging the one side for the other, being fully persuaded, that by that means they will beare leaues thicker, preferme and defend their fruit better, and in the end feede fewer: more particularly, that the fig tree thereby will be the * more easie to climb. Most men take great heed of this only, that when they prune trees, and cut off the top ends of boughes, the cut may be toward the South, without any regard or consideration, that in so doing they expose the boughs to the danger of cleauing, by reason of the hote Southern wind which lieth vncessantly beating vpon them. Yet hold I rather with them, that would haue branches cut Southeast or Southwest, namely, toward the points where the Sun is, at the fifth and eight houres of the day. Another secret there is besides, whereof they are as ignorant, howbeit, not to be neglected, namely, to beware that the roots of such trees as are to be replanted, stay not long about ground, and thereby was drie also, that trees be not digged vp, either standing into the North, or in any quarter between that point and the South-east, where the Sunne riseth in midwinter, in case the wind sit in those corners: or at leastwise, that the roots be not exposed bare against any of those winds: for surely, many a tree dies hereby, and husbandmen neuer know the cause thereof. *Cato* vtterly condemneth all manner of winds whatsoeuer, yea, and raine too, all the while that trees be in remouing. Moreover, in this case it is singular good, that there hang to the roots of these trees, when they be translated, as much of the old earth wherein they liued and grew before, as may bee, yea, and (if it were possible) to bring them away with the turfs whole and entire, lapped fast about the roots. And therefore *Cato* prouided well, that such yong plants should be caried in baskets, earth and altogether with the roots. Doubtlesse, not without very great reason there is one Author faith, That it is sufficient that the vppermost course of the old mould that lay at the foot of the tree, should be put vnder the root thereof now when it is replanted. Some write, that if the bottom of the hole or

* It seems that *Cato* means of trenches to drain water out of low grounds: and not as *Pliny* misliketh.

* Scantlin, reading it as a measure, but I for *Scantlin*, as it is used in the text, more or less.

graue be pased with stone where Pomegranate trees should stand, the Apple or fruit that they bear, wil neuer burit nor cleaue vpon the trees. Also, that the roots of trees when they are to be set, should be laid bending at one side, and not stand direct and straight. Moreover, that the tree in any case be set iust in the mids of the ditch or hole made for it. It is said moreover, that if a man plant a fig-tree, together with the sea-onion, Scilla (that is a kind of the Bulb) it will make hast to bear Figs, and those wil not be subiect to the worme and yet other fruits will be worme-eaten neuertheless, set them with the said Scilla as well as you can. As for the roots of a tree who makes any doubt, that great care should be had in the taking of them vpon as they might seeme rather drawn forth gently, and not plucked vp violently. But my purpose is not to dwell in these matters, nor to stand much vpon such points, which I haue a manifest reason, and wherof no man is ignorant or doubtfull; to wit, that the earth is to be well driuen and beaten downe close with a rammer, that it may lie fast about the roots, which *Cato* judgeth to be a principall point for to be observed in this businesse: who also giueth a rule, that the place where a tree is cut in the body, should be plaistered ouer with dung, covered ouer also, and fast tied with leaues.

CHAP. XII.

¶ Of the spaces and distances that ought to be betweene trees planted: of their shadowes and droppings: of the place where they should be planted.

IT belongeth to this place properly for to speak of the distances between tree and tree, in the setting. Some writers are of opinion, That Pomgranat trees, Myrtle trees, & Lawrels, should be planted thicker than ordinarie, howbeit, with this regard, that they be set 9 foot asunder one from another. As for Apple trees, they may stand a little more at large, Pear trees somewhat wider than they, Almond trees, and Fig trees yet a little more than all the rest. But here in must we be ruled & directed by the boughs spreading more or lesse, by the room of the place it selfe, and according to the shadow that each tree casteth. There is not (I say) any one of these considerations to be neglected, and the shade especially of all others would be observed. For such trees as branch round as it were in compass, although they be otherwise great, as namely Apple trees, and Pyrries, yet they yeild no great shadow: whereas a man shall see Cherry trees and Lawrels take vp an exceeding deale of ground with their shade. Now these shadowes of trees haue their properties by themselves, for that of the Walnut tree is noisome and hurtfull euen to man, breeding heauineffe in the head: and an ill neighbour it is besides to all plants either vnder or neere vnto it. The Pine tree also with her shadow nipeth and killeth the yong spring of all plants within the reach thereof. Howbeit, both it and also the Walnut tree resist the force of winds notably, and therefore they serue in good steed to protect vineyards, and are projected against the winds to breake their violence. The dropping of the Pine, Oke, and Mast-holme, by reason of the raine water wherewith they are much charged, is very heauy and ponderous, and therefore hurtfull. As for the Cypress tree, it droppeth little or nothing, by reason that it receiueth so small a deale of rain: and in truth of all others the shade is least, the boughs are knit and trust so round, and run vp sharpe pointed in the top. The Fig tree giueth no thicke shadow, howeuer the boughs spread large ynough; which is the cause, that no man forbiddeth the planting of them in Vineyards among Vines. And as for Elmes, their shade is so milde and thin, that it nourisheth whatsoeuer it ouerspreads vnder it. Howbeit, *Atticus* is of opinion, That the shadow of Elmes is one of the thickest and most hurtfull: neither doe I make any doubt thereof, if they be let to spread into great armes and boughes at liberty: marie, if the branches thereof, or if any tree within-forth be shrigged, I thinke that the shade will doe no harme at all. The Plane tree carrieth a heauie head, and therefore casteth a thicke shade, howbeit, pleasant it is, and refreshes those that sit vnder it: safe resting there is vpon the grasse, rather than the bare ground: and there is not a tree againe where grasse groweth thicker and longer, to couer the bankes and seats vnder it. As for the white Poplar or Aspen tree, it maketh little or no shade at all, the leaues keep such a wagging & trembling, and neuer hang still: the shadow of the Alder tree is far and battle, it feeds whatsoeuer is sowne or set vnder it. The Vine hath shade ynough to serue her owne turne: the leaues are euer stirring, and by their motion and turning often too and fro, there is a good temperature of shade and Sunne by that means: they serue also in steed of a couert in time of raine, and beare off a good shower. Generally, all trees in manner that haue

A haue their leaues hanging by a long taile, cast but a light and slender shadow. And truly the knowledge hereof would not be contemned, nor set in the last place of such points as belong to husbandrie, considering there is not the shadow of any one tree, but either is a kind nourse, or a shrewd and curst step-dame, that is to say, either profitable or incommodious to all the fruits of the earth. For without all question, the shade of Walnut trees, Pine trees, Pitch trees, & firs is no better than poison to all that is within the compass of it, and kills whatsoeuer it toucheth. And thus much of Shadowes.

As touching the dropping of trees, a man may conclude in one word all that belongs thereto. For looke what trees soeuer be so defended and clad with thicke leaued branches, that the raine cannot passe readily through them, be sure the dropping and distillation of such is naught and dangerous. And therefore it skilleth very much in this matter and question now in hand, to know the nature of the earth wherein we meane to plant, how many trees it may well bear and nourish. As for hills, they require of themselves not so great distance between tree and tree, as the plaines beneath: besides, in such places exposed to the wind, it is good that they be planted thicker. Howbeit, *Oliues* require the greatest space between of all others: and therefore *Cato* following the judgment of all *Italic*, ordaines in these words, That they should stand asunder five and twentie foot at the least, and thirtie at the most: but this rule holdeth not alwaies; for herin guided we must be by the nature and site of places, which varie and differ much. For in *Boetia*, which is a part of *Spaine*, there is not another tree growing bigger than the *Oliue*; and if we may give credite to authors that haue written hereof, there bee in *Affricke*, by their report many of them called *Milliaria*, for that euery yeare they yeild a thousand pound weight of oile; *apreece*. And therefore *Mago* allowed threefore and fifteen foot euery way, for distance between *Oliue* trees, or else five and forty at least, euen in leane and hard grounds, and those that were exposed to the winds. And in *Boetia* verily, the people vse to reap great plenty of corn among *Oliue* trees.

Now of all other follies this is one, and bewraith shamefull blindness and ignorance, To be driuen to make glades between trees when they be grown to a good bignes: and namely, either by lopping their boughs too much for to let in light between, and so by this means to hasten their age and decay; or els to draw them by cutting them downe cleane: wherin oftentimes they that did set them at first, take themselves in the manner, and blame their own want of skill. D Considering therefore, that there is no greater shame can happen to husbandmen than to repent when a thing is done, and then go about to vndoe it, much better it is of the twain in this case, to fault in ouerwide, than too straight roume.

CHAP. XIII.

¶ What trees grow but slowly: and which they bee that soone come forward: also, of the Summe.

SOME trees by nature are slacke of growth, and principally those that come of seed, and liue longest. But such as soone decay and die, are quicke of growth, as the Fig tree, Pomegranat tree, Plumme-tree, Apple-tree, Pear-tree, Myrtle, and Willow: but they make amends for their short life in this, that they goe before others in fruit, and enrich their maisters quickly, for they begin to beare well at three yeeres age, yea, and they make a shew thereof in their blossom before. Of all these the Pear-tree is the slowest. But the Cypress, as wel the true & legitimat as the bastard (which is a shrub called *Pseudo*. Cypress) come fastest forward of any other, for they beare at first both blossome and fruit. This is a general thing observed, That all trees will thrive and prosper better, yea, and grow sooner to perfection, if the shoots and suckers that put out at the root, as also other water twigs, be rid away, so that all the nourishment may be turned to the principall stocke only.

The work of Nature in sending out these sprigs, taught vs the feat to couch and lay sets in the ground by way of propagation: and euen after the same manner briars and brambles doe of themselves put forth a new off-spring: for growing as they doe, small and slender, and withal running vp to be very tall, they cannot chuse but bend and lean to the ground, where they lay their heads againe, and take fresh root of their owne accord without mans hands: and no doubt, ouer-grow they would and couer the whole face of the earth, were they not repressed and withstood by

by good husbandrie. The consideration whereof maketh me to enter into this conceit. That men were made by Nature for no other end but to tend and look vnto the earth. See yet what a commodious deuice we haue learned by wickied and detestable a thing as this bramble is, namely, to lay slips in the ground, and quick-setts with the root. Of the same nature is the Yucca also, euen to grow and get new root as it creepeth and climbeth. And by *Cates* saying, not onely the Vine, but Fig trees & Oliues also, wil grow & increase of cuttings couched in the ground; likewise Pomegranate trees, all kinds of Apple-trees, Baies, Plum-trees, Myrtles, Filberts, Hazels of Prenelle, yea, & Plane-trees. Now be there two waies to increase trees by way of propagation or entering their twigs. The first is, to force a branch of a tree as it grows, downe to the ground, & so to couch it within a trench foure foot square euery way; & after two yeares to cut it arow, where it bent from the tree; and after three yeares end to transplant it. But if a man list to haue such plants or young trees to beare longer, the best way were to burie the said branches at the first within mould, either in paniers or earthen vessels, that when they are once rooted, they might be remoued all whole and entire in them, and so replanted. The second is a more curious and wanton deuice than this, namely, to procure roots to grow on the very tree, by carrying, and conueighing branches, either through earthen pots or osier baskets, full of earth, thrust close to the said branches; and by this means, the branches feeling comfort of the warme earth enclosing them on euery side, are easily intreated to take root, euen among Apples and other fruits, in the head of the tree, (for surely by this meane we desire to haue roots to chuse, growing vpon the very top.) So audacious are men and of such monstrous spirits, to make one tree grow vpon another, far from the ground beneath. Thus in like manner as before, at 2 yeares end, the said imps or branches that haue taken root, be cut off and carried away in the forehead pots or paniers; thither where they shall grow. As for the Saurine, an herb or plant it is that wil take if it be in this sort couched in the ground; so, a sprig if it be slipped off cleane from the stocke, wil come again and root. Folke say, that if a man take wine lees, or an old bricke out of the wal broken small, and either pour the one, or lay the other about the root, it wil prosper and come forward wonderfully. In like manner may Rosemarie be set as the Saurine, either by couching it, or slipping off a branch from it, for neither of them both hath any feed. To conclude, the herb or shrub Oleander, may be set of any impe, and to grow, or else come of seed.

CHAP. XIII.

¶ Of increasing trees by seed: the manner of grafting one in another: how the fine deuise of inoculation by way of cutcheon and enplaster was deuised.

Nature not willing to conceal any thing from man, hath also taught him to engraffe trees with their feed and graine. For oftentimes it happeneth, that birds being hungrie, haue greedily gobbled vp feed and fruit whole and found, which after they haue moistened in their gorge, and tempered it also with the warmth and natural heat of their stomack, they send forth and squirt out again when they meute, together with their dung, that giueth vnto it a vertue of fecunditie, and so lay it vpon the soft beds of tree leaues, which many a time the winds catch and driue into some clifts and cranies of the barke, by meanes whereof, we haue seene a Cherrie tree vpon a Willow, a Plane tree vpon a Lawrell, a Lawrell vpon a Cherrie tree; and at one time Berries and fruits of diuerse sorts and sondry colors hanging at one and the same tree. It is said moreover, that the Chough or Daw hath giuen occasion herof, by laying vp for store, seeds and other fruit in crevices and holes of trees, which afterwards sprouted and grew. From hence came the manner of inoculation or grafting in the futecheon, namely, to cut out a parcel of the barke of that tree which is to be grafted, with a sharp knife made in manner of a shomakers nail blade, and then to enclose within the said concavity, the eie or feed taken out of another tree with the said instrument. And in old time verily this was the only manner, of inoculation vfed in fig-trees and apple trees. *Virgil* teaches vs to open a concavity in the knot or joint of a bud that driueth out the barke, and within it to enclose the gem or bud taken out of another tree. And thus much for the grafting that Nature hath shewed.

But there is another way of grafting, which casualitie and chance hath taught. And to say a truth, this Maister hath shewed well neere more experiments, now daily practised, than Nature her selfe. Now the manner of it came by this occasion. A certain diligent & painfull husbandman,

A man, minding to mound and empane his cottage round about with a fence of an hedge; to the end that the flakes should not rot, laid a fill vnder them, of Iuie wood: but such was the vitall force of the said Iuie, that it took hold fast of the flakes and clasped them hard, in such manner as by the life thereof, they also came to liue; and euident it was to the eye, that the log of Iuie vnderneath, was as good as the earth to giue life and nourishment vnto the flakes afore-said.

To come then vnto our grafting, which we haue finished by this occasion: first, the head or upper part of the stock must be sawed off very euen, and then pared smooth with a sharp garden-hook or cutting-knife: which done, there offers vnto vs a two-fold way to perform the rest of the worke: The first is, to set the graffe or Sion between the barke and the wood, for in old time truly, men were afraid at first to cleaue the stocke; but soon after they ventured to bore a hole into the very heart of the wood: and then they set last into the pith iust in the mids thereof, but one Sion or graffe, for by this kind of grafting, impossible it was that the said pith should receiue or beare any more. But afterwards they deuised a finer and more subtile inuention to graffe, by cleaueing the stocke gently thorough the mids; and after this manner they might well set into it six imps or Sions at once: as being perswaded, that by such a number they might supply the defect of any, if they chanced to die or miscarry any way. Now when the said clift was made, they held it open with a wedge of wood put between, vntill such time as the impe or graffe being thwitted thin and sharp beneath were set hand somely close within the rift. In the practise of which feat, many points are to be obserued: first and foremost, it would be considered, what trees will thus sort together and be vnted; namely, what stock will beare this manner of engraffing, and of what tree an impe or Sion will agree well to be set into it: for be ye sure of this, all trees are not alike, neither haue they all their pith in one and the same part. Vines and Figtrees are drier in the mids of the tree, than in the head; and toward the top they are more apt to take and conceiue, and therefore from thence it is good to make choise of imps to be grafted. Contrariwise, the sap of Oliues is most from about the mids, and from thence they afford Sions; for the tops are drie. Moreover, soonest of all other doe those trees incorporate one into another, if when the stock and graffe haue barks both of one nature, if they blossom together at one time, if they bud and put forth their spring at the same season, and last of all, if their saps doe agree one with another. On the other side, long it wil be ere they take, when the stock is drie and the graffe moist; or when the barke of the one is tender, and of the other tough and hard.ouer and besides, carefull heed must be taken in this businesse, that the stocke be not clouen in a knot, for the churlish hardnesse thereof wil not willingly receiue and entertaine a guest, that choise also be made of the smoothest and fairest place in the stocke, where the graffe would be set: Item, that the clift be not aboue 3 fingers deepe; that it be streight and direct; and lastly, that the impe stand so close barke to barke in the socket, that a man may not see between it and the stocke. *Virgil* will in nowise haue a Sion or graffe, to be taken from about the top of a tree, for such are all naught. But this one thing is generally held for certain, that the good imps to be grafted are those, which be gathered from those armes of the tree that regard the Sun rising in summer: Item, that all such grafts come from the boughs that beare well also that they be new tender shoots of the last yeare (vnlesse they are to be grafted in the stock of an old tree, for then there should be chosen such as are stronger;) moreover, this is to be regarded, that they be well budded, yea and knotted too, making shew and giuing good hope euen then, that they would bear fruit the same yeare, but in any wise the same ought to be of 2 yeeres growth at least, and not smaller beneath toward the stocke than a mans middle finger. As for the graffes, the tree should spread rather in breadth, than run vp in height. Aboue all, it would be looked well to, that they be neat and bright, so as they shine againe; that no part of them be seene either scorched drie with the sunne, or cicatrized (as it were) and blistered. Good hope there is that the graft wil take, if the pith or marrow of the stocke do fall jump with the joynt, so as it ioynes close to the wood and inner barke of the mother stocke: for this is farre better than to let it meet iust and euen with the bark without-forth. Moreover, a carefull eie must be had in thwitting and sharpening the graffe or imp, that the heart or woody substance be not stript all naked and left bare: howbeit gently and with a light hand a man must go ouer it with a fine and sharp instrument, in such sort, as it may go downe into the clift wedgewise, no deeper than 3 fingers breadth: the which may right easily be don, if it be shauen and pared presently after it hath bin dipped

in water. Moreouer, wee ought be well aduised, that wee sharpen not the end of a graffe in the wind, and that the barke goe not either from it or the stock. As for the graffe it selfe, it must be driuen downe into the clift, close to the shoulder where the owne barke goeth round, and from whence you began to sharpen it; but take heed in thrusting and forcing thereof, that it stand not out of joynt, ne yet that the barke thereof turne vp in wrinkles: and therefore chosen they would not be which are ouer moist, no more (I assure you) than those that be too drie; for as the excessive humiditie of the one loosethen the rind, so the want of vitall moisture in the other, will not suffer it to vnite & conporat.ouer and besides, in the working of this feat, men obserue a certain religious reuerence, namely, that the fions be set into the stocke when the moone is croissant (to wit, before the full) and with both hands forsooth, or els all is marred: and otherwise in this businesse there is an opinion, that two hands together are put to smaller effect, and haue better stay of themselves than one alone; and therefore such a moderation is right necessary: for the more forcibly the graffes be set into the stocke, and the faster that they are settled, the longer it will be ere they take to bear, but surer they be, and continue the longer: contrariwise, if they stand slacke, the tree indeed will the sooner beare, but last the lesse while. Furthermore, regard would be had in this case, as well that the clift of the stocke gape not too much (as being ouerwide for the graffe); as that it be not too little and ouer-straight, for feare that either it flurt it out againe, or clasp it and gird it so hard that it kill it quite. This principally we must take heede of at the first, that there be no spill or little chip left behind in the mids of the clift, nor any thing besides the graffe it selfe, to fill vp the place. Some there be, that enter the clift first in the stock, with a bill, and with an otter twig tie and bind vp the very brims or edges thereof; which done, they driue the wedges in, to make such an ouerture as is meet; for by reason of the foresaid bonds, they need not feare the gaping of it too wide. Some stocks there be that the very same day that they be grafted in the nourece garden, are without any harme remoued to the place where they must grow. If the stocke wherein you graffe be big and round, the best way is to set the fion between the barke and the wood thereof, and to diuide the one from the other with a wedge of bone, least in enlarging of the barke it chance to breake. In grafting of a Cherry tree stocke, the ouer rind or barke would be taken away before the clift be made. [Now these trees alone of all others may be grafted very well presently after mid-winter.] When the said rind is gone, you shall see therein a certain down, that if it chance to clasp about the graft, it rots the same incontinently. But to return again to our worke of grafting: After the wedge is taken forth whole and found at the point (which is a token that no spill remains within) you may be bold to bind the head of the stocke all about. Yet this would be considered by the way (which I had like to haue forgotten) that the best & handfomest grafting, is as neere the ground as may be, in case the knots will giue leaue and the stock beare it; also that the graffs would not conueniently stand without the stock about six fingers breadth. Now when all is done and sure work made (as hath been said) *Cato* willett vs to take cleý, or the sandie gree of chalk, mixed together with oxe or cow shearn, to worke and temper all these together in manner of a tough past or cataplaine, and then to lay the same within the clift, & round about to daube all. And verily by this and other such rules which he hath left in writing, it appears plainly, that in those daies the manner was to graffe between the barke and the tree, and not otherwise; as also to set the fions in the stocke, not about two fingers deepe. As for Apple trees and Pyrries, he preferibeth that they should be grafted in the Spring; also 5 daies after the summer Sun-lead, and again after vintage; but Oliues and Fig-trees in the Spring only, obseruing the age and disposition of the Moon, when he is in the wane and thirthe, that is to say, drie: morcouer, after noonetide, and when no Southern wind doth blow. And I cannot chuse but wonder much at the curiositie and double diligence of *Cato*, who not content to haue defended the graft with clay or past afore said, yea and to preserve it with turfe and mosse against the iniurie of rain and cold, to haue bound it about also with little knitches of soft otter twigs sluied in twaine; must giue charge besides to couer it with Oxe-tongue (a kind of herb there is so called) i. Buglosse; and yet hee hath not done, but the same must be bound with wispes and wreaths of straw and litter aloft. Now adde men make no more ado, but thinke it sufficient to stop and close vp barke and al, with earth or clay and chaffe tempered together, thinking it sufficient, the graft beare out two fingers breadth above. They that wait vpon the Spring season for to graffe, are many times driuen to their thirsts for want of time, by reason that all trees make hast then to bud, and do breake

out

A out of a sudden, vnlesse it be the Oliue, the oilers or cries whereof be longest while in coming forth, as hauing least sap of all other, running vnder the barke; the which if it were ouermuch would stifte and choke the grafts. As for the Pomegranar and Fig tree, howeouer otherwise they seem to be drie, yet good it is not to defer and put off the grafting of them. The Pear tree may well enough be grafted with the blossom on the head, and it makes no matter if a man do lay and graffe it within the moneth of May. To be short, if a man be constrained to fetch his fions or imps of Apple trees, and such like, far off, it is thought that they will keepe their sap best, if they be stuck or set fast in a Rape root. Also if one would preferue them a certain time before they should be occupied, it is passing good to lay them close between two creft tiles, well stopped on euery side with earth, and that neere to some riuers or fish-ponds.

CHAP. XV. ¶ The manner how to graffe a Vine tree.

A S for the cuttings or sets of vines, they may be kept wel a long time, covered all ouer with straw or litter in drie ditches; and afterwards they are to be laid within the earth, all billed or couered, saue only that their heads be seen aboue ground. *Cato* graffeth a vine stock three maner of waies: First, he willett that the mother stock should be cut ouerthwart, & then clouen through the very pith or heart in the mids, wherein he would haue the yong imps (thwitted and sharpened as is before said) to be set and ingrafted so, as the marrow of the one and the other may ioyne and meet iust together. The second maner is, when two vine stockes doe reach one to the other, for to cut byas or allaut (after the manner of a goats foot) two twigs or branches, of either one, with this regard, that these cuts be of a contrarie side the one vnto the other, and withall so deepe, as that they come vnto the pith or heart: then to fit one to the other, ioyning pith to pith, and then binding them fast together so close, that no aire may enter between, vntill such time as the one hath adopted the other. The third deuise is, to bore holes in an old vine, not directly, but alope, as far as to the pith; and then to put into them yong imps a foot long, and to bind them fast: which done, to make a certaine batter or mortar (with clay, beas dung, and sand together) and therewith to dawbe the place: but with this regard, that the graft stand halfe vp right, or somewhat leaning. This manner of grafting hath bin checked and corrected of late daies by our countrymen, who leauing the hand-piercer, haue taken the French Vibrequin or brest-wimble, which gently and quickly boreth a hole, and hurteth nor the wood: for all chafing heare caused by the said piercer, dulseth the vigor both of stock and imp. Also they haue deuised, that the said imp to be ingrafted, be gathered from the tree when it begins to bud or burgen: and when it is set into the stocke, that it be left standing out with no more than two eies or buds out of the grafting place; that it be well bound also with the winding rods of an Elme: morcouer, that on either side of it the mother stock be slit or cut in two places on both sides, to the end that from thence rather than otherwise, the waterish humour may distill and drop forth, which of all things hurteth vines most. After all this, they would haue the said graft remain bound, vntill such time as it haue put forth shoots two foot long; and then the foresaid bands to be cut in sunder, that they may burnish in thickness and at ease accordingly. The season which they haue allowed for to graffe vines, is from the Equinoctial in Autumne, vnto the time that they begin to bud forth. Generally all trees that are tame and gentle may wel be grafted into stocks and roots of the wild, which by nature are dryer: contrariwise, graft the wild and furaige kind vnto the other, you shal haue all degenerate and become wild. Touching other points belonging to the feat of grafting, all dependeth vpon the goodnesse or malignitie of the sky and weather. In sum, a dry season is good for all trees grafted in this manner: and say that the drought were excessive, there is a good remedie for it, namely, to take certain earthen pots of assies, and to let water distill through them softly, by little and little to the root of the stock. As for inoculation, it longeth small dewes otherwhiles, to refresh both stock, feutecheon, and Oiler.

CHAP. XVI.

¶ Of Emplastration or grafting with the Scotchene.

T He manner of grafting by way of emplastre or feutecheon, may seme also to haue come from inoculation: and this deuise agreeth best with those trees that haue thicke barks, as namely Fig trees. To goe therefore artificially to worke, the mother stocke or tree to be

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grafted,

grafted, must be well rid and clefted from the branches all about the place where you mean to practise this feat, because they should not suck the sap from thence; and chuse the nearest and frimmest part, which seems most fresh and lively: then cut forth a scutcheon of the barke [but be careful that your instrument pierce no farther than the bark, nor enter into the quick wood] which doth take from another tree the like scutcheon of the bark, saving the eye or bud thereon, and set it in the place of the other; but so equal this must be to the place, and so close ioynd and vntied to it, that a man may see no token at all or appearance in the ioynt, of any wound or skar made, to the end, that presently they may incorporate, that no humor of the sap may issue forth, nor so much as any wind get between: and yet to make sure work, the better way is to lute it well and close with clay, and then to bind it fast. This deuice of grafting thus with the scutcheon was but lately found out, by their saying, that sauer all new and modern inuentions: howbeit I find that the ancient Greeks haue written thereof: yea and *Cato* also our own Countryman, who ordained to graffe both Oliue and Fig tree in that order: and (as he was a verie diligent and curious in all things that he tooke in hand) he hath set downe the iust measure and proportion of the scutcheon; for he would haue the barks both the one and the other, to be cut out with a chisell foure fingers long, and three in breadth, and so to close vp all in manner aforesaid, that they might grow together; and then to be dawbed ouer with that mortar of his making aforesaid: after which maner Apple trees also may be grafted.

Some there be who haue intermingled and comprehended vnder this kinde of grafting with the scutcheon, that deuice of making in the side a cleft, and namely in vines, for they take forth a little square piece with the bark, and then set in an impe very hard & close, on that side where it is plain and euen, to the very marrow or pith. Certes, nere to Thulie in the Tyburtines country, I haue seen a tree grafted all these waies aforesaid, and the same laden with all manner of fruits; one bough bearing Nuts, another berries, here hung Grapes, there Figs; in one part you should see Peares, in another Pomegranats; and to conclude, no kind of Apple or other fruit, but there it was to be found: may this tree liued not long. Howbeit, let vs view what diligence we can, yet neuer shall we able with all our experiments to attain vnto the depth of Natures secrets. For some Trees there be that come vp of themselves, and by no art and industry of man will be made to grow: such also loue ordinarily to be in wild forests and in rough desarts, where they prosper well; whereas the Plane tree will beare all manner of grafting best of any other; and next vnto it the wild and hard Oke: but both the one and the other corrupt and mar the tast of what fruit soeuer is grafted thereupon. Some trees there be that refuse not to be ingrafted vpon any stock, and what way soeuer they be grafted it skils not, as fig trees and Pomegranat trees. As for the Vine it will not beare the scutcheon, neither any Tree besides that hath a thin bark, or which doth pill and rift: no nor such as be dry or haue small store of sap within them can away with inoculation. Howbeit this maner of grafting is most fruitfull of all others, and next vnto it that which is done by way of scutcheon or emplatte: yet trees so grafted be of all others most tender and feeble: as also such as rest and lay vpon the bark only, are with the least wind that is, soonest displanted and laid along on the ground. The surest and strongest way therefore is, to graffe imps vpon the head of a stocke, yea, and more plentifull by far, than to sow them of seed, or plant them otherwise.

CHAP. XVII.

¶ An historie shewing the example and prooue her of.

IN this discourse and question concerning grafts, I cannot passe ouer the rare obseruation of one example, practised by *Corellius* a Knight of Rome, borne at Aretse: This Gentleman of Rome, in a ferme that he had within the territorie of Naples, chanced to graffe a Chestnut with an imp cut from the same tree: This graft tooke and bare faire Chestnuts and pleasant to the tast, which of him took their name. After the decease of this gentleman, his heire (who had bin sometime his bond slaue, and by him in franthified) grafted the foresaid *Corellian* Chestnut tree a second time: and certainly between them both was this difference, The former *Corellian* bare the more plenty, but the nuts of the other twice grafted were the better. As for other sorts of grafting or planting, mans wit hath deuised, by obseruing that which hath fallen out by chance: thus are we taught to set broken boughs into the ground, when we saw how stakes pitched

A ched into the earth, tookeroot. Many trees are planted after that maner, and especially the Fig tree, which will grow any way, saue only of a little cutting: but best of all, if a man take a good big branch thereof, sharpen it at the end in manner of a stake, and so thrust it deepe into the ground, leaving a small head about the ground, and the same covered ouer with land. The Pomegranate likewise and the Myrtles are set of branches, but the hole first ought to be made easie and large with a strong flake or crow of iron. In sum, all these boughs ought to be 3 foot long, smaller in compass than a mans arme, sharpened at the one end, and with the barke saved whole and sound with great care. As for the Myrtle tree, it will come also of a cutting, the Mulberry will not otherwise grow: for to couch and plant them with their branches, we are forbidden, for feare of the lightnings. And forasmuch as we are fallen into the mention of such cuttings, I must now shew the manner of planting them also: about all things therefore regard would be had, that they be taken from such trees as be fruitfull, that they be not crooked, rough and rugged, nor yet forked; ne yet slenderer than such as would fill a mans hand, or shorter than a foot in length. Item, that the barke be not broken or raised; that the nether end of the cut be set into the ground, and namely, that part alwaies which grew next the root, and last of all, that they be banked wel with earth about the place where they spring and bud forth, vntill such time as the plant haue gotten strength.

CHAP. XVIII.

¶ The manner of plowing, ordering, and dressing Olive trees. Also which be the convenient times for grafting.

WHAT rules (by the iudgment of *Cato*) are to be obserued in the dressing and husbanding of Oliues, I think it best to set downe here word for word, as he hath deliuered them. Thus he saith therefore: The trunches or sets of Oliue trees which thou meanest to lay in trenches, make them 3 foot long; handle them gently and with great care, that in cutting, sharpening, or squaring them, the bark take no harm nor pill from the wood. As for such as thou dost purpose to plant in a nourish garden, for to remoue again, see they be a foot in length, and in this manner set them: Let the place be first digged thoroughly with a spade vntill it be well wrought, lie light, and brought into temper: when thou putteth the said truncheon into the ground, beare it downe with thy foot; if it goe not willingly deepe enough by that means, drive it lower with a little beetle or mallet; but take heed withall, that thou ruse not the barke in so doing. A better way there is, To make a hole first with a flake or crow, before thou set it into the ground, and therein maiest thou put it at ease, and so will it liue also and take root the sooner: when they be three yeares old, haue then a careful eye to them in any case, and marke where and when the bark turneth. If thou plant either in ditches or furrowes, lay three plants together in the earth, but so as their heads may stand a good way asunder about the ground, also that there be no more seen of them than the breadth of foure fingers: or els, if thou thinke good, let the buds or eyes only of the Oliue. Moreover, when thou art about to take vp an oliue plant for to set againe, be wary and careful that thou break not the root: get as many furrows or strings, called the beard, as thou canst, earth and all about them: and when thou hast sufficiently covered those roots with mould in the replanting, be sure thou tread it down close with thy foot, that nothing hurt the same.

Now if a man demand and would gladly know what is the fittest time for planting oliues; in one word I will tell him, Let him chuse a dry ground in feed time [i. in Autumne] and a fat or barrell ground in the spring: furthermore, begin to prune thy Oliue tree 15 daies before the Equinox in the spring, and from that time forward for the space of forty daies, thou canst not do amisse. The maner of pruning or disbranching them, shall be thus, Looke where thou seest a place fertile, if thou spy any dry or withered twig, or broken boughs that the wind hath met withall, be sure thou cut them away euerie one: but if the plot of ground be barren, care it vp better with the plough, take pains (I say) to till it well, to breake all clots and make it euen, to cleft the trees likewise of knurs and knots, and to discharge them of all superfluous wood: also about Autumne bare the earth from about the roots of Oliues, and lay them bare, but in stead thereof put good mucke thereto. Howbeit if a man do very often labor the ground of an oliue plot, and take a deep stich, he shall now and then plough vp the smallest roots thereof, to ebbe

they will run within the ground, which is not good for the trees; for in case they spread aloft, they will wax the thicker, and so by that means the strength and vertue of the Oliue will turne all into the root.

As touching all the kinds of Olive trees, how may they be; also in what ground they ought to be set, and wherein they will like & liue best; likewise what coast of the heauen they should regard; we haue shewed sufficiently in our discourse and treatise of Oile. *Mago* hath giuen order in his books of husbandry, that in planting them vpon high grounds, in dry places, and in a vein of clay, the season should be between Autumne and mid-Winter: but in case you haue a fat, moist, or waterish soile, he sets down a longer time, namely from harvest to mid-winter. But this rule of his you must take to be respectiue to the climat of Africk only: for in Italy at this day, verily men vse to plant most in the Spring: howbeit it a man hath a mind to be doing also in Autumne, he may be bold to begin after the Equinox: for during the space of 40 dayes together, as he is to the setting of the * Brood-hen star, there are no more but 14 days ill for planting. In Barbarie the people haue this practise peculiar to themselves, For to graffe in a wilde Oliue stock, whereby they continue a certain perpetuity: for euer as the boughs that were grafted, and (as I may say) adopted first, wax old and grow to decay, a second quickly putteth forth afresh, taken new from another tree, and in the same old stock sheweth yong and lively; and after it a third successefully, and as many as need; so as by this means they take order to eternise their Oliues; inasmuch as one Oliue plant hath bin known to haue prospered in good estate a world of yeares. This wilde Oliue aforesaid may be grafted either with fions set in a cliffe, or els by way of inoculation with the scutcheon aforesaid. But in planting of Oliues this heed must be taken, that they be not set in a hole where an Oke hath been stocked vp by the root: for there be certain canker-wormes, called *Eruca* in Latine, or *Rauca*, breeding in the root of an Oke, which eat the same, and no doubt will do as much by the Oliue tree. Moreouer, it is found by experience better for Oliue trees, that their sets be not interred in the earth, nor yet dried, before they be planted. Also, the same experience hath taught, that for old Oliue trees, ouergrown with a kind of mossie skurfe, it is passing good, each other yeare to scrape and claw them well, between the Spring and Equinox, and the rising of the starre *Vergilii* or the Brood-hen: likewise to bestow mossie round about the root: many euery yeere they would be digged round about the root and laid bare after the sunstead, with a trench made two cubits broad, and a foot deep: as also once in three yeeres it were not amiss to cherish them with good dung.ouer and besides, the same *Mago* saith, that almond trees ought to be planted between the setting of *Arcturus* and the shortest day in the yeare. As for Pear trees, they are not to be set all at one and the same time, for they blossom not all alike. They that beare either the long or round pears, haue their season from the occultation of the Brood-hen starre, vntill mid-Winter. All other sorts, and principally those that regard either the East or the North, are to be planted in mid-winter, namely after the retreat of the star called *Sagitta* [i.e. the Shaft.] The Lawrell would be put in the ground, from the Eagle-star, vnto the fall of the Shaft aforesaid: for certainly the obseruation of the time, pertinent to the planting of trees, agreeth much what after this manner; and for the most part, men do accord and ordaine, That it should be done in the Spring and Autumne especially. Another season there is about the rising of the Dog-starre, which few men take knowledge of, because it is not so generally practised, nor found alike profitable to all countries: howbeit I must not ouerpasse it in silence, considering that my purpose is not to speake of that or countries disposition, but to search into the nature of all things. In Cyrenaica therefore, a region in Africk, they vse to set trees about the time that the Etetian North-wind blows: in Greece likewise they do the same, and namely in Laconia they suppose that to be the best time for the Oliue tree: & in the Island *Cos* the manner is then to plant Vines also. In all other parts of Greece they make no doubt to inoculate and to graffe in that season; but in no wise will they plant whole trees then. But herein it skilleth much to consider the nature of each tract and region: for in Egypt, they set, plant, and replant euery moneth of the yeare: in Ethiopia likewise, and India; and generally in all Countries whereof euer it raineth not in Summer. Setting these respects aside, Trees require of necessitie to be planted in Autumne. Like as therefore there be three seasons of planting Trees, so there are as many wherein they bud and put forth new shoots; to wit, the Spring, the rising of the Dog-starre, and the apparition of *Arcturus*. And verily this is a thing worthy to be noted, that not onely beafts

A beafts and other liuing creatures haue an appetite to engender, but the earth also, and all the plants thereupon, are much more lusty and hot that way. And therefore to make them to conceive in due season, the time would be well obserued, when they be as it were in loue, and desire the act of generation. And not onely in the earth and trees therein planted, is this to be seen, but in graits and stocks also particularly by themselves, since that they haue a mutual and specific appetite, one to ioine and incorporate with the other. They that make choise of the Spring for this purpose, begin to put them as it were together to engender, presently after the Equinoctiall; giuing out in these plaine termes, that trees then are broody and ready to put forth sprouts; which is the reason, that their barks at such a time will knit and ioine together easily. But such as prefer the Autumne before the Spring, fall to this businesse immediately vpon the rising of the star *Arcturus*, for then they suppose, that plants will take root forthwith, by the time that the Spring is come, they will be better prepared to put forth lustily; considering that their vertue is not straightwaies spent in budding, but rather imploied in making good root. Howbeit, some trees there be that haue their set times and seasons of the yeere limited; whether it be to plant or to graffe: and the same indifferently in all places; as namely, Cherry trees and Almond trees about the mid-winter. But for the most part, the situation of the place, will be able to guide and order all this matter best: for cold and waterish grounds ought to be planted in the Spring; but dry and hot in the Autumne. With our peasants here in Italy, it is ordinary to diuide their times and seasons for planting in this manner following. They set out for the Mulberry all the time from the Ides of February to the Spring Equinox: for the Pear and longer; for Summer apples and quinces, for Seruises likewise and plums, they assigne the space between the winter tropicke or Sun-stead, and the Ides of February. As for Carobes of Greece, and Peach trees, they haue all the Autumne and the whole yeere before them vntill mid-winter trees, would be planted from between the first day of March, and the 15 thereof. To conclude, the only time for willowes and broom, is about the Calends or beginning of the fame March. But of these two last named, the Broom loueth to be set of Nource-plants, coming of seed, in dry and light grounds; but contrariwise, the willow to be set of twigs in moist places, according as we haue before said.

CHAP. XIX.

¶ What trees they be that loue to sort and keepe companie together. The skill, and feat of baring the roots of trees; and also of hilling or banking them about.

There is besides a new manner of grafting trees, which I will not ouerpasse: for my purpose is not willingly to omit ought, that I haue found in any booke as touching this argument. And *Columella*, as himselfe affirmeth, was the first deuiser thereof, namely, to conioin trees of diuers natures, and such as otherwise cannot abide societie and fellowship together, as for example, Fig. trees and Oliue trees. He, I say, would haue a Fig-tree to be planted nere vnto an Oliue, and so nere indeed, as that a bough or branch of the oliue may reach vnto the Fig-tree at ease, considering that it is very supple and pliable otherwise, and ready to follow and be led as a man would haue it; and yet as obedient as it is, hee would haue it it euer and anon to be handled and made gentle in the meane time, that by this meanes inured first, it may be bent and bowed to the purpose when the time serues. Which done, after that the Figge tree hath gotten some strength, and is growne to sufficient bignesse for to beare a graffe (which ordinarily is at three yeeres end, or at the utmost when it is five yeeres old) the head thereof must be cut or sawed off, and then the branch or bough of the Oliue before said, being well clenfed and made neat, and the head end thereof (as is before said) thwisted and scraped sharpe, howbeit, not yet cut from the mother stocke, must be set fast in the shanke of the Figge-tree, where it must be kept well and surely tied with bands, for feare, that thus being forced and grafted arch-wise, it start and flurr not out againe, and returne vnto the owne. Thus being of a mixt and meane nature, betweene a branch or bough growing still vnto the Tree, and yet laid in the ground to take new root, and an Impe or Sion grafted, for the space of three yeeres it is suffered to feed and grow indifferently betweene two mothers, or rather by the meanes thereof, two mother-stocks

stocks are growne and vnited together. But in the fourth yeare it is cut wholly from the owne mother, and is become altogether an adopted child to the Fig-tree, wherein it is incorporat. A pretty deuise, I assure you, to make a Fig-tree beare Oliues, the secret whereof is not knowne to euery man, but they selfe do conceiue and see the reason of it well enough.

Moreover, the same regard and consideration aboue rehearsed, as touching the nature of grounds, whether they be hot, cold, moist, or dry, hath shewed vs also the manner of digging furrows and ditches. For in watery places it will not be good to make them either deep or large; whereas contrariwise, in a hot and dry soile they would be of great capacity, both to receiue and also to hold store of water. And verily, this is a good point of husbandry for to preferue not onely young plants; but old trees also: for in hot countries, men vie in Summer time to raise hillocks and banks about their roots, and couer them all therewith, for feare lest the extreme heat of the Sun should scorche and burne them. But in other parts the manner is to dig away the earth, and to lay the roots bare, and let in the wind to blow vpon them. The same men also in winter doe hanker the roots about, and thereby preferue them from the frost. Contrariwise, others in the winter open the ground for to admit moisture, to quench their thirst. But in what ground soeuer it be where such husbandry is requisite, the way of cleming tree roots, and ridding the earth from them, is to dig a trench three foot round about. And yet this must not be done in meadows, forasmuch as for the loue of the Sun, and of moisture, the roots of trees run ebbe vnder the face of the earth. And thus much verily may suffice in general, for the planting and grafting of all those trees that are to beare fruit.

CHAP. XX.

Of Willow and Osier plots: of places where reeds and Canes are nourished: also of other trees that be usually cut for poles, props, and stakes.

It remaineth now to speake of those trees which are planted and nourished for others, and for Vines especially to which purpose, their wood is usually lopped to serue the turne. Among which, Willows and Osiers are the chiefe, and to be placed in the moistest rank; and ordinarily they loue to grow in moist and watery grounds. Now, for the better ordering of the Osier, the place would be well digged before, and laid soft two foot and a halfe deep, and then planted with little twigs or cuttings of a foot and a halfe in length, and those prick in: or else stored with good big sets, which, the fuller and rounder they be in hand, so much better they are for to grow, and sooner will they proue to be trees. Betwene the one and the other, there ought to be a space of six foot. When they are come to three yeares growth, the manner is to keepe them downe with cutting, that they stand not aboue ground more than two foot, to the end that they might spread the better in breadth, & when time serues be lopped & shired more easily, without the help of ladder: for the Withe or Osier is of this nature, that the nearer it groweth to the ground, the better head it beareth. These trees also, as well as others, require (as men say) to haue the ground digged & laid light about them euery yere, in the month of April. And thus much for the planting and ordering of Osier willows, which must be employed in binding and winding. As for the other willow, which affordeth big boughs, for poles, perches, and props, those may be set likewise of twigs and cuttings, and trenched in the ground after the same manner. These lightly euery fourth yere will yeeld good poles or flauces, & for that purpose would they then be ordinarily cut and lopped. If these trees become old, their boughs by propagation may still maintain and replenish the place; to wit, by couching them within the ground; & after they haue lien foone yere, and taken root, by cutting them clean from the stocke-father. An Osier plat of one acre sored thus, will yeeld twigs sufficient for windings and bindings, to serue a vineyard of five and twenty acres.

To the same purpose men are wont to plant the white poplar or Aspe, in manner following. First, a piece of ground, or a quarter, must be digged and made hollow two foot deep: and therein ought to be laid cuttings of a foot and a half in length, after they haue had two daies drying: but so, as they stand one from another, a foot and a handbreadth, & be couered ouer with mould two cubits thick.

As touching canes and reeds, they loue to grow in places more wet and waterish than either the Willows and Osiers aboue said, or the Poplars. Men vie to plant their bulbous roots, which

A some call their oilers or eies, in a trench of a span depth: and those two foot and an halfe asunder. These reeds do multiplye and increase of themselves (if a plot be once planted with them) after the old plants be extirped & destroyed. And surely, this is found now adays to be the better and the more profitable way, euen to commit all to Nature, rather than to guele and weed them out where they seem to grow ouer thick, as the practise was in old time: for the manner of their roots is, to creepe one within another, and to be so interlaced continually, as if they were twisted together. The fit and proper time to plant and set these canes or reeds is a little before the calends of March, to wit, before the oilers or eies aboue said begin to swell. They grow vntill mid-winter, at which time they wax hard, which is a signe that they haue done growing; and this is the only season also for to cut them. Likewise, the ground would be digged about them, as often as vines. The order of planting them is two manner of waies, for either the roots be laid ouerthwart or across, and but shallow within the ground, (and look how many eies there be in the root, so many plants will spring aboue the earth;) or els they be pitched down-right, within a graue or trench of a foot depth, so as there be two eies or buds vnder the ground, & the third aboue, but close and meet with it; but this caueat is to be giuen, that the head thereof may third forward toward the earth, for feare that it drinke in any dew, which might stand and fettle vpon it. This also is obserued, that they be cut euer in the wane of the Moone: as also, before that they are imploied about Vineyards for to beare vp vines, they would haue a whole yeares drying, for such are more profitable than the greene.

The best staies to beare vp Vines, are made of the Chestnut tree: for why? the wood is gentle and tractable; tough withall, and induring long; besides, it hath this property, that cut it when you list, it will spring againe more plentifully than any willowes. It loueth to grow in a gentle and sandy ground, but principally, if the same stand vpon a moist grauell or a hot earth full of little pebbles, and namely, where there is good store of such soft stones, as will foone crumble into grime: neither makes it any matter how much the place be shadowed, nor how cold and exposed to the Northern winds, for such it liketh well enough, yea, although it be the side or hanging of an hill, as bleake and cold as may be. But contrariwise, it may not abide the red French Nut, as we haue before said; but it commeth not vp, vntill there be fue in a heape piled together, and those of the fairest & biggest sort. Moreover, the plot wherein you mean to haue Chestnuts grow, must be ouerly broken vp aloft, from between Nouember and Februarie: in which time the Nuts vse to be loose, and to fall of themselves from the tree, and spring vnderneath, there ought to be a foot space euery way, and the trench wherein they be set, of a span depth: out of this plot, as out of a seminary and nourse-garden, these yong plants are to be transplanted into another, and then they must be set two foot asunder. Howbeit, they ought to be about two yeres old first, before they be removed and replanted. Moreover, a man may increase Chestnut-trees by propagation; to wit, by couching and trenching the branches thereof, as they grow to the mother: and there is not another tree againe that sooner taketh that way, than it doth; for the root thereof being laid bare, the whole branch must be interred along in the trench made for the purpose, leaving out the end only aboue ground. Thus shall you haue one tree spring from it, and another from the root. Howbeit, planted in this wise, it loueth not to be transplanted, it cannot lodge elsewhere, but dreads it, and hateth all change of soile: and therefore such plots of ground as do afford coppices of Chestnut trees, are stored with plants comming of marrons or nut-kernels, rather than quicke-sets or plants set with the root. For the ordering and dressing of them, there is no other labour required, than the others before rehearsed; namely, for the two first yeares insuing to dig the ground loose about their roots, and to proue or cut away the superfluous twigs: for euer after they will shift well enough, & manure themselves, by reason that their owne shade will kill those superfluous water-shoots that spring out either from the root or the sides of the tree. A coppice of these trees is cut ordinarily within euery seuenth yere; and one acre of them will yeeld props enough for to serue a vineyard of twenty acres: for besides that one pole of them will abide to be clouen and make two props apeece, they will last very well vntill the next fall of the wood or coppis be past.

Moreover, the Malt tree called Esculus, is planted and commeth vp in like sort: howbeit, passing vntoward and vnwillig they are to grow, and therefore they stand ten yeres at least before they

they be cut and lopped. Set Acorns of this tree Esculus wherfoever you please, they will surely take and come up: but the trench must be a span deep, and the Acornes two foot asunder. And foure times a yeare they to be lightly raked and clesned from weeds. A forke or prop made of this wood, lasteth very well and rotteth not: and in very truth, the more that the tree it selfe is cut and mangled, the better it springeth and putteth forth new shootes.

ouer and besides these trees abouenamed, there be others that vse to be cut and lopped for Vine props and stakes: to wit, the Ash, the Bay tree, the Peach and Hazell tree, yea, and the Apple tree: but these are all of them lateward and slow of growth: neither will they endure so well without rotting, if they stand any time in the ground, and much lesse will they abide any wet. But on the othe side, the Elder tree of all others is most firme for to make poles and stakes of. It will grow of fions and imps euen as the Poplar. As for the Cypresse tree, we haue of it spoken sufficiently already.

CHAP. XXI.

¶ The manner and skill of husbanding and dressing Vineyards.

Now that we haue treated sufficiently of the instruments, furniture, and tackling as it were belonging to Vineyards, it remaineth to speake of the nature of vines, and to deliuer with especial regard the manuring and dressing them. According thereto as we may see in Vines and some other trees, which haue within them a spongy matter and light substance, their twigs and branches do containe a kind of marrow or pith inclosed between certain knots or joints wherewith their stalkes are diuided and parted. As for the fistulous concavities, they are but short all of them, and toward the top shorter and shorter, but euermore betwene two knots, they inclose the joints aforesaid. Now this marrow, this vegetatiue and vitall substance, I say (call it whether you will) runneth forward fill on end all the length of the hollow ke or pipe so long as it findeth no resistance by the way: but meeting once with a joint or hard knot which maketh head vpon it, not suffering the same to passe forward, it beeing driven backe, returneth downward: howbeit, in that reuerberation, breaketh out vnder those knots, and putteth forth certaine wings or pinnions like arme pits, whereas the buds or leaues doe come; but alwaies in alternatiue course, one of this side, another of that; after the maner of reeds, canes, and fennell-giant, as hath bin shewed before; in such wise, that if one wing rise forth at the bottome of the lower knot on the right hand, another springeth for it on the left hand in that next about it; and thus they keep order the whole length of the branch. These sprouts when they are come once to some bignesse, and do branch there, be called of the Latines by a pretty name, Gemme, as it were precious stones: but so long as they are no other than buds sprouting forth vnder the concavity or pit-hole of the foresaid joints, they term them Oculos [i. Oylers or Eyes] marie in the very top they be named by them Germina [i. Sprigs or Burgeons.] After this order are ingendered the maine branches, the smaller * sprigs yearly cut away, the grapes, leaues, and yong tendrils of Vines. But herat I wonder most, that the burgeons coming forth on the right side, be alwaies more tough and firm than those of the left. To come now vnto the planting of these vines: the shootes or branches must be cut iust in the midst between the foresaid knots or joints, so as the marrow in nowise run out. And if you would plant fig-fets or fions, they ought verily to be a span long, and then to be prickt into the ground (but first there should be a hole made with a little stake) with the greater end that grew next to the body of the tree downward: provided alwaies, that two oylers or buds stand about ground. Now these oylers are properly (in twigs or fets of trees) those buds called, where the new spring first shooteth forth. And herupon it is, that these fions or cuttings being set in nourse-gardens, beare the same yere that very fruit which they would haue borne vpon the tree, if they had not been cut off: and namely, if they be set in the right season whiles they be plump and full: for hauing conceiued on the Tree, they do consummat the sad conception so begun, and are deliuered thereof else where. And look what Fig-fets be in this manner planted, may be easily and without danger removed and translated the third yere after. For certes, as this tree of all others soon ageeth and indureth not long, so in recompence of short life, this one gift it hath of Nature; That it comes forward apace, quickly growth to the full bignesse, and beareth fruit.

As for the Vine, there is not a tree that is planted more fundrie waies, nor affordeth greater store

A store of fions or fets than it. For first and foremost, nothing thereof is planted, but that which is vnprofitable, burthensome, and of necessitie to be pruned and cut away. But in the pruning, this rule must be obserued, that those branches be cut off which were portours, and bare grapes the yere before. The manner in old time was to plant or set a fion, headed (as it were) and taking hold on both sides of the old wood and hard stock: wherupon, because it was fashioned like a little mallet or hammer head, it was and is at this day called in Latine Malleolus. But afterwards they began to slip off a twig with a heele only of the old wood (as they vse to doe in a Fig-tree): & there is not a better way to make a Vine surely to take and liue than this. At third forth there is besides of fions or fets which are more readily gotten, without any such heele of the hard wood, and therefore they be wreathed and twined when they be set into the ground:

B wherupon they be called in Latine Sagittis [i. Shafts]: for the same fions only cut off and not wreathed are named Trigenmes, as a man would say, twigs with 3 buds or spurts: & therefore of one and the same vine-branch, a man may in this sort make many kinds of fions or fets. Howbeit, that is to be noted, that if you set any yong sprigs that neuer bare fruit but leaue onely, the Vines coming thereof will be euer barren: and therefore none ought to be planted but such as are fruitful. A vine set or cutting, that hath joints standing thin, but here & there, is thought to be fruitlesse: but contrariwise, if it be set thick with buds, by all likelihood it will beare plentifully. Some are of opinion, that no fions should be put into the ground, but those that haue floured already: also, that to set such cuttings as be called shafts, which haue no part of the old wood, is not so fit; for, that in removing they are in danger to break whereas they were written.

C Now, when you haue gotten such fets as be meet for planting, let them be a foot long at the least, and carry five or six knots, and at this length they cannot possibly haue fewer than three buds. Moreover, the best way is presently to set them the very same day that they be gathered. But in case a man be driven to keep them long before they be put into the ground, great heed would be taken, according to the rule before said, that they be not laid about ground, that they dry not in the Sun: that they take no wind, nor loose their fresh vigor by cold. And if it chance that they lie out any while in the dry aire, they would be laied to soke in water many daies together, vntill they be refreshed and look green again, before they be set into the earth. The plot or quarter within the nourse-garden or vineyard, ought to be wel exposed to the Sun of a good largeness, and sufficiently moulded: also, it must be well digged for 3 foot broad with a grubbing double toothed forke: then must you goe deeper and cast vp the earth with a broad spade or shouell, after that the same hath bin broken vp with a mattocke or yron tooke, carrying foure foot in the head, so as the ditch may go two foot directly deep into the ground. Which done, the ditch is to be clesned, & the mould to be spread abroad, & not left lying raw in that maner,

but to take a kind concoction in the weather. And herein must the labourer proceed and be ruled by measure, and trie his worke thereby: for if the earth be not well delused, it will be soone found out by the vneuen balks or beds. There would be a iust measure taken also of the allies that lie between the beds. All things being thus prepared, let vs come now to the planting of the fets aforesaid, which would be couched either in trenches made of purpose, or in long furrows; and then the finest and most delicate mould that can be found, is to be cast aloft. But all this prepaireth not in a leane and hungry ground, vnlesse fatter earth be laied as a pallet underneath. Moreover, this is to be looked vnto, that two fets at the least be moulded and laid within the earth together in one range: also they must be so couched, that they leane with their heads close vpon the earth next about them; yea, and with one and the same stake the said earth ought to be driven close and fast about them.ouer and besides, throughout the whole plot or quarter of this nourse-garden, regard is to be had, that between euery two fets there be a foot & an half one way; to wit, in breadth; and halfe a foot another way, to wit, forward in length. These plants being thus ordered, after they haue growne to twelue moneths, they should be then discharged of all their burgeons, euen to the nethermost knot, vnlesse haply it be spared and let alone: for some there be that cut it also after these, cometh forth the matter of the oylers, & shew them felues; and therewith at the third twelue month end the quick-set root and all is removed to another place in the vineyard.

Besides all this, there is another pretty and wanton deuise, more curious ywis than needfull, to plant Vines, and namely, after this manner. Take foure branches of foure vines growing together, and bearing sundry kinds of grapes; bind them wel and strongly together in that part where

where they are most ranke and best nourished: being thus bound fast together, let them passe along either through the concavities of an Oxen shanke and maribone, or els an earthen pipe or tunnel made for the nonce. Thus couch them in the ground, and couer them with earth, so as two ioints or buds be seen without. By this meanes they inioy the benefit of moisture, and take root together: and although they be cut from their owne stocks, yet they put out leaues & branches. After this, the pipe or bone aforesaid is broken, that the root may haue libertie both to spread and also to gather more strength. And will you see the experience of a pretty secret: you shall haue this one plant thus vnited of foure, to beare diuers and sundry grapes, according to the bodies or stocks from whence they came. Yet is there one fine cast more to plant a Vine, found out but of late, and this is the manner thereof: take a Vine-set or cutting, slit it along through the midit, and scrape out the marrow or pith very cleane; then let them together again wood to wood, as they were before, and bind them fast-but take heed in any case that the buds or oilets without-forth be not hurt, nor rased at all. This done, put the same cutting into the ground, interre it I say wel within earth and dung tempered together: when it begins to spread yong branches, cut them off, and oftentimes remember to dig about it, & lay the earth light: & certes, *Columella* holdeth it for certain, and as sureth vs vpon his word, That the grapes coming of such a vine will haue no stones or kernels at all within them. A strange thing and passing wonderful, that the very set it selfe should liue; and that which more is, grow and beare, notwithstanding the pith or marrow is taken quite away.

Furthermore, since we are entred thus far into this discourse and argument, I cannot passe by but I must needs speake of such twigs and branches of trees as will knit and grow together euen to a tree. For certain it is, that if you take five or six of the smallest sprigs of box, binde them together, and so prick them into the ground, they will proue and grow to one entire tree. Howbeit, in old time men obserued, that these twigs should be broken off from a Box tree, which neuer had bin cut or disbranched, for otherwise it was thought verily they would neuer liue; but afterwards this was checked by experience, and the contrary knowne. Thus much as touching the order of Vine-plants, and their nource-garden for store.

It remaineth now to speake of the manner of Vineyards and Vines themselves. Where in the first place, there offer vnto vs fise sorts thereof. For some traine and run along vpon the ground spreading euery way with their branches: others grow vp right and beare vp themselves without any staies. Some rest vpon props, without any traile or frame at all: others be born vp with K forkes and one single raile lying ouer in a long range: and last of all, there be vines that run vpon trailes and frames laid ouer crosse-wise with foure cources of railes, in manner of a crosse dormant. The same manner of husbandry that serues those Vines which beare vpon props without any other frame at all, will agree well enough to that which standeth of it selfe without any staies. For surely it groweth so, for default onely and want of perches and props. As for the vine that is led vpon a single range as it were in one direct line, which they call *Cantarius*, it is thought better than the other, for plenty of liquor: for besides that it shadoweth not it selfe, it hath the furtherance and help of the Sun-shine continually to ripen the grapes: it hath the benefit also of the wind blowing through it, by which means the dew will not long stand vpon it. Moreover, it lieth more handfome to the hand for the leaues to be plucked away, and for the clouds to be broken vnder it: & in one word, is readiest for all kind of good husbandry to be don about it. But about all other commodities it hath this, that it is not long in the floure, but bloometh most kindly. As for the frame aforesaid, that is ranged in one line a length, it is made of perches or poles, reeds and canes, cords and ropes, or els lines of haire, as in Spaine and about Brindis. The other kind of frame with railes and spars ouerthwart, beareth a vine more free, for plenty of wine than the rest, and called this is *Compluvata vitis*, because it resembleth the hollow cource of gutter tiles, that in houses receive all raine water and cast it off. For as the crosse dormant in building shutteth off the raine by foure gutters, euen so is this Vine led and caried foure waies, vpon as many trailes. Of this Vine and the manner of planting it, we will only speake, for that the same ordering will serue well enough in euery kind besides: marie there be far more M waies to plant this than the rest, but these three especially. The first and the surest is, to set the Vine in a plot well and thoroughly delued: the next to it, is in the furrow: the last of all, in a trench or ditch. As for digging a plot and planting therein, ynough hath been written already.

¶ Of furrowes and trenches wherein vines are planted: also of pruning vines.

IT sufficeth that the furrow or trench wherein a vine is to be planted, be a spade or shouels bit breadth: but ditches would be three foot long euery way. Be it furrow, trench, or ditch, wherein a vine is to be replanted, it ought to be three foot deepe; and therefore no plant thereof should be removed so little, but that it might ouer and besides stand aboue ground, and shew two buds at the least in sight. Needful it is moreover, that the earth be well loofened and made more tender and gentle, by small furrowes ranged and trenched in the bottom of the ditch: yea and betempered sufficiently with dung. Now if the vineyard lie pendant vpon the hanging of the hill, it requireth deeper ditches, and those raised vp well with earth and bedded, from the brims and edges on the lower ground. As for such which shall be made longer, and able to receiue two vine-plants growing contrary one to the other, they shall be called in Latine, *Alvei*. About al, the root of the vine ought to stand iust in the midit of the hole or ditch: but the head and wood thereof which resteth vpon the found and firme ground, as neere as possible is, must beare directly into the point of the *Equinoctiall* Sun-rising: and withail, the first props that it leaneth vpon, would be of Reeds and Canes.

As touching the bounding and limitation of a vineyard, the * principall way which runneth straight East and West, ought to carry 18 foot in breadth, to the end that two carts may passe easily one by another, when they meet; the other crosse allies, diuiding euery acre iust into the mids, must be ten foot broad: but if the plot or modell of the vineyard will beare it, these * allies alow which lie North and South, would be as large as the aforesaid principall high way. Moreover, this would be alwaies considered, That vines be planted by fiftes; (I) that at euery fifth perch or pole that shoreth them vp, there be a path diuiding euery range and cource, and one bed or quarter from another. If the ground be stiff: and hard, it must of necessitie be twice digged ouer, and therein quick-sets only that haue taken root, must be replanted: marie in case it be a loose mould, light, and gentle, you may set very cuttings and sions from the stock, either in furrow or in trench, chuse you will. But say it be a high ground and vpon the hill, better is it to cast it into furrowes ouerthwart, than to dig it; that by this meanes the perches or props may D keep vp the ground better, which by occasion of raine water would settle downward. When the weather is disposed to raine, or the ground by nature drie, it is good planting vine-sets, or sions at the fall of the leafe, vnlesse the constitution of the tract and qualitie of a country require the contrary: for a dry and hot soile would be planted in Autumne or the fall of the leafe, whereas a moist and cold coast may tarry, euen vntill the end of Spring. Let the soile be dry and hard, bootlesse it will be to plant, yea though it were a very quick-set, root and all. Neither will it do well to venter the setting of imps cut from the tree, in a drie place, vnlesse it be immediately vpon a good ground shower: but in low grounds, where a man may haue water at will, there is no danger at all to set vine branches, euen with leaues on the head; for they will take well enough at any time before the Mid-summer Sun-stead, as we may see by experience in Spaine: E When you will plant a vine chuse a faire day; and if possibly you can, let it be when there is no wind stirring abroad; for such a calme season is best: and yet many are of opinion, that Southern winds be good, and they wish for them, which is cleane contrarie vnto *Cato* his mind, who expressly excepteth and reiecteth them. If the ground be of a middle temperature, there ought to be a space of fise foot distance between euery vine: and in case it be a rich and fertile soile, there would be foure foot at least from one to another; but in a leane hungry piece of light ground, there should be eight foot at the most: for whereas the *Vmbrians* and *Marians* leaue twenty foot void between euery range of vines, they doe it for to plough and sow in the place, and therein they haue quarters, beds and ridges, called *Porculeta*. If the place where you plant a vineyard be subiect to thicke and darke mists, or to a rained disposition of the weather, vines F ought to be set the thinner: but in a drie quarter, it is meet they should be planted thicke. Moreover, the wit and industrie of man hath found out meanes to saue charges, and in setting a nource-garden with vine-sions to goe a neerer way, with small expence and no losse of ground: for in replanting a vineyard with quick-sets vpon a leuell plot, onely digged and laied euen, they haue with one and the same labour (as it were by the way) replenished the ground be-

* *Discrimina*
Limes.

* *cardines*.

between every such rooted plants, with vine cuttings for store, so as the quick sets may grow in his owne place appointed, and the sion or cutting (which another day is to be transplanted) in the mean time take root between every course and range of the said vine quick-sets, before they be ready to take up much ground. Thus within the compass of one acre, by iust proportion a man may haue about 16000 quick-sets. This is the difference only, that such beare not fruit so soon by two yerse so much later as they that be set of sions, than those that were transplanted and remain still on foot. When a quick-set of a vine is planted in a vineyard, and hath grown one yere, it is usually cut downe close to the earth, so as but one eie or button be left above ground, and one thore or stake must be stickt close to it for to rest vpon, and dung laid well about the root. In like manner ought it to be cut the second yere. By this means it gathereth strength inwardly, and maintaineth the same in such wise, as it may be sufficient another day to beare and sustain the burden both of branch and bunch, when it shall be charged with them: for otherwise if it be let alone and suffered to make haft for to beare, it would proue to be slender, vined, leane, and poore: for surely this is the nature of a vine, That the growth most willingly: in such sort, that vnlesse the be kept vnder, chaffised, and bridled in this manner (her inordinat appetite is such) she will run her selfe out of heart, and go all to branch and leafe.

As touching props and shores to support vines, the best, (as we haue said) are those of the Olke or Oliue tree, for default whereof, ye may take good stakes and forks of Iuniper, Cypress, Laburnum, and the Elder. As for those perches that be of other kinds, they ought to be cut and renewed every yere. Howbeit, to lay ouer a frame for vines to run vpon; the best poles are of Reeds and Canes, for they will continue good five yeares, being bound many of them together. When the shorter branches of a vine are twined one within another in manner of cording or ropes, and strengthened with the wood of vine cuttings amongst, thereof arch-work is made, which in Latine they call Funeta. Now by the time that a vine hath growne three yeares in the vineyard, I putteth forth apace strong branches, which in time may make vines themselves; these mount quickly vp to the frame; and then, some good husbands there be, who put out their eies, that is to say, with a cutting hook (turning the edge vpward) fetch vp the eies budding out beneath: thus by pruning, although they seem to do hurt and wrong vnto them, yet they draw them to shoot out the longer by the means: for in good faith, the more profitable way it is, thus to vse & acquaint it with bearing branches lustily, and far better and easier is it besides to cut away these young imps as the vine lieth fast joined to the frame, untill such time as a man think it be strong enough of the wood. Others there are, who in no case would haue a vine touched or medled with all the next yere after that it is remoued into the vine-yard; nor yet to feele the edge of the cutting hook, untill it haue five yerse ouer the head; many then they agree it should be pruned & grieued of all the wood it hath, saue only three burgeons. You shall haue some againe that will indeed cut them the very next yere after they be replanted, but so as they may win euery yere three or foure ioints, and when they be foure yerse old and nor before, they giue them liberty to climbe vpon the frame. But this I assure you is the next way to make the vine fructifie slowly and late: besides, it causeth it to seem scorched and full of knors, yea and to grow like a dwarfe or wrecpling. The best simply, is to suffer the stocke or mother to bee strong first, and afterwards let the branches and young imps hardly, be as forward and audacious as they will. Neither is it safe trusting to some which is full of cicatrices or skarres (a thing that proceeds of greater error and an vskilfull hand), for surely all such branches grow of hurts or wounds, and spring not one jot from the mother stock indeed: for all the while that these gathereth strength, her whole vertue remaineth within her; but when she is suffered to grow and fructifie, the goeth throughly to worke, and emploiet her forces full and whole to bring forth that, which yercely shee conceiued: for Nature produceth nothing by halves nor by peccemeale, but is deliuered of all at once. Well then, after that a vine is once full grown and strong enough, let it presently run vpon perches, or be led in a traile vpon a frame; but in case it bee yet with the weakest, let it be cut againe, and take vp her lodging hardly beneath vnder the very frame: for in this point the question is not, what Age, but what Strength it hath: for that is it which must rule all. And verily great folly and rashnesse it were, to put a vine to it, and let her haue the will to grow ranke, before she be as big full as a mans thumbe. The next yere after that it is gotten to the frame, there would be faued and let to grow one or two branches, according to the strength and ability of the mother: & let the same the yere following also be preferred, nourished,

- A nourished, and permitted to grow on end, vnlesse her feeblenesse be against it: but when the third yere is come, and not afore, be bold to giue her the head with two branches more, and neuer let her goe but with foure at the most. In one word, hold a vine downe as much as you can, neuer cocker and cherish her, but rather repress her fruitfulness; for of this nature is the vine. Rather than her life, she would be alwaies bearing, neither taketh the such pleasure to liue long, as to beare much: and therefore the more you take away of her ranke and superfluous wood, the better will the employ her radical sap and moisture to fructifie and yeeld good thore of grapes: yet by her good will she would be euer putting forth branches for new plants, rather than busie in bearing fruit: for well worth she, that fruit will fall and is but transitory. Thus to her owne vndoing and ouerthrow, while shee thinketh to spread and gaine more ground, shee spends her strength, her selfe and all. Howbeit, in this case, the nature of the soile will guide a man and aduise him well: in a lean and hungry ground, although the vine be strong enough, you ought to keep it with cutting, that it may make abode vnder the head of the traile and frame above, and howlocuer she may haue some hope that her young branches may get vp to the top, (as being at the very point to mount about it, and so neare as that they reach thereunto) yet let her stay there and proceed no farther: suffer her not (I say) to lay her head thereupon and couch vpon the traile, nor wantonly to spread and run on at her ease. In this manner (I say) hold her head in with the bridle, that she may in the end chuse rather to grow big in body & strong withall, than to shoot forth branches about her euery way far and neare. The same branch now that is kept short of the frame, ought to haue two or three buds to burgen at, and to bring forth more wood in time: and then let it be drawne and trained close vnto the traile and tied fast thereto, that it might seeme to beare vpon it and be supported thereby, and not to hang loosely thereupon. Being thus bound to the frame, it must likewise be tied anon, three buds or ioints off: for by this means also the wood is reclaimed and repressed from running out in length beyond all measure, and the burgeons in the way between will come thicker & shoot vp on height, to furnish the husbandman with store of new sets and sions for the next yere. The very top end in no wise must be tied. Certes this property and qualitie hath the vine, That what part fouer of it is dejected and drinen downward, or els bound and tied fast, the same ordinarily beareth fruit, and principally in that very place where it is bowed and bent in manner of an arch. As for the other parts which be backward and neerer to the old maine stocke, they send out store of new branches indeed, full of wood, but otherwise fruitlesse that yere: by reason (I suppose verily) of the spirit or vegetatiue life, and that marrow or pith wherewith wee speake before, which findeth many stops and lets in the way. Howbeit these new shoots thus putting forth, will yeeld fruit the next yere. Thus there offer vnto vs two kinds of vine branches: for that which springeth out of the hard and old wood, and promiteth for that yere following nothing but sprigs and twigs onely, is called Pampinarium: whereas that which commeth more forward beyond the cup or cicatrice, and beareth shew of grapes, is named Fructuarium. As for another, springing from a yere-old branch, it is left alwaies for a breeder and kept short vnder the frame: as also that which they terme Custos, [i. the Keeper, or Watch:] a young branch this is, and no longer than it may well carry three buds: which the next yere is like to beare wood and repaire all, in case the old vine stocke should miscarry and spend it selfe by carrying too great a burden. Also another burgen there is close to him, bearing out like a knob, of the bignesse of a wart (called hee Furunculus) who must serue the turne and make supply, if peraduenture the foresaid Watch or Keeper faile.

Moreover, a vine if it be suffered to beare before the seuenth yere after it was first set of a cutting or sion, decayeth sensibly and soon dieth: neither is it thought good to let the old wood run on still in length vpon the frame, as far as to the fourth forke that vnderpropeth it, (such old crooked branches some call Dracones, others Iuniculos) to make thereof huge and great trailes of vines termed Mafculeta. But worst of all it is, to seeme for to propagate or draw in a long traile within the ground vines in a vineyard, when they be growne hard with age. When the vine is five yeares old, a man may boldly wind and twine the very branches, so as out of euery one there be a twig left to grow at liberty: thus he may proceed forward to the next cutting away the wood as he goeth that bare before. The surer way euermore is supposed to leaue the Watch or Keeper behind: marie he must le next vnto the vines maine bodie, and nearest the root, and no longer than is before set downe. Now in case the branches proue ouer ranke,

they must be writhed and twisted in maner aforesaid, so as the vine stock may put forth no more than foure boughs at the most, or twaine if so be it rest vpon one chanter or range of perches. If you would order a vine so as it may stand alone without any props, at the beginning it would desire and haue some supporter or other (it makes no matter what) to rest vpon, vntill it haue learned to stand of it selfe, & rise vpright afterwards, it is to be vsed in manner of all other vines when this training is past. This regard would be had in pruning and cutting the twigs of these vines called Pollices, That a man well guide and ballance his hand, and goe euē withall in euery part indifferently, for feare lest one side be charged with fruit or branch more than the other: where by the way, he must also remember to keepe downe the head, and nor suffer it in any wise to run vp in height: for if this kind of vine be above three foot high, it wil hang the head downward. As for others, they may well grow to five foot and upward, so that they passe not in any case the full height of a man. To come now vnto the other vines that creepe along and spread ouer the ground, they be inuironed all the way as they run, with pretty short hollow cages as it were, to rest and repose their branches in. They haue need moreover of certaine trenches or ditches round about to run in, to the end that as the said branches wander too and fro, they should not encounter one another and frise together. And verily in most parts of the world, they vse to gather their vintage of vines thus growing low by the ground, as we may see the manner is in Africke, Egypt, Syria, throughout all Asia, and in many places of Europe. For the good vlsage and dressing of these vines, a speciall care would be had to keepe them downe close to the earth, and to fortifie the root, so long and in the same manner, as hath bene shewed before in those, that are shored or beare vpon frames, with this charge and regard besides, to leaue alwaies the short twigs only called Pollices, with three buds a piece, in case the ground be fruitful, or * fine, if it be light and lean. And in one word, better it is without all question, that they be left more, than long. As for those points which we haue deliuered heretofore, as touching the nature of the soile, they will be more effectually seen to proue either the goodnesse or the contrary, in the grapes of this vine, by how much nearer they lie to the ground than others. Wherein consideration is to be had of the sundry sorts of vines; namely, that they be feuered apart, and nothing is better, than to fort euery one with the tract or region that agreeth best with it, and therein to plant them accordingly: for these mixtures of diuers kindes are neuer good, but alwaies discordant: naught in old wines that come to our table, much worse then you may be sure, in those that be new and not yet tunned vp. But if a man will intermingle plants of sundry vines together, yet in any case those would be ioined together (and none els) which ripen their fruit at one and the same time.

For frames and trailes wherein vines are to run, the better and more battle that the ground of the vineyard is, the plainer and euener that it lieth, the higher they would be from the ground; likewise if the place be subiect to dews, fogs, and mists, and nothing exposed to the winds: contrariwise, if the ground be leane and dry, hot, and open to the winds, they must be the lower and nearer the earth. As concerning the rafters, that lie ouer & reach from prop to prop, they ought to be tied and fastened thereto with as streight and sure a knot as is possible; whereas the Vine would be bound vnto them, but slacke. Of the sundry sorts of Vines, as also which were to be planted in this or that soile, and what coasts & climates each one of them loueth, we haue shewed sufficiently in the particular treatise of their nature, and of the wines that come of them.

Touching all other points of husbandry that remaine behind; much doubt and diuers questions are made for many there: be that feare not all Summer long to bee digging in the vineyard about vine-roots, after euery little raine. Others again forbid to meddle & be lusty therein, in the budding time: for it cannot be auoided, but that the yong oylets will either bee smitten off clean, or els galled or bruised one time or other, with their gate that go in and out between: which is the cause, that they would haue all kind of cartell to be kept out that they come not neare, and especially such as beare wooll on their backs; for sheep of all others soonest rub off the buds as they passe by, with their shag coats. Moreover, they are of opinion, that all manner of raking and harrowing, is an enemy to vines when they bee in their floure, and putting forth yong grapes: and sufficient it is (say they) if a vineyard be deluded thrice in one yere, to wit, first from the Spring Equinox, to the apparition of the Brood-hen star; secondly, at the rising of the great Dog star; and thirdly, when the grape beginneth to change colour and turne blacke. Others set out these times after this maner: if the vineyard be old, they would haue it once digged

A ged betweene vintage and mid-winter; how soeuer some be of this mind, That it sufficeeth them to bare the roots only of the vines and lay dung thereto. The second deluding they would haue to be from the Ides of Aprill, and fix daies before the Ides of May, that is, before they begin to conceiue and bud: and thirdly, before they fall to blossom; also when they haue done flourishing; and also at the time when the grapes alter their hew. But the more skilfull and expert husbands affirme constantly, That if the ground be ouermuch laboured, and digged too often, the grapes will be fotterskin, that they will burst againe. Moreover, these rules following are to be observed, That when any vines do require such deluding and digging, the laborers ought to goe to worke betimes before the heat of the day: may if the vineyard stand vpon a mirie clay, it is not good then either to care or dig it, but rather to wait for the hot season; for the dust that riseth by digging, is very good (by their saying) both to preserue the vine and grapes from the parching Sun, and also to defend them against the dropping mists.

As for disburgening of vines, and cleming them of their superfluous leaues, all men accord; that it should be done once in the Spring, to wit, after the Ides of May, for the space of eleuen daies following, and in any hand before they begin to put forth floure. And how much thereof must be thus disoiled for the first time, euē all that is vnder the traile or frame, & no more. As for the second, men be not all of one minde, some would haue the leaues to be disbranched when the vine hath done flourishing; others expect, vntill the grapes begin to be ripe. But as touching these points, the rules that Cato giueth, will resolve vs: for we are now also to shew the manner of cutting and pruning vines. Many men begin this worke immediately after vintage, when the weather is warm and temperate: but indeed (by course of Nature) this should neuer be done before the rising of the Aegle star (as we will more at large declare in the next booke, where we are to treat of the rising and fall of the fixed stars and of their influences) or rather in truth, when the Westerne wind Faunus beginneth to blow, forasmuch as there might be danger in going ouer soon to work, considering that haist commonly maketh wast. For this is certain, that if there come an after-winter, and chance to bite the vines newly medicined (as it were) or rather fore with this pruning, if it happen (I say) that when euery man makes reckoning that winter is gon, it come vpon them againe and whiske with his taile, their buds pinched with cold will lose their vigor, their wounds will cleaue and make rifts, in such sort, that when the humidity is distilled and dropped forth, the oylets will be nipt and burnt away with the bitterness of the vntimely weather; for who knoweth not, that in frost it is ticklish meddling with vines, and that they be in danger soon to breake and knap asunder? To say therefore a truth, by order of Nature there would not be such haist made. But here is the matter, they that haue a large domaine and much lands to look vnto, they that must go through a great deale of work, cannot wil nor chuse but begin betimes, and make this computation and reckoning aforesaid. And in one word, the sooner that vines be pruned (if the time wil serue commodiously) the more they run into wood and leaues; and contrariwise, the later you go to work, the more plenty of grapes they will yield: and therefore it is meet and expedient to prune vines that be poore and feeble, very timely; but such as be strong and hardy, last of all.

C As for the manner and fashion of the cut, it ought alwaies to be aslant, like a goats foot, that no drops of raine may settle and rest thereupon, but that euery shower may soon shoot off: also that it turn downward to the ground, that it be euē and smooth made with a keen and sharpe edged bill or cutting hook. Furthermore this heed would be taken, that the cut be iust between two buds, for feare of wounding any of the oylets nere vnto that part which is cut off: and commonly this is supposed to be blacke and dusky, and so long as it is so seen, it ought to be cut and cut again, vntill you come to that which is found and cleare indeed: for neuer shall yee haue out of a faulty and corrupt wood, any thing come forth that will be worth ought. If the vine be so poore and lean that it affordeth no branches meet and sufficient to beare, cut it down to the verie ground, for best it is then to fetch new from the root, and to see whether it will be more liuely.ouer and beside in disburgening and defoliating a vine, you must beware how you pluck off those burgeons that are like to beare the grape, or to go with it, for that were the next way to supplant (as it were) the grapes, yea and kill the vine, vntill it were a new and yong plant. Will you then know which are vnprofitable and may be spared: euē all those are deemed superfluous, which are come not directly from the knot or neere oylet, but grow out of the side: and no maruell, since that the verie branches of grapes which hang in this manner out of

E the side: and no marvell, since that the verie branches of grapes which hang in this manner out of

the hard wood, are so stiffe and tough also, that vnneth a man may plucke them off with his fingers, but had need of a knife or hook to cut them away.

As for the pitching of props into the ground, some are of opinion that the best way is to set them between two vines: and indeed that were the easier way to come about the vines, for to lay their roots bare when time serueth. Also, better it is far so to doe, in a vineyard where the vines run vpon one single traile, in case the said traile be strong enough, and the vineyard not subiect to the danger of winds: but where a vine runneth foure waies, it must be relieued with prop and stayes as neer as may be, to support the burden; yet so, as they be no hinderance when as men should come about the foot to lay the root bare: and therefore they would be a cubit off, and no more. Moreover, this is a general rule, that a vine be cleared about the root beneath, before that it be pruned aboue.

Cato treating generally of all maters concerning vines, writeth thus by way of rule and precept; Let your vine (quoth he) be as high as possibly you can: fasten it to the frame decently, but take heed you bind it not too hard. Dresse and order it after this manner: After you haue cut away the tips and tops thereof, dig round about the roots, and be, in then to eare vp & plow the vineyard: draw furrowes and ridges too and fro throughout. Whiles vines be yong & tender, couch the branches within the ground for propagation, with al speed: as for old vines, geld them as little as you can, & keep them with a good head; rather if need require, lay them along on the ground, and two yeares after cut them hard to the root. If it be a yong vine, attend vntill it be of strength sufficient, then will it be time and not afore to prune it. If haply the vineyard be bare and naked of vines, and that they grow but thin here and there, make furrowes and trenches between, and therein plant new quickets: but rid the weeds well from about those Trenches, for ouershadowing them: be euer alo digging and delving. Then, if it be an old vineyard, soe drag and pulle for prouender: if it be a lean and light ground, low nothing that bears grain or corn. Be sure that ye lay about the heads of the said quickets, dung, chaffe, refuse of grapes pressed, and such like mullock. When the vine beginneth to put out leaues and look green, fall to disburgeoning. So long as the Vines be yong and tender, tie them surely in many places, for feare lest the wood or stalk thereof do break asunder. But when a vine hath gotten head to perch aloft vpon a single traile, gently binde the tender burgeons and branches thereof, extend and stretch them out, and lay them streit. Now when they stand once vpright and are able to beare themselves, mark when the grapes begin to change colour, bind them wel and sure below.

As for grafting of vines, there are two seasons of the yeare meet therefore: the one in the spring, the other when the vine doth floure, and this is held for the best. If you purpose to translate an old stock of a vine into another place, and there to replant it, cut off the first thick arm only, leaue behind two buds and no more. In taking of it vp, be carefull that you do it with such dexteritie, as that you race not nor wound the root. This done, look how it grew before, so set it now, either in trench or furrow: couch it wel and close, and couer it thoroughly with good mould. After the same manner as is before said vnder set and prop it vp, bind it, turn and winde it; but about all be euer while digging about it. As touching the drage called Ocymum, the which *Cato* wills to be sowed in a vineyard, it is a kind of forage or prouender for horses, which the Latines in old time named Pabulum; it cometh vp very speedily and groweth fast, and besides can well away with shadowie places.

CHAP. XXIII.

Of Trees ranged in rows for to support Vines.

It remaineth now in this discourse and treatise of Vines, to write of the manner of trees planted of purpose for to serue their turn. And here I cannot chuse but cal to mind, first, how this point of husbandry hath bin iudged naught, and altogether condemned by the two *Sarsones*, both father and sonne; but contrariwise held for good, and highly commended by *Scrofa*: whereas all three were reputed the most ancient writers, and skilfullest in this kind next to *Cato*. And yet *Scrofa*, as great a patron as he is thereof, alloweth not this device in any climate else but only in Italy. Howbeit, gon this hath for currant many yeares past, and time out of mind, That the best and most dainty Vines came of those grapes onely which grew vpon such Hauins or trees before said. Yea, and it was thought generally, that the higher a Vine climbed vp-

on

on these trees, the better grapes it bare, and yielded more commendable wine: and againe, the lower that those trees were, the greater plenty followed both of the one & the other. By which a man may see how materiall it is to raise Vines on high, and haue grapes growing in the top of trees. In which regard, choise also is to be made of trees for this purpose. And here first and formost is presented vnto vs the Elme: and yet I must except that kind of it which is called *Atinia*, by reason that it is ouermuch charged with boughes and leaues, and therewith too full of shade. Next vnto it may be ranged the blacke Poplar, euen for the same cause, because it is not leaue nor branched so thick. Many men there be that refuse not the Ash, the Fig tree, yea and the Olive, so that it stand not ouer thicke with boughs, and make too much shade. As for the setting, planting, and ordering of these trees in general, we haue sufficiently and to the full treated heretofore. But now for this speciall and peculiar vse that they be put vnto, this would be considered, That Vines which are to be wedded to these trees, must in no wise feeble the edge of the cutting hook, before they be three yeares old full. After which time, this regard ought to be had, that euery second branch or arme thereof is to be spared, and likewise each other yeare and no oftener they are in this wise to be pruned: and by that they are six yeares old, it is good time to joine them in marriage vnto their husbands aforesaid.

In Piemont, Lombardie, and those parts of Italy beyond the riuier Po, they vse for this purpose to plant their grounds with these trees ouer and besides those aforesaid, to wit, the Cornell, the Opier or Wich-hazell, the Teil or Linden, the wild Ash Ormus, the Carpin Carme or Horn-beane, and the Oke. About Venice and all that tract, the Willowes serue the turne and none else, by reason that the whole foken standeth so much vpon water.

As touching the Elme, named in the first place, it must be kept plaine and bare, and the great water-boughs vnderneath shread vntill you come to the middelt of the tree, or thereabout; and then the rest ought to be arranged and digested into good order, whereupon the Vine may climb as it were vpon staires or ladder rounds, and lightly none of these trees vpward be aboue twentie foot high. Now in case it be a high ground vpon an hill, and drie, they are permitted to branch and shut out their armes, within eight foot of the ground. But in plaines and low moist grounds, they begin not to fork before they beare twelue foot. Howbeit, let the place be what it wil, the flat of the tree from whence the boughs begin to diuide, ought to regard the south sun. And the said branches immediately from their project must rise somewhat vpright in manner of fingers, standing forth from the palm of ones hand, among which, the smal sprigs must eist fons be barbed (as it were) & shauen clean off, for feare they do not ouershadow the Vine branches.

As touching the space or distance between one tree & another, the ordinarie proportion is, that afront and behind, in case the ground be erable, it beare fortie foot: but a flank, or on the side, twentie. Marie, if it be not well tilled and husbanded, so much wil serue euery way, to wit, twentie foot and no more. Commonly euery one of these trees maintaineth tenne Vines at the foot thereof; and a bad husband he is who hath fewer reared about it than three. But by the way, it is no good husbandrie to suffer a tree thus to be coupled (as it were) in marriage to so many Vines, before that it be of sufficient strength to entertain them: for there is nothing so hurtfull, by reason that the Vines will choke and kill them; so quick they be of their growth, and so ready to ouercharge them.

As for planting of Vine-sets to the root of trees, needfull it is to make therefore a ditch three foot deepe; and they ought to be distant one from another a full foot, and so much likewise from the tree. This don, there is no question thereof the smal twigs or shoots what to do with them: neither is there any charge or expence required for digging and delusing: for this is the manner of it, and this peculiar gift haue these tree-rows. That in the same ground where they grow, the sowing of come is nothing hurtfull. nay, it is profitable and good for the Vines. Moreover, this commoditie and easement cometh of their height, that they be able to faue themselves: neither is there any such need, as in other Vineyards, to be at the coast of walls, of mounds, pales, or hedges, ne yet of deep ditches or other fences, to keep off the violence or injuries of beasts. Of all other toiles before rehearsed, there is no more required but to looke vnto onely the getting of quick-sets, or couching fions: all the matter I say lieth herein, and there is no more to do.

But of couching fions and that kind of propagation, there be two deuises. First within paniers or baskets vpon the boughs of the tree, and that is the best way, because it is safest from the danger of cattel. The second is, to bend the Vine, or a branch thereof, close to the foot of the

CHAP.

owne tree, or else about the next vnto it: if it stand single and haue no Vine joined vnto it. As much of this branch or Vine thus couched as is about the ground, must be kept with scraping; that is to say, the buds ought euer and anon to be knapt off, that it spring not forth. Within the earth there should be no fewer than foure joints or budding knots buried and entered for to take root, in the head without, two onely are left for to grow. [Where, note by the way, that the Vine which groweth to the foot of a tree, must be trenchen in a ditch foure foot long in al, three in breadth, two and an halfe in deapth.] Now, when the sion thus couched, hath lien one yere, the order is to cut it toward the stock to the very pith or marrow, that so by little and little it may be inured to fortifie it selfe vpon the own roots, and not to hang and cling alwaies to the mother: as for the other end or head thereof, it would be cut off also so neere the ground, as that there be but two only buds left. By the third yere it must be quite cut in two, (where before it was but goulded to the pith) and that which remaines of it, laid deeper into the ground, for feare it should sprout forth and beare leaues toward that side where it was cut in twaine. This done, no sooner is Vintage past, but this new quicket-fer, root and al, must be taken vp and replanted.

Of late daies deuised was the manner of couching or planting by a trees side a Vine Dragon (for so we vse to call the old branch of a Vine past all seruice, which hath done bearing many a yere, and is now grown to behard.) And verily, they vse to make choise of the biggest they can find, which when they haue cut from the stocke, they scrape and pil the bark, three foure parts in length, so farr forth as it is to lie within the ground [whereupon they name it in Latine Rafalis:] when it is thus couched low within a furrow, the rest that is about the earth they rear vp against the tree. And it is thought, that there is no to good nor so ready a mean to make a Vine grow and beare than this. If it fall out so, that either the Vine be smal and weak, or the ground it selfe but lean and hungrie, it is an vsuall and ordinarie practise to cut and prune it as neer the ground as possibly may bee, vntill such time as it be well strengthened in the root, as also, regard is had, that it be not planted when the deaw standeth vpon it, ne yet when the wind fits full in the North. The old Vine stock it selfe ought to look into the Northeast, provided alwaies that the yong branches turne Southward. Moreouer, new and tender Vines would not be pruned and cut in half: but better it is to expect and tary vntill such time as they be strong ynough and able to beare the cutting bill: meane while, to gather the yong branches together round in manner of an houp or circle. [Where note by the way, That Vines which are erected vpon trees for the most part beare later by one yere than those in Vineyards that be peached or run on frames.] Some would not haue them to be cut at all, before they haue raught vp to the top of the tree. At the first time when you come with the pruning hooke, the head must be cut off at six foot from the ground, leauing vnderneath one little top twig, which must be forced to beare by bending it downward in the head: and in the same, when it is thus pruned, there must be left behind three buds and no more. The branches which burgen out from thence, ought the next yere to bee brought vp to the lowest armes of the tree, and there seated: and so from yere to yere, let them climb vp higher to the vpper boughs, leauing alwaies vpon euery loft or scaffold as it were where they rested, one branch of the old hard wood, and another yong imp or twig, for to grow vp and climbe as high as it will. Furthermore, as often as a Vine is pruned afterwards, those branches or boughs thereof in any wife must bee cut away which were bearers the yere before: and in stead of them, the new after they be first cleansed from all the hairy & curled tendrils on euery side shred off. The ordinarie manner of pruning and dressing of vines here about Rome, is to let the tender branches and sprigs entrelace the boughes, in somuch, as the whole tree is ouerspread & clad therewith, like as the very same tendrils be also couered all ouer with grapes. But the French fashion is to draw them in a traile along from bough to bough: whereas in Lumbardie and along the caufey Emilia [from Plaifance to Rimino] they vse to train them vpon forks and poles: for albeit the Atinian Elmes be planted round about, yet the Vine cometh not neere their greene boughes. Some there be, who for want of sill and good knowledge about vines, hang them by a strong bond vnder the boughs: but this is to wrong, yea to stifle and strangle them outright: whereas indeed a vine, as it ought to be kept down with oisier twigs, so it must not bee tied ouer straight. For which cause, euen they also who otherwise haue store & plenty ynough euen to spare, of willows & oisiers, yet chuse rather to bind vines with some more soft and gentle matter, to wit, with a certain heab, which the Sicilians in their

language

A language called Ampelodesmos [i. Vine-bind.] But throughout all Greece they tie their vines with Rushes, Cyperus, or Gladen, Reeke, and Ica grassie.ouer and besides, the manner is otherwise, to vntie the Vine, and for certain daies together to giue it liberty for to wander loosely, and to spred it selfe out of order, yea, and to lie at ease along the ground, which all the yere besides it onely beheld from on high: in which repote it seemeth to take no small contentment and refreshing: for like as draught horses, when they be out of their geeres, and harkies vnledled, like as Oxen when they haue drawn in the yoke, yea, and greyhounds after they haue run in chafe, loue to tumble themselves and wallow vpon the earth: euen so the Vine also, hauing bin long tied vp and retrained, liketh wel now to stretch out her lims and loins, and such easement and relaxation doth her much good. Nay, the tree it selfe findes some comfort and ioy thereby, in being discharged of that burden which it carried continually as it were vpon the shoulders, and seemeth now to take breath and heart again. And certes, go through the whole course and worke of Nature, there is nothing, but by imitation of day and night, desireth to haue some altematiue ease and play dayes between. And it is by experience found very hurtfull, and therefore not allowed of, to prune and cut Vines pretently vpon the Vintage and grape-gathering, whilst they be still wearie and ouertrauelled with bearing their fruit so lately: ne yet to binde them, thus pruned, in the same place again where they were tied before: for surely vines do feel the very prints and marks which the bonds made, and no doubt are vexed and put to paine therewith, and the worke for them.

The manner of the Gauls in Lumbardy, in training of Vines from tree to tree, is to take two boughs or branches of both sides, and draw them out, in case the stock Vines that beare them be forty foot asunder: but foure, if they are but twenty foot distant. And these meet one with another in the space between, and are interlaced, twixed and tied together. But where they are somewhat weak and feeble, they be strengthened with Oisier twigs or such like rods here and there by the way, vntill they beare out stiffe: and look where they be so short that they will not reach out, they are with an hook stretched and brought to the next tree that standeth without a Vine coupled thereto.

A Vine branch drawn thus along in a traile, they were wont to cut when it had growne two yeres: for in such Vine stocks as by reason of age are charged with wood, it is the better way to giue time & leisure for to grow and fortifie the said branch that is to passe from tree to tree, so as the thicknes thereof will giue leaue: yea and otherwise it is good for the old main bough to feed still and thrive in pulp and carnositie, if we purpose that it should remaine and carrie a length with it.

Yet is there one manner besides of planting and maintaining Vines, of a mean or middle nature between couching or interring a branch, by way of propagation, and drawing them thus in a traile from one to another: namely to supplant, that is, lay along vpon the ground the whole stock or main body of a Vine; which done, to cleaue it with wedges, and to couch in many furrowes or raies, as many parcels thereof, comming all together from one. Now in case each one of these branches or armes proceeding from one body, be of it selfe small, weak and tender, they must be strengthened with long rods like staves bound vnto them round about, neither ought the small sprigs and twigs that spring out of the side, be cut away.

The husbandmen of Novaria reit not contented with a number of these trailed branches, nor with store of boughs and trees to sustaine and beare them, vntill they be thored and supported also with posts and ouerthwart railes, about which the yong tendrils may creep & wind. No maruell therefore if their vines be after a fort rough, hard, and vnpleasent: for besides the badnesse of their soile, the manner of their husbandry is so crooked and vtoward.

Our husbandmen moreouer here about vs, neer vnto the city of Rome, commit the like fault, and find the same defect therupon, in the Varracine Vines, that be pruned but once in two yeres: a piece of husbandry by them practised, not for any good that it doth vnto the vine, but because the wine thereof is so cheap, that oftner pruning would not quit cost, neither doth the

revenue answer the labor and charges.

In the territorie of Carfeoli [a champion and plain countrey about Rome, the peasants take a better order, and hold a middle and temperat course. For their manner is to pruned and cut away from the Vine those parts onely that are faulty and rotten, when they begin one to drie and to wither, leaning all the rest for to beare Grapes: and thus discharging it of the superfluous burden

burden that it caried, they hold opinion, that it is not good to wound **ft** in diuers places: for by this means (say they) it will be nourished and come on very well. But by their leaue, vnlesse the ground be paffing rich and fat, Vines thus ouercharged with wood, will for want of pruning degenerate into the bastard wild wines called Labruſcare.

But to returne againe vnto our plots planted with Trees and Vines coupled together: such grounds when they be plowed require a good deep ſtitch, although the corn therein ſown need it not. Alſo it is not the manner to diſburgen or deſpoile altogether ſuch trees, and thereby a great deale of toyle and labor is ſaued: but when the Vines are a pruning, they would be diſbranched at once with them, where the boughs grow thickeſt; and to make a glade onely throw, the ſuperfluous branches would be cut away, which otherwiſe might conſume the nutriment of the grape. As for the cuts and wounds remaining after ſuch pruning and debranching, we haue already forbidden, that they ſhould ſtand either againſt the North or the South. And I think moreouer it were very well, that they did not regard the Welt where the Sunne ſetteth: for ſuch wounds will ſmart, and be long fore, yea, and hardly heale again, if either extreme cold pinch, or extreme heate parch them.

Furthermore, a Vine hath not the ſame liberty in a vineyard that it hath vpon a tree: for better means there are, and eaſier it is to hide the ſaid wounds from the weather flanked as they be within thoſe cloſe ſides; than to wyrrh and weſt them to a mans mind to & fro. In lopping and ſhredding of trees, when the cut ſtandeth open, there would be no hollow places made like cups, for feare that water ſhould ſtand therein. Laſt of all, if a Vine be to climbe Trees that are of any great height, there would be ſtaves and appuies ſet to it, wherupon it may take hold, and ſo by little and little ariſe and mount vp aloft.

CHAP. XXIII.

¶ *The manner of keeping and preſeruing Grapes. Alſo the maladies whereto Trees be ſubiect.*

IT is holden for a rule, That the beſt Vine-plants which run vpon a frame of rails, ought to be pruned in mid-March about the feaſt of *Minerva*, called *Quinquatrus*: and if a man would preſerue and keep their grapes, it would be done in the wane of the Moone. Alſo, that ſuch vines as be cut in the change of the Moone, wil not be ſubiect to the iniurie and hurt of any noſſom vermin. Although in ſome other reſpect men are of opinion, that they ſhould be cut in the night, at the full of the Moone, when the ſigne is in Leo, Scorpio, Sagittarius, and Taurus: and generally it is thought good to ſet them when the Moone is at the full, or at leaſt wiſe when the is croiſſant. Moreouer, this is to be noted, that in Italy there need not about ten men for to look vnto a vineyard of an hundred acres.

And now that I haue diſcourſed at large as touching the manner of planting, graſſing, and dreſſing of Trees, I purpoſe not here to treat again of Date Trees & Tretifoly, whereof I haue ſufficiently written already in the Treatiſe of ſtrange and forein Trees: but ſo far as much as my meaning is to omit nothing, I will proceed forward to decipher thoſe matters which concerne principally the nature of Trees, and namely their maladies and imperfections, whereto they alſo as well as beaſts and other liuing creatures, are ſubiect. And to ſay a truth, what creature is there vnder heauen freed therefrom? And yet ſome ſay that wild and ſauage trees are in no ſuch danger: only the hail may hurt them in their budding and blooming time. True it is alſo, that ſcorched they may be otherwiſe with heate, and bitten with cold black winds, coming late and out of ſeaſon: for cold weather ſurely in due time is kindly and good for them, as hath bin ſaid before. But let me not forget my ſelf. See we not many times the cold froſt to kill the very Vines? Yeſ verily: but this is long of the ſoile and nothing elſe; for neuer hapneth this accident but in a cold ground. So as this concluſion holdeth ſtill, That in winter time we alwaies find froſt and cold weather to do much good: but we neuer allow of a cold and weak ground. Moreouer, it is neuer ſeen, that the weakſt and ſmalleſt trees are endangered by froſt, but they are the greateſt and tallſt that feeble the ſmart. And therefore no maruel if in ſuch, the tops being nipped therewith, ſeem firſt to fade and wither, by reaſon that the native and radical moiſture being bitten and dulled before, was neuer able to reach vp thither.

Now concerning the diſeaſes that haunt Trees: ſome there be that are common vnto all; others

A others againe, that extend peculiarly to ſome certaine kind or other. As for the former ſort generally it is, that no trees are exempt from the worme, the blaſting, and the joint-ach. Hereof it cometh, that we ſee them more feeble and weak in one part or member than in another, as if they did participate the maladies and miſeries of mankind, ſo common are the names of diſeaſes vnto them both. For certes, we ſee to ſay indifferently, That trees are headleſſe, when they be lopt and toppt, as well as men who are beheaded: we ſee their eyes to be enflamed, ſendged, and bloodie often, when their buds be blaſted; & many other infirmities, according to the like proportion. And therupon it is, that we ſay they be hungerſtared and pined and contrariwiſe, that they be full of crudities and raw vndigelted humors, namely, when moiſture aboundeth in them. Yea, and ſome of them are ſaid to be groſſe and ouerfat, to wit, ſuch as bear roſin; when by the means of too much greaſe (as it were) they begin to putrifie and turn into Torch-wood; yea, and it falleth out, that they die withall, in caſe the ſaid greaſe take once to the rooſes, ſenſe as liuing creatures being ouergrowne with fat. Moreouer, ye ſhall ſee a kind of pettilence light amongſt one peculiar kind of trees: like as it ſarth ſometimes with men in ſundrie ſtates and degrees; whereby one while ſlaues only die of a plague, another while the Commons, and thoſe either artians in a citie, or peaſants and huſbandmen of the country.

Now as touching the Worme, ſome trees are more ſubiect vnto it than others: and to ſay a truth, in manner, more or leſſe, and that, the birds know well ynough, for with their bills they will job vpon the bark, and by the ſound trie whether they be worm eaten or no. But what ſay we to our gluttons and belly gods in theſe daies, who make reckoning among their dainty diſhes, of wormes breeding in trees; and principally of thoſe great ſat ones bred in Okes, which wormes they call *Coſti*, & are eſteemed a moſt delicate meat? Theſe forſooth they feed in mue, and franke them vp like fat-ware, with good corn-meale. But about al others, Pear trees, Apple trees, and Fig trees, are ſooner worme-eaten: and if any trees eſcape, they be ſuch as are of a bitter wood in taſt, and odoriferous in ſmell. Touching thoſe wormes that be found in Fig trees, ſome are engendered of themſelues, and of the very wood: others are bred of a bigger vermin called *Ceraſtes*. Howbeit, al of them (which way ſoever they come) are ſhaped in manner of the ſaid *Ceraſtes*, and make a certaine ſmall noiſe like the thrill and creaking ſound of a little criquet. The Seruiſe tree likewiſe is haunted and plagued with little red and hairie wormes, that in the end doe kill it. The Medlar trees alſo when they be old, are ſubiect to this maladiſe.

D As for the milking of trees [called *Sideratio*] wherby they conſume, wither away, & crumble to powder; it is a thing cauſed only of the weather and influence of ſome Planet. And therefore in this ranke are to be raneged Haile, Blaſting with ſome vntoward winds, and froſts that bite and nip them to the heart. And verily it falleth out, that in a mild and warme Spring, when plants bee too forward, and put forth their ſoft buds and tender ſprouts ouer-ſoone, the black wind taketh them on a ſuddaine, and a certaine rine ſetteth thereupon, ſendging and burning the oileers of the Burgeons, whiles they be full of a milky ſap which accident if it light in blooming time vpon the bloſſome, is called properly *Carbunculus* [i.e. Mieldew.] As for the Froſt at ſuch a time, it is far worſe than the blaſting aforeſaid, for when it falleth vpon any trees or plants, it there reſteth and remains ſtill, it congealeth all into an yce, and no puiſſe of wind there is to remoue and diſlodge it: for why? ſuch froſts commonly are not but in time of a ſtill, cleer, and calm aire. Touching that manner of Blaſting or milking called *Sideratio*, as if they were ſmiten with the maligne aſpect of ſome planet, this danger chanceth peculiarly by ſome drie and hote winds, which are buſie commonly about the riſing of the Dog ſtar, at what time we ſhall ſee viong trees and newly graſſed to die outright, eſpecially Figge trees and Vines. The Olive, oneer and beſides the worme (whereto it is ſubiect) as well as the Figge tree, hath another greſſe and forance called in Latin *Clauus*, Fungus or *Patella* [i.e. Knur, Puſſe, Meazil or Blifter] chuſe you whether: and nothing is it but a very ſendge or burne by the ſunne.

Furthermore, *Cato* ſaith, That the red Moſſe is hurtfull vnto trees. Oftentimes alſo we ſee find that as well Oliues as Vines, take harm by ouermuch fertility and fruitfulnes. As for ſcab and ſkurie, what tree is cleare of it? The running mange or tetter, is a miſcheſe peculiar vnto the Fig trees: alſo, to breed certain Hoddie-dods or ſhell-Snailes ſticking hard thereto and eating it. And yet theſe maladies are not indifferent and alike in all parts of the tree. For thus you muſt think, that ſome diſeaſes are appropriate to one place more than another. For like as men are troubled with the Arthriticall torments, or the Gout, even ſo be trees: yea, and after 2 ſorts

as well as they: for either doth the difeafe take the way to the feet, that is to fay, to the roots, & there breaketh out and sheweth it selfe, or else it runneth to the exterior joynts and fingers, to wit, the final branches and top twigs, which be farthest remote from the main body of the tree. Hereupon then begin they to drie, wither, and waxe blacke: and verily the Greeks haue proper names and termes respectiue to the one infirmity and the other, which we in Latin want. Howbeit we are in some sort able to expresse the Symptomes following thereupon, and namely, when we say, first, That a tree is ill at ease, sicke, and in pain euery where: anon, that it falls away, looks ill, poore, and leane, when wee see the fresh green hew gone, and the branches fraile and brittle: last of all, that it is in a waft, consumption, or feuer hecick, and dieth sensibly, to wit, when it receiueeth no nourishment (or not sufficient) to reach vnto all parts, and furnish them accordingly: and the same Figge tree of al others, is more subiect herunto, as for the wild, they be exempt wholly from all these inconueniences hitherto named.

Now as touching the scab or scurfe incident vnto trees, it commeth of certain foggie mists and clammy dewes, which light softly and leisurely after the rising of the Brood-hen star Vergil, for if they be thin and subtle, they drench and wash the trees wel, and do not infect them with the scab: howbeit in case they fall down right, or that there be an ouer great glut of show-ers and raine, the Fig tree taketh harme another way, namely, by soaking of too much moisture into the root.

Vines, ouer and about the Worme and the Blast, haue a difeafe proper vnto themselues, called Articulation, which is a certain barraineffe of theirs when they leefe their spring in the euery joynt. And this may come vpon three causes: the first, when by vnseasonable and ill weather, as frost, heat, haile, or other forcible impreffions of the aire, they forgoe their young sprouts: the second (as *Theophrastus* hath well noted) if in pruning of them, the cut stand vpright and open to the weather: the third, when they be hurt by those that haue the dressing of them, for want of skill and taking good heed: for all these wrongs and inconueniences they feele in their joynts or knots. A feuerall kind of blasting or mortification there is besides in vines, after they haue done blooming, which is called *Roratio*; namely, when either the grapes do fall off, or before they come to their full growth, be baked (as it were) into a thick and hard callositie. It happens also that they be otherwhiles sick, in case after their pruning, their tender oyles or buds be either bitten with the frost, or singed with some blast. The same befalleth likewise to them vpon some vntime or vnseasonable heat: for surely in all things, a certaine measure and moderate temperature doth well, to bring them to their perfection. To say nothing of the wrong that is done vnto them by the vine-masters themselves and husbandmen as they dresse and trim them, namely, when they bind them ouer-straight, as hath been said before, or when the labourer that diggeth about them, chaunceth to do them one shrewd turne or other by some crooked crosse blow, or else when the ploughman at vnauare doth loosen the root, or glance vpon it with the share, and so disbarke the bodie of it: finally, they haue iniurie done vnto them, in case the pruning-hooke be ouer blunt, and so giue them a bruse. In regard of all these causes, they are lesse able to beare either cold or heat; for euery outward iniurie is readie to pierce their fresh galls, and a naked head is soon broken. But the tenderest and weakest of al others, be the Apple trees, and namely, the hastic kind that bringeth sweet Lennings. Howbeit some trees there be which vpon such feebleness and hurt done vnto them, become barren onely, and die not; namely, the Pine and Date tree: for if a man fetch off their heads, you shall see them faile in bearing fruit, but this hurt will not kill them quite.

Moreover, it falleth out otherwhiles, that the Apples only or other such fruits, as they hang are diseased, when as the tree aileth nothing, to wit, if in due time they wanted rain, warmth, or winds that were needfull, or contrariwise, if they had too much of euery one: for by such means they either fall from the tree of themselves, or els they are the worse for it, if they proue worth ought at all.

The greatest displeasure that can happen to Vine or Oliue tree, is, when in their very blooming they be pelted with violent showers of raine, for, together with the blossome, down goeth the fruit of them both. From the same cause, proceed the cankerwormes or caterpillars (a most daungerous and hurtfull kind of vermine to trees) which will eat out the greene bud, knot and all. Others there be that will denoure the blossome and leaues of Oliues alones, as in Miletum: and thus hauing consumed all the greene leaues, leaue the trees bare, naked, and ill-fauoured to the

eye

A eye. These wormes doe breed in moist and warme weather, and especially if there be thick and foggie mists. Of the same vermine, there is another engendred, namely, if there ensue vpon the former wet season, hotter gleames of the sunne more than ordinarie, which burne the foresaid wormes, and therefore change them into other vermine. Moreover, there is a fault or imperfection besides, wherto Oliues and Vines especially are subiect, and this they call in Latine *Ara-neus*, [i. the Spider] when cobwebs (as it were) doe enfold and wrap their fruit, keeping them from growing, and so in time killing them. Ouer and besides, there be certaine winds which singe and burne Oliues and grapes principally, yea and all sorts of fruits whatsoeuer. In some yeres also ye shall see all fruits worme-eaten, and especially Apples, Peares, Medlars, and Pomegranats, without any such hurt and offence to the trees that bear them. As for Oliues, the worm sometimes doth them harme, otherwhiles good: for if the worme be engendred and formed before it take the Oliue, it consumes and spoileth the fruit, but in case they breed within the kernel, it causeth the Oliue to thrive the better, by eating the said kernel that drew away and sucked the humor which nourished it. The rain that falleth after the rising of the starre *Arcturus*, hindereth the generation of wormes, and preferueth fruits from being worme-eaten: and yet if the wind sit Southward in that time when it so raineth, such raines will breed worms in oliues especially, called *Drupe*; which beginning but then to ripen, are most readie to fall from the tree. And verily those trees that grow in waterie places or neer riuers, are more subiect to haue worme-eaten fruit, which although it fall not so soone, yet it is as loathsome euery way.

Ouer and besides, there is a certaine kind of flice resembling the Gnat, which annoieth some trees and their fruits, and namely, Malt and Figs: and it seemeth that this flice is engendred of a certaine sweet humour that lyeth vnder their barks. Thus much as touching all diseases that speake of, that trouble trees.

As for the impreffions of the Aire at certaine seasons, as also of other accidents occasioned by the climat, they are not properly to be called Maladies, because they kill trees sodainly: as namely, when a tree is blasted outright, or all at once doth wither and drie away: like as when some puffe of an vtward wind peculiar vnto any kind, doth smite them: such as in Apulia they call * *Atabulus*, and in Euboea is named *Olympias*: For if this wind chaunce to blow in mid-winter, it birteth, burneth, and drieth vp trees with such cold blasts, as afterwards no heat of the Sunne is able to recouer againe. In this sort likewise, al trees growing in vallies or standing along riuers sides, bee endangered: and about all others, Vines, Oliues and Figge trees. This death that they thus take, is soone after discovered and seene in the budding time when trees begin to put forth, how soeuer it be later ere the Oliue shew it. Howbeit, a good signe it is in them all of their recouery, when they lose their leaues: for you shall see the leaues tarien on in many of them, and when you think they are past the worst, sodainly die. Otherwhiles also you shall haue the leaues to fade and seeme drie, yet afterwards the same trees to reuiue againe, and become greene. Furthermore, in the Northernly regions, as in Pontus and Phrygia, some trees there are that be ordinarily frozen to death, namely, when the frost and yce continueth after mid-winter fortie daies. And not onely there, but also in other countries, if immediately after that trees haue put forth their fruit, there follow a hard frost, they will die vpon it, although the frost last not many daies.

In a second ranke of causes that may kill trees, are to be ranged the injuries and wrongs that come by mans hand, Pitch, oyle, and greafe, are very enemies and hurtfull to them all, but especially to young trees. Again, if trees be barked round about, they will die all, vnlesse it be the Corke tree; for it will thrive and prosper the better, if it be in that wise discharged of the outward barke; for growing as it doth ouer thicke, it claspeth and clingeth to the tree so hard, that it choketh and stranglenth it againe. Neither doth the tree *Adrachne* find any hurt or offence by disbarking, vnlesse the very wood be cut also together with it. As for cherie trees, Lindens, and Vines, it is ordinarie with them to cast their barke in some sort, and take no harme thereby; but it is not the vitall and liuely inner barke indeed which is next vnto the bodie, but that onely F which by coming of another underneath fresh and young, is driuen forth and thrust out.

Some trees there be, which naturally haue their barke full of chaps and rifts, as the Planes for example. As for the Line or Linden tree, if it chance to losse the barke, it will come in manner whole and entire againe. In such therefore the manner is, by way of cure to close vp againe with clay and dung, the naked and bare place, and so to bring it to a cicatrice: and, I assure you,

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* quasi dictu
dum, scilicet
miserum, aut
pessimum inferens

this practise sometimes speeds well, and doth the deed; provided alwaies, that the naked place were not surpris'd before the cure, with extremity either of cold or heat. Certaine it is, that by this means both kinds of the Oke, as wel the Robur as the Quercus, liue the longer, and die nothing so soone as otherwise they would. And herein the time of the yeare ought to be considered, when a tree is thus pilled and disbarked: for in case that a man pille the barke of the Firre or Pine tree, during those months wherein the sunne passeth thorough the signes of Taurus or Gemini, which is the very season of their budding, there is no way but one with them, for presently they die: but if this wrong should befall them in winter, they would abide it the better and longer liue, than being so misused either in April or May. The same is the case of the mast-Hoime, the wild Robur also, and the common Oke. Howbeit, take this note by the way, that if the void place where the tree hath bene barked round about, be but narrow, so as the brims of the bark remaining be not farre asunder, the trees aforesaid will take no harme at all thereby. Mary in the tenderer sort, and such as a man may beare but of a weake complexion, and growing besides in a leane and hungrie ground, if the bark be taken away but of one side and no more, it is enough to kill them.

The like may be said of the topping or beheading the Cypresse, the Pitch tree, and the Cedar: for let these haue their heads either cutt off with an axe, or burnt by fire, they will die, there is no remedie. As much also is to be said, when beasts doe brouse and eat them. As for the Oliue tree, if a Goat chance but to licke thereof, it will thereupon proue baraine and beare no more Oliues; so saith *Varro*, as we haue noted heretofore. But as some trees vpon the like injury done vnto them, will die, so others againe will be but the worse for it, and such are the Almond trees: for where before they did beare sweet Almonds, they will euer after bring bitter. Moreover, you shall haue some trees, that will thrive & do the better after this hard dealing, & namely a kind of pearre tree called Phocis, in the Island Chios: for you haue heard by me already, which trees they be that lopping and shredding is good for.

Most trees, and in manner all (except the Vine, Apple tree, Fig tree, and Pomegranate tree) will die, if their stocke or bodie be clouen: and some be so tender, that vpon euery little wound or trace that is giuen them, yee shall see them to die: howbeit, the Figge tree and generally all such trees as breed Rosin, desie all such wrongs and injuries, and will abide any wound or bruse whatsoeuer.

That trees should die when their roots are cut away, it is no maruell, and yet many there bee of them, that will liue and prosper well neuertheless, in case they be not all cutt off, nor the greatest maiest roots, ne yet any of the heart or vitall roots among the rest.

Moreover, it is often seene, that trees kill one another when they grow too thicke, and that either by overshadowing, or else by robbing one another of their food and nourishment. The Iuice also, that with clipping and clasping bindeth trees too hard, halteth their death. Mislike likewise doth them no good; no more than Cytisus, or the hearbe Auro, which the Greekes name Alimus, growing about them. The nature of some plants is, not to kill and destroy trees out of hand, but to hurt and offend them only, either with their smell, or else with the mixture and intermingling of their owne iuice with their sap. Thus the Radish and the Lawrell doe harme to the Vine if they grow neare vnto it: for surely the Vine is thought to haue the sense of smelling, and wonderfully to sent any odours: and therefore it is observed in her experience, That if shee be neare vnto Radish or Lawrell, shee will turne away and withdraw her selfe backward from them, as if shee could not abide their strong breath, but vtterly abhorred it as her very enemy. And vpon the obseruation of this secret in Nature, *Androcles* the Physician deuised a medicine against drunkenesse, and prescribed his patients to eat Radish, if they would not be overcome with wine. Neither can the Vine away with Coleworts or the Cabbage, nay it hateth generally all worts or pot-herbs: it abhorreth also the Hazell and Filbert tree; in such sort, as a man shall sensibly perceiue it to looke heauily and milke, if those plants aforesaid grow not farther off from it. And now to conclude and knit vp this discourse, would you kill a Vine out of hand? lay to the root thereof nitre or salt-petre, and alumne, drench it with hote sea-water: or doe but apply vnto it Bean coes, or the shales or husks of the pulse Erutile, and you shall soone see the operation and effect of a most ranke and deadly poison.

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CHAP. XXV.

Of many and sundry prodigies or strange tokens and accidents about trees. Also of an Olive plot which in times past was transported all and in whole, from one side of an high port way, to another.

IN this Treatise of the faults and imperfections incident to Trees, me thinks I should dowle to say somewhat of the supernatural occurrences in them obserued: for we haue known some of them to grow vp and prosper without any leaues at all. And as there haue bin Vines and Pomegranats seene to beare fruit, springing immediately from the trunk, and not from branch or boughs: so there haue bin vines charged with grapes, and not clad with leaues: and Oliues likewise had their berries hanging vpon them whole and sound, notwithstanding all their leaues were thied and gon.

Moreover, strange wonders and miracles haue hapned about trees by meere chance and fortune: for there was an Oliue once, which being burnt to the very stump, reuiued & came againe: and in Bæotia, certain Fig Trees, notwithstanding they were eaten and gnawn most piteously with Locusts, yet budded anew, and put forth a fresh spring. Also it hath bin marked, that trees haue changed their colour from black to white. And yet this is not alwaies a monstrous thing beyond naturall reason, and specially in such as come of seed, as wee may obserue in the Aspe, which erst soones turneth to be a Poplar. Some are of opinion, That the Seruise Tree if it bee transplanted, and come into a hotter ground than is agreeable to the nature thereof, will leaue bearing, and be barren. But it is taken for no lesse than a monster out of kind, that sweet Apples and such like fruits should proue sowre, or sowre fruit turne to be sweet; as also that a wilde Fig Tree should become tame, or contrariwise. And it is counted for an vnluckie sign, if any Tree change from the better to the worse; to wit, if a gentle garden Oliue degenerate into the wilde and sauage: if a Vine that was wont to beare white grapes, haue now black vpon it: and so likewise if a Fig Tree which vsed to beare white Figs, chance afterwards to beare black.

And here by the way I cannot forget the strange accident that befell in Laodicea, where vpon the annuall of King *Xerxes*, a Plane tree was turned into an Oliue. But if any man be desirous to know more of these and such like miracles, for as much as I loue not to runne on still and make no end, I refer him ouer to *Aristander* a Greeke writer, who hath compiled a whole volume, and stuffed it full of such like wonders: let him haue recourse alio to *C. Epidorus*, a Countryman of ours, whose Commentaries are full of such stuffe: where he shall find also, that trees sometimes spake.

A little before the ciuill war brake out between *Inlius Cesar* and *Pompey the Great*, there was reported an ominous and fearfull sight prefaging no good, from out of the territory of Comes, namely, That a great Tree there sunke down into the earth so deep, that a very little of the top boughs was to be seene. Hereupon were the propheticall books of *Sibylla* perused, wherein it was found, that this prodigie portended some great carnage of men; and that the neerer that this slaughter and execution should be to Rome, the greater should the bloodshed be.

A prodigious signe and wonder it is reputed also, when trees seem to grow in places where they were not wont to be, and which are not agreeable to their natures; as namely on the chapters of pillars, the heads of statues, or vpon altars: like as to see one tree of diuers and contrary kinde growing vpon the top of another; as it befell about the city Cyzicum hard before the streit siege that was laid vnto it [by *Mithridates*], both by sea and land, where a Fig tree was seene to grow vpon a Lawrell. Likewise at Talleis, about the time of the foresaid ciuill war, a Date tree grew out of the base or foot of a Colunne that *Cesar* Dictator caused there to be erected. Semblably at Rome also, twice during the war between the Romans and *K. Persius*, there was a Date tree known to grow vpon the lanterne or top of the Capitoll temple, forseeing wherefore

when this was by stormes and tempests ouerthrowne and laid along, there sprung vp of it selfe in the very same place a Fig tree, at what time as *M. Messius* and *Caius Cassius* the two Censors, held their Quinquennall solemn sacrifices for the assailing and purging of the city of Rome. From which time *Piso* (a renowned Historiographer and Writer of good credit) hath noted, that the Romans were giuen ouer to voluptuousnesse and sensuality, and that euer since all chieft

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Or as some read, the head of Iupiter within the Cæsars.

fitie and honest life hath bin exiled. But aboute all the prodigies that were euer seen or heard, there is one that passeth, and the same hapned in our age, about the very time that *Nero* the emperor came to his unhappy end and fall: for in the Marrucine territorie there was an olue garden belonging to *Vestius Marcellus* a right worshipfull knight of Rome, which of it selfe remoed all and whole as it stood, ouer the broad highway, to a place where lay tillage and earable ground: and the corn lands by way of exchange croffed ouer the said caufey againe, and were found in lieu of the Olue plot or horyard aforesaid.

CHAP. XXVI.

¶ *The remedies for the maladies and diseases of Trees.*

Now that I haue declared the diseases of Trees, meet it is that I should set down the cure and remedies thereto. Where this one thing would be first noted, That of Remedies, some be common to all trees, others appropriate to certain. Common be these following, To bare and cleanse the roots, to hille and bank them againe, that is to say, to giue aire vnto the roots, & let the wind into them; and contrariwise to couer them, & keep both wind & weather from them: to water them, or to deriue & diuert water from them: to refresh their roots with the fat liquor of dung: to discharge them of their burden by pruning their superfluous branches. *Item*, to giue their humors issue, and as it were by way of phlebotomie to let them blood, and to skice and scrape their bark round about, in manner of scarification. To take downe their strength and keep them vnder that they be not too luffy & proud. Also, if the cold hath caught their buds or burgeons, & thereby caused them to look burnt, rough, and vnpleasant, to slick, polish, & smooth them again with the pumy stone. These verily be the diuers helps to cure trees: howbeit, yfed they must be with great discretion, for that which is very good for one, is not too good for another: and some trees require this course, others that, to be taken with them. As for example, the Cypres tree cannot abide either to be dunged or watered, it hateth all digging and deluing about it, it may not away with cutting and pruning, it is the worst for all good physick, nay, all remedies to others are mischiefs to it, and in one word, go about to medicine it you kill it. All Vines, and Pomegranat trees especially, loue alife river sides, & desire to be watered, for thereby will they thrive and prosper. The Fig tree also it selfe is nourished and fed in waterie grounds: but the fruit that it beareth is the poorer by that means. Almond trees if they be plied with digging, will either not bloome at all, or else shed their floures before due time. Neither must any vng plants or trees newly grafted, be digged about their roots, before they haue gathered sufficient strength and begin to beare fruit. Most trees are willing enough to be disburdened of their superfluous and ouer-rank branches, like as we men can spare our nails to be pared, and bush of hair to be cut, when they be ouergrowne. As for old trees, they would be cut down hard to the ground, for usually they rise againe of some shoot springing from the root, and yet not all of them. Regard therefore must be had, that none be so vled but such (as we haue noted before) as are able of nature to abide it. For trees to be watered at the roots in the heate of summer, it is good, but in winter it is as bad. In the fall of the leaf it may be wholsome, it may also be hurtfull, and therefore the nature of the soile would be considered: for the grape-gatherer in Spaine meeteth with a good vintage, notwithstanding the Vines stand in a marsh and fennie ground; howbeit in most parts of the world besides, it is thought good husbandry, to draine away from the roots the very rain water that falls from aboue in Autumne. About the rising of the Dog-star, trees desire most of all to be well watered; and yet they would not haue too much thereof euen in that time, for in case their roots be ouer-drenched and drowned therewith, they will catch harm. Herein also the age of trees is to be respected, which in this case prescribeth what is meet and sufficient: for yong trees be less thirsty than others: also Custome is a great matter. For such as haue bene vfed vnto waterie must not change their old woont, but they require most of all others to be vled to still. Contrariwise, Those Trees which grow vpon dry grounds naturally, desire no more moisture than that which is needfull. In the territory about Sulmo in Italy, and namely within, the Liberties of Fabianum, the Vines which doe beare the harder and sower Grapes, must of necessitie be watered. And no maruaile, for the verie lands and Corne-fields vse to haue water let in vnto them. And here a wonderfull thing is to be obserued; This water cheriseth the Corne, but killeth all the hurtfull Graffe among: and

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A the riuer ouerflowing the lands, is as good as a weeding. In the same countrey the maner is in midwinter to open a sluice or draw vp their floodgates, for to ouerflow their vine roots with the riuer: and so much the rather, if either it be an hard frost, or snow lieth vpon the ground: And why so? because the pinching cold should not burne them: and this they call there by the name of *Tepidare*, [i. to giue them a kindly warmth as in a flouer:] see the memorable nature of this only riuer, to be warme in winter, and yet the same in summer is so cold, that hardly a man can endure his hand in it.

CHAP. XXVII.

¶ *Of caprification or scarifying trees: also the maner of danging them.*

Touching the remedies for blasting as well by heat as cold, I will treat in the booke next following. Meane while I cannot omit one manner of cure by way of Scarification. For when the bark is poore and lean, by reason of some disease or mislike, so as it clengs together, pressing and binding the quick wood ouermuch, whereby the tree is as it were hide-bound, they vse to slit the same along with a very sharpe cutting hooke, guiding and gaping the edge thereof with both hands, that it goe not ouer-deepe and so by these incisions they doe open it, and as it were lfen and enlarge the skin. Now, when this feat is wrought, the only signe that it is wel don and good for the tree, is this, if the incisions in tract of time appeare wide, and the void place incarnate againe and fill vp with a kind of callous substance, compounded of the sap and wood together growing betwene. Whereby it appeareth, that in many cases the cure of mens maladies & the diseases of trees is very like: for that euen their bones also vse to be trepanized and bored through as well as ours. Also for to make sweet almonds of bitter, first the tree must be digged round about, and then boared thorough with an auger toward the root or butt end, whereby the waterish humor that runneth downward, may issue forth and passe away. Moreover, if a man would discharge Elmes of their superfluous moisture, they must be pierced with a wimble, a little about the ground, as far as to the very heart or pith; if either they be old, or be perceived to receiue ouermuch nutriment. In like manner the same excessive humor is let out of Fig trees by means of certaine light slits or gashes made in the bark, aslant or byas, in case it seeme to swell and be ouer-streight, and by this deuise they preuent the falling of their fruit.

D Generally, what trees soeuer beare Apples or such like soft fruit without, if they chauce at any time to prove barren, that is to say, to put forth leafe only without any fruit, the vse is, first to make a clift in the root; then to put a stone therein, that the edges meet not and rejoin againe; and so they become fruitfull. The same is practised in Almond trees also, but in steed of the stone there must be a wedge of Oken wood driuen in. As for Pyrries and Medlar trees, those wedges must be made of Pine Torch-wood. Moreover, if either vines or fig trees be ouer-ranke of wood, it is very good to cut and skice the roots round about, and when they be thus serued, to couer with ashes the said incisions: but then they must be close couered with ashes and earth aloft. If ye would haue trees beare figs at the later end of the yere, pluck off the first green figs so soon as they be somewhat bigger than Beans: for vnder them there will other come vp in the place, and be later ere they wax ripe. The same fig trees when they begin to spring leaf and look green, if the top-twiggs of euery bough be cut off, become the stronger & more fruitfull by it. For as touching the ripening of Figges by Caprification, true it is, that there be certain flies like gnats engender in greene figs, which are the occasion thereof, for when they are flown out, there are no graines or seeds found within: whereby it is euident, that they be turned into those flies. And when they do fly forth, so hasty they are to be gone, that many of them as they break out, leave either a foot or a wing behind them. Besides, another kind there is of gnats, which they call Centaine, for stoth and shrewdness like in all the world to Drone-bees, so mischeuous they be to the good flies or gnats indeed, that cause the Flies to ripen-for, then they kill, and die themselves when they haue done. Moreover, there be certaine wormes like moths that ordinarily do much hurt to the graines or seeds within figs, and eat them quite: The only remedie against this vermine, it is to take a twig or imp of the Italian Lentisk tree, and to let or couch it with the wrong or top end downeward, in the very same trench where the fig tree was planted, For to haue fig trees beare most plentifully, take ruddle or red-earth tempered wel with the lees or grounds of oile, after that the same is mixed with dung, poure it to the roots of the

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trees when they begin to put forth leaues. Among wild Fig trees, the best be the black & those that grow in stonie grounds: for their Figges are fullest of cornes or graines within. And as for caprification, it would be practised after rain. And take this for a generall rule, That ye beware in any hand in curing of trees, least yee vse a mischeefe for a remedie, a thing that commonly happeneth by ouer many medicines, or the same not applied in due season: for as it is very good for trees, to cut and lop off their boughs where they grow too thicke: so to be hacking and mangling of them euery yeare, hurteth them as much. As for the vine, it requieth pruning once a yeare: but the Myrtle trees, Pomegranate, and Oliue trees, euery two yeares; because they will quickly spring againe and shoot forth branches thicke. Other trees would not be lopped so often. Neither is it good to cut or prune any whatsoeuer it be, at the fall of the leafe. Nay, they are not so much as to be scraped, but in the pruning time, that is, in the Spring. All wounding of trees goes to the very heart, and hurt the quick, vlesse it be of those parts that are superfluous.

As great consideration there would be had in the manner of mucking them. No doubt, they loue dung well: but carefull heed would be taken first, that none be laid to the roots in the hottest season of the yeare. Item, That it be not Greene, but thoroughly rotten: lastly, that it be not ouer ranke nor stronger than is needfull. Swines dung burnes the root of vines, vlesse it bee five yeares old, or the vines stand in some place where water is at commaundement for to coole the excessive heat thereof. Also the filth of Tanners oose and Carriers scrapings doe the like, if they be not well delaiued with water. Likewise it must not be laid too thicke. The ordinarie proportion is thought to be for euery ten foot square, three Modij of dung. But herein no certaintie can be set downe: for the nature of the soile must rule all. With Swines and Pigeons dung, they vse to foulder the cuts and wounds that are given to trees. In case the Pomegranats grow to bee tart and foure, the manner is to dig about the root and lay it bare, and then to put Hogs dung there: for that yeare the Pomegranats will be full of a wine iuice, and the next yeare following prove sweet. Some good husbanden there be, that think it meet and requit four times a yeare to water their roots with mans yvine and there water together, and vpon euery one they bestow a whole Amphore. Or else to bedew and sprinkle the top branches of the Pomegranat trees with wine, wherein Lafer hath bene steeped. When the pomegranat doth cleaue & open vpon the tree, it is good to wreath the steall therof. If Figs doe the like, there would be oile lees cast vpon them. Other trees when they are amiss or doe mislike, ought to be drenched with wine lees and Lupines if they be set about their roots, will helpe them. The water also or decoction wherein Lupines were foddren, poured about the roots of Apple trees or such like, doth them much good. If it happen to thunder about the feast Vulcanalia, Figs will fall from the tree. The remedie therof is to throw the plots before with Barley straw. Would you haue hastie Cherries? Lay lime to the roots of the tree, it will cause them to ripen their fruit speedily. Of al fruits these hastie Cherries would be plucked and gathered as they ripen, to the end that those which be left behind, may thrive and grow big and faire.

CHAP. XXVIII.

Many and sundrie medicines seruing for trees, to wit, remedies against venomous vermin and viscines, likewise against all hurtfull beasts.

Some trees there be which are the better for wrong and injurie done vnto them: yea, and if they be pinched or bitten, they shoot vp the rather, as Date trees and the Lentisks, for euen the very salt water nourisheth them. And true it is, that ashes hath the like nature and vertue that salt, howbeit, more mild and gentle. Hereupon it comes also, that Fig trees vse to be strewed therewith, yea, and to be wet with the iuice of Rue, to the end, that neither their fruit should proueworm-eaten, nor their roots putrifie and rot. Moreover, if vines be too full of moisture and apt to bleed ouermuch, it is an ordinarie thing to pour salt water to their roots. Also, in case their grapes be apt to fall, folk vse to take ashes and besprinkle them with vinegre, and so to besmeare the roots therewith: or els with red Orpiment, in case the grapes be giuen to putrification. Say that vines be barren and will not bear grapes, their roots ought to be wel drenched and dawbed with sharp vinegre and ashes incorporat together. But what if a vine bring not her fruit to full maturity, before it begin to wax drie and to wither? the superfluous wood ought to be cut away about the root, and the cuts together with the small string or beard of the root to be cut

be wet and soked in sharp vinegre, and stale chamber-lee, and then they should be well couered and stopped with a kind of mortar made therewith, and often digged about. As for Oliues, if they make thew of smal increase, their roots must be bared and laid open to the cold in winter, for by this manner of chastisement they will amend and do far better.

In all these remedies, proceed we must according to the course of the yeare: for sometime the season requireth, that the meanes should bee sooner vsed, and otherwhiles later. Some plants there be that fire is good for, and namely, canes and reeds: for if they be burnt, they will come vp againe the thicker and more smooth. As for *Cato*, hee hath certain compound medicines for trees, distinct by sundry measures by him preferred: for he hath ordained to the roots of the greater trees an * Amphore, but of the lesse an * Vna only, of Oile dregs, with an equal quantity of water: all which being tempered together, he would haue to be poured by little & little to the roots, but they ought before to be digged about and laid bare. And for the Oliue, he addeth moreouer, that the roots should haue a bed of litter or straw made before, and then vsed accordingly. In like manner also would the fig tree be serued: but especially at the roots of it there should be raised a bank of old earth; for by that means it wil come to passe, that the green figs will not fall, they will beare more plentifully, and the fruit be more smooth and pleasant.

To prevent in like maner, that the worme * *Convolutus* bred not in a vine, hee appointed two gallons of oile dregs or lees, to be boiled first to the thicke consistence of hony, and then afterwards to take a third part of the slime Bitumen, and a fourth part of brimstone, and seeth all together again in the open aire, for within dores there would be some danger of setting the house a fire. With this mixture, if a vine be well annoiued about the ioints, and vnder their hollow arm-pits, he assurth vs, that there will no such worme breed therein. Some content themselves to perfume vines onely with the smoke of this composition, so as it be done on the winde-side, that it may carry the fume directly to them; and this should be continued for three daies together. Many are of opinion, that wine being mingled with like quantity of water (because alone of it selfe it is hurtfull) is as good for this purpose as the oile dregs aboue said, which *Cato* hath preferred. Another kind of vermin or worme there is, that gnaweth the tender buds or burgeons of the vine, and the same is called *Volvox*: to preserue vines from this harmfull creature, men are wont to take their vine-hooks when they be newly ground and sharpened, then to scoure them with a Beauers skin, and with them to prune the vines: or else after they be pruned, to annoiue them with bears blood. Moreover, Ants or Pismires make foule work otherwise among trees. If you would driue them away, daub the stock or butt end with red Sinopre and Tar tempered together. Or do but hang vp any fish neere by, and all the Pismires will leaue their former haunt, and gather about it. Others make no more ado, but stampe Lupines with oile, and therewith annoiue the roots. Many there are, who kill both them and Mouldwarps with oile dregs. Also, against Palmer-worms or Caterpillars, and to keepe Apples from rotting, they giue order for to annoiue the top twigs and branch ends of trees with the gal of a green Lizard. But more particularly against the said caterpillars, they would haue a woman whilst her monthly sickness is vpon her, to go round about euery tree by it selfe, barefooted and barelegged, vnbraued and vnlaiced, and her haire hanging about her cares. Moreover, to preserue trees from wilde and noisome beasts, that none of them come neere to bruise and marre their green spring, they doe appoint to besprinkle their leaues with greene Cow or Oxen earne, and water together, betwene some showes, that the rain may wash away the malice and hurtfull quality of the medicine. A wonder to see how inuentiue men are to deuise remedies for euery mischiefe; for many you shal haue, who be verily perswaded, that there are certain charms & enchantments to driue away the haile. But for mine own part, I thinke it meerer mockery to fet downe the very words, although *Cato* hath done it before me. Who also speake of another spell for dislocations or members out of ioint (an accident happening to trees) which he would haue to be ioined close within the cleft of canes. The same writer hath permitted men to cut down sacred groves, trees also dedicated for religion and sequestered from profane vse (after a solemne sacrifice to the gods first performed:) the reason and manner whereof he hath put downe in a certaine treatise, which hee compiled of purpose as touching that argument.

* Amphore
Quadrant
was a measure
Romane of li-
quors, con-
taining is thought
which is about
16 wine gal-
lons.

* Vna is halfe
Amphora, to
wit, 8 cions,
whereabouts
* Vine flowers,
or the Disks
gold-ting.



THE EIGHTEENTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS
SECVNDVS.

CHAP. I.

¶ Of the exceeding laue and affection of our ancestors in old time to Agriculture
and Husbandrie. Also, of their singular paines and diligence
about Gardens.

NOW followeth the treatise of corn, of Gardens, and Floures, and generally of all things
else, that by the goodnesse of Nature the Earth bringeth forth bountifullly, besides
Trees and Shrubs. The speculation whereof verily is infinit, if a man do but consider
the number and variety of Herbes and Floures, together with their odors and colors;
the diuerty also of their iuices, their feuerall vertues and properties, whether it be to cure men
of their maladies, or to giue them pleasure and contentment to their senses. But before that I
enter into this discourse, very willing I am to take in hand the cause of Earth (the common mo-
ther of vs all) and to assist her against all slanderous imputations, notwithstanding I haue in the
beginning of this my worke pleaded once already in her defence. For when we looke into the
matter within her contained, we are set on fire inwardly to find fault with her for breeding and
bearing noisome things, charging vpon her our own faults, and impuring to her that, for which
we of right ought to be blamed. Set case she hath brought forth poison and venom, Who hath
feared had them out but man? As for the fouls of the aire and wild beasts, it is sufficient that they
touch them not, nay they know how to beware and auoid them. For say that the Elephants doe
file their teeth sharp against hard trees, say that the Rhinoceroses whet their horns against the
rockes, and the wild Bores sharpen their edge tuskes against both stocke and stone: say that all
creatures know well enough how to prepare and frubbish their weapons to do mischief, which
of them all yet infect them with poison, but man alone we haue the cast to envenome and poi-
son arrows, we can tell how to put something to our darts of yron and Steele, more hurtfull and
mischieuous than they be. It is ordinary with vs to poison riuers also, yea & the very Elements
whereof the world doth stand, are by vs infected: for euen the aire it selfe, wherein and whereby
all things should liue, we corrupt to their mischief and destruction. Neither can we truly say or
think, that other creatures besides vs are ignorant of these poisons, for we haue already shewed,
that they are not to seeke either what defectiuities to prouide against they should fight with
serpents, or what remedies to find for their cure after they haue fought and are hurt. Moreover,
setting man aside, there is no creature furnished or armed with any other venom, but their
own. We cannot chuse therefore but confesse our great fault and deadly malice, in that we rest
not contented with naturall poisons, but betake our selues to many mixtures and compositions
artificiall, made euen with our owne hands. But what say you to this? Are not some men them-
selues meere poisons by nature? for these slanderers and backbiters in the world, what doe they
else but lance poison out of their black tongues, like hideous serpents? what doe these enuious
persons, but with their malicious and poisonfull breath stinge and burne all before them that
they can reach or meet with, finding fault with euery thing whatsoeuer? Are they not well and
fitly compared to these cursed fouls flying in the dark, which albeit they lequester themselves
from

A from birds of the day, yet they bewray their sight and enuy euen to the night and the quiet re-
pose thereof, by their heauie grones (the only voice that they vtter) disquieting and troubling
those that be at rest: & finally, all one they be with those vnluckie creatures, which if they hap-
pen either to meet or crosse the way vpon a man, preface alwaies some ill toward, opposing them-
selues (as it were) to all goodnesse, and hindering whatsoeuer is profitable for this life. Neither
do these monstrous and abominable sprites know any other reward of this their deadly breath,
their cursed and detestable malice, but to hate and abhor all things. Howbeit, herein may wee
acknowledge and see the wonderfull maiesty of dame Nature: for like as she hath shewed her
selfe more fruitfull and liberall in bringing forth profitable and holefome plants, in greater
plenty than hurtfull and noisome; so surely hath she furnished the world better with good men
B and virtuous for the weale publick. In which regard and consideration, we also taking no small
joy and contentment (leauing these troublesome spirits to themselves for trobroile and frie in
their owne greace) will go on forward and proceed to declare the rest of Natures workes; and
with the better resolution, for that wee seeke more pleasure and contentment in the paines and
trauell that we take, than expect any fame or bruit of men afterwards. For why? we are in hand
to speake of the country and countrie commodities, such as in old time like as they were most
necessary for this life, so they were accounted and honoured most highly.

CHAP. II.

¶ Of the first guirland or chaplet made of herbes and floures at Rome.

THE first order that K. Romulus instituted in Rome city newly built, was the guild or frater-
nitie of certaine Priests or Wardens ouer corn fields, which were in number twelue. And
for to do the greater honour to this company, he caused himselfe to be called the twelfth
brother among them: and *Acca Laurentia*, the nourse or foster-mother of this Prince, bestowed
vpon him a garland of corn eares, twisted and tied together with a white ribband, as the most
sacred badge and ensigne of this new Priesthood, which he and his brethren should weare with
great reuerence and deuotion: and this was the very first chaplet known at Rome. Now the ho-
nor of this ornament was perpetuall, and continued for terme of life; so as a man once inuested
therein, could not be degraded and deprived thereof, though hee were banished or taken priso-
ner; it accompanied him euer to his dying day. Then, and in those daies, euery man within the
whole body of the people of Rome, contented himselfe with two acres of land, and King *Romu-
lus* assigned to none of his subiects a greater proportion: whereas now ye shall haue those that
erewhile were but slaves and seruants vnder the emperor *Nero* (despising as not sufficient, green
enclosures and gardens of that compasse) must haue fiftie pooles also bigger than so: and well
it were if they would stay there and go no further, for shortly we shall see some one or other of
them, neuer rest vntill he haue kitchenis also more than two acres wide. And thus much for king
Romulus.

King *Numa* his successor, ordained to worship the gods with an oblation of corne, yea and to
offer prayers and supplications vnto them by no other means, than cakes made of salt and meal:
yea and as *Hemina* mine author saith, for to induce the people of Rome the better vnto it, he al-
lowed them to parch their corne in their sacrifices; for that corne thus parched, was supposed
to be a more wholesome food: by which meanes, this one thing infused in the end, that no corne
was counted pure and good, nor fit to be used in diuine seruice, but that which was thus baked
or parched. He also instituted the feast *Fornacalia*; to wit, certaine holy daies for the parching
and baking of corne: as also another as religiously obserued, called *Terminalia*; namely, for the
bounds and limits of lands: for these and such like gods, as then, they worshipped most: as also
the goddesse *Seia*, so called *a serendo*: [i. of sowing corne and setting plants:] and *Serepha*, which
name they gaue her *a segitibus*, [i. of corn fields:] whose images we at this day do see in the grand
Cirque or Shew-place at Rome. A third goddesse there is among them, whom to name and
inuocate within-houfe, they might not with safe conscience. Lastly, so religious and ceremo-
nious they were in old time, that they would not so much as taste of new corne or wine, before
the Priests had taken a fey of the first fruits.

*Terminum, to
wth Terminus,
for preserving
of trees, plan-
ted, and corne
sowne: or as
some vnder-
stande
(Terminus)
meaning
Terminus.

CHAP.

¶ *Of Iugerum, and Actus. Of the antient Lawes ordained for Cattell in old time. How often and at what time Corne and victuals were exceeding cheape at Rome. What noble and famous persons addicted themselves wholly to Husbandrie and Tillage.*

AN Acre or Arpen of ground, called in Latine Iugerum, was as much as might be eared vp or ploughed in one day with a yoke of Oxen. And Actus in Latine is a Land, or so much just as two Oxen are driuen and occupied in, whiles they plough in one tract without any rest. This contained by the old time, 120 foot in length: and being doubled in length, made the Acre or Iugerum above said.

In antient time of the old Romans, the greatest Present that could be giuen to captains and souldiers who had borne themselves valiantly in the seruice of their country, was as much ground as they could haue eared or broken vp in one day. And it was thought a great reward to receiue at the hands of the people of Rome halfe a pint (or a pint at the utmost) of corn. Moreover, in so great request was corn and Husbandry, that the first and chiefe houses in Rome, took their surnames from thence: and namely, the *Pisennii*, who deuised first the pestill to bray corne withall in their mills and backhouses: also, the family of the *Pisenes*, who tooke their name, a *pisenda*, [i. of stamping or pounding corne in a mortar.] The *Fabij* in like manner, the *Centulii*, and the *Cicerones*, each one according to the funerall pulke that they skilled best to set or sow. Moreover, to the house of the *Iunij*, they gaue the surname of *Bubulcus*, by occasion of one of their ancestors, who knew passing well how to vse and order oxen. Ouer & besides all this, that you may know what regard was had of corn, among other sacred and holy ceremonies, there was nothing reputed more religious than the bond of Consecration in knitting vp of mariages, & assurance making of the chiefe priests: yea, the manner of the new wedded brides was to carry openly before them a wheaten cake. In times past, the Magistrates called Censors, iudged it a trespass worthy of great rebuke, to be an ill husband; that is to say, to be carelesse and negligent in tilling the ground. And as *Cato* reporteth, if men called one by the name of a good husbandman, they were thought to haue praised & commended him in the highest degree: hereupon also it came, that rich and substantiall men were termed in Latine, *Locupletes*, as one would say, *Locupleni*, [i. well landed.] And as for the very word Pecunia in Latine, which signifieth money, it took the name of Pecus, [i. cattell.] And euen at this day (as appeareth in the Registers of the Censors, and the accounts of the ory Chamber) all their rents, revenues, and customes growing vnto the people of Rome, are called *Pascua*; for that a long time the whole domaine of Rome, good vpon pasture and nothing els. The penalties and fines also, which offenders were put to pay, were raised of nothing else but of Kine, Oxen, and Sheep: where, by the way, I cannot conceale from you the fauorable regard that the antient lawes and ordinances of Rome had; whereby it was expressly forbidden, That no Iudge who had power to enioine or impose any paine and amercement, should name the fine of an Oxe, yflesse he had passed that of a Sheep first. The solumme games and plaies also in the honour of Kine and oxen, they who frequented them, called *Bubetij*. Moreover, king *Seruius* at the first when hee made brazen coine, stamped the peeces with the portraiture of Sheepe, Kine, and Oxen. By the lawes of the twelue Tables, all persons whatsoever aboute foureteen years of age, were forbidden vnder paine of death, either by stealth, to feed their cattell in the night time vpon any corn-field of another mans, ploughed and sown; or to cut the same downe by fyth or sickle at such a time, and in that manner. By the same laws also ordained it was, That whosoever was attaint or conuicted thereupon, should be hanged by the head and strangled for satisfaction of the goddesse *Ceres*: and in one word, to be more grievously punished than in case of man-slaughter. But if the offender were vnder that age before said, the same law provided, that hee should be whipped at the discretion of the Pretor or Lord chiefe Iustice for the time being: or, if this punishment were remitted by the partie who sustained the damage, then hee should satisfie vnto him for the trespass as a slave, and pay double for the losse, according as honest and indifferent men valued it. Furthermore, in antient time, the distinction of States and degrees in the city of Rome (both for wealth and worship) was according to their lands, and not otherwise. Insomuch, as those citizens were reputed for chiefe and principall, who were possessed of Land and liuing in the Countrey: and these made the State, called the Rusticke Tribes, in Rome: whereas contrariwise the other estate, reputed

A the meaner in degree, was named the Vrbane Tribes; consisting of Artisans and such like as were not landed persons: into which, if a man were transferred from any of the rest, it was thought a great shame and disgrace, as if he were reproched for idleness & negligence in husbandry. And hereupon these foure Tribes alone took name of those foure principall parts or quarters of the city wherein they were seated, to wit, Suburrana, Palatina, Collina, and Esquilina. Ouer and besides, vpon faires and market daies, the Rusticke Tribes usually visited the city: vpon which daies therefore no publick assemblies of the people were holden, to call the Commons away from their market affaires. Also the manner in those daies was to take their sleepe and repose in good straw and litter. Yea, and when speech was of glory and renowne, men would call it by no other term but *Adorea*, of *Adora*, kind of fine red wheat. Whereby the way, I haue in great admiration the antique words of those times, and it doth me good to think how significant they were. For thus we read in the sacred Pontificall Commentaries of the high priests, For the *Augurie* or *solemn* sacrifice called * *Canarium*, let there be certain daies appointed, to wit, before the corn showe care out of the shee, yea, and before that it come into it. But to returne againe to the praise of Husbandry. When the world was thus added and giuen to Agriculture, Italy was not but ly well provided and sufficiently furnished of corne, without any help from out provinces; but also all kind of grain and victuals were in those daies so exceeding cheape, as it is incredible: for *Manius Martins* a Plebeian Edile of Rome, was the first man that serued the people wheat at one Asse the Modius: and after him *Minutius Aquarius*, the eleventh Tribune of the commons (euen he who indited that mutinous and seditious citizen *Sp. Maelus*) brought down the price of wheat for 3 market daies to an Asse the Modius. The people therefore of Rome, in regard of this good deed of his, erected a statue for him without the gate *Trigemina*; and that with such affection and deuotion, that euery man contributed somewhat thereto by way of beneuolence. *Trebius* also in the time of his *Adilship*, caused wheat to be sold vnto the people at the same rate; to wit, one Asse a Modius. For which cause, there were 3 statues also in memoriall of him set vp, both in the Capitoll and also in Palatium: and himselfe when he was departed this life, had this honor done vnto him by the people; at his exequies, as to be carried on their shoulders to his funerall fire. It is reported moreover, That in the very same yeare wherein this great goddesse *Cybele* (called also the mother of the gods) was brought to Rome, there was a more plentifull harvest that Summer, and corn was at a lower price than had bin known in ten yeares before. Likewise, *M. Varro* hath left in writing, That when *L. Metellus* made shew of so many Elephants in his triumph at Rome, a Modius of good red wheat, was worth no more than one Asse; also a gallon of wine cost no more. And as for drie figges, thirty pound weight carried no higher price: and a man might haue bought a pound of Oile olive, and 12 pound of fish at the very same reckoning. And yett all this plenty and cheapnesse proceeded not from the great domaines and large possessions of those priuate persons that incroched vpon their neighbors, and hemmed them within narrow compasse. For by the law published by *Stola Licinius*, provided it was, that no Roman citizen should hold in priuat aboute five hundred acres. The rigor of which law or statute was extended and practised vpon the Law-maker himselfe, and by vertue thereof he was condemned: who, for to possesse aboute that proportion, and to defraud the meaning of the said Act, purchased more lands in the name of his Son. Loe what might be the proportion and measure of possessions allowed euen then, when as the State and Common-wealth of Rome was in the prime and began to flourish. And as for the Oration verily of *Atatius Curius* after such triumphs of his, and when he had subdued and brought vnder the obedience of the Roman Empire and laid to their dominion so many forein nations; what it was, euery man knoweth, wherein he deliuered this speech, That he was not to be counted a good man, but a dangerous citizen, who could not content himselfe with a close of seven acres of ground. And to say a truth, after that the kings were banished out of Rome, and their regiment abolished, this was the very proportion of land assigned to a Roman Commoner. If this be so, What might be the cause of so great plenty & abundance afore said in those daies? Certes, this & nothing els, great I.L. and generals of the field (as it should seem) tilled themselves their ground with their own hands: & the Earth again for her part, taking no small pleasure (as it were) to be eared and broken vp with ploughes, Laureat, and ploughmen Triumphant, strained her selfe to yeeld increase to the uttermost. Like it is also, that these braue men and worthy personages were as curious in sowing a ground with corne, as in ordinance of a battell in array: as diligent I say in disposing and ordering

Made with a red dog to please the Dog-flaue.

ring of their lands, as in pitching of a field: and commonly every thing that cometh vnder good hands, the more neat and cleane that the vſage thereof is, and the greater paines that is taken about it, the better it thriveth and prospereth afterwards. What ſhall we ſay more? was not [C. *Attilius*] *Serranus* (when the honorable dignity of Conſulſhip was preſented vnto him, with commiſſion to conſult the Roman army) found ſowing his own field and planting trees, whereupon he took that ſynname *Serranus*? As for *Quintius Cincinnatus*, a purſuant or meſſenger of the Senat brought vnto him the letters patents of his Dictatorſhip, at what time as he was in proper perſon ploughing a piece of ground of his owne, containing ſoure acres and no more, which are now called *Prata Quintiana*, [i. *Quintus* his medowes] lying within the Vaticancaend (as it is reported) not onely bare-headed was hee and open breasted, but alſo all naked and full of duſt. The ſouldier officer or ſergeant taking him in this manner, Do on your cloths fir(quoth he) and couer your body, that I may deliuer vnto you the charge that I haue from the Senate and people of Rome. Where, note by the way, that ſuch Purſeuants and Sergeants in thoſe daies were named *Viatores*, for that eſtſoones they were ſent to fetch both Senatours and Generall captaines out of the fields where they were at worke: but now, ſee how the times be changed! They that doe this buſineſſe in the field, what are they but bond-ſlaues fettered, condemned malefactours manacled, and in one word, noted perſons, and ſuch as are branded and marked in their viſage with an hot yron? Howbeit the Earth, whom wee call our Mother, and whom wee would ſeem to worſhip, is not ſo deafe and ſenceleſſe, but the knoweth well enough how ſhee is by them deprived of that honour which was due in old time vnto her: inſomuch, as wee may well weete, that againſt her will ſhee yeeldeth fruit as ſhe doth; howſoeuer wee would haue it thought, by theſe glorious titles giuen vnto her, that ſhe is nothing diſpleaſed therewith, namely, to be labored and wrought by ſuch vile and baſe hirings. But we forſooth do maruell, that the labor of theſe contemptible bondſlaues and abieſt villains doth not render the like profit, as that trauell in former times of great captaines and LL. Generalls. And in very truth, euen among other forrein nations, it was counted a princelike profeſſion indeed, to be able for to giue rules and direCTIONS about Huſbandry: for ſo we may ſee, that both kings haue ſtudied this argument, as namely, *Hiero*, *Philemetor*, *Attalus*, and *Archelaus*: and alſo martiall captaines; to wit, *Xenophon*, and *Mago* the Carthaginian. As for *Mago* verily, our Senate did him that honour after Carthage was woon, that in ſacking it and giuing away among diuers LL. of Affricke, the Libraries there found; they thought good to reſerue only 28 volumes of his, and penned by him as touching Agriculture, and io haue them tranſlated into the Latin tongue (notwithſtanding that M. *Cato* had already beforetime put out in writing and ſet forth certaine rules & precepts thereof) giuing order for this tranſlation, to thoſe that were well ſcene in the Punicke or Carthaginian language: in which buſineſſe, *D. Syllanus* a Romane gentleman of a right worſhipfull houſe, went beyond all others. As for great ſchollers and men of profound and deep learning, a number there were beſides that trauelled in this matter, whom wee haue named already in the foreſort; and eſtſoones ſhall mention in the diſcourſe of this volume. In which range we muſt nominate not vnthankfully among the meanest writers, *M. Varro*, who being foureſcore yeares old and one, thought it not amiſſe to compile a ſpeciall booke and treatiſe of Huſbandry.

CHAP. IIII.

¶ The manner of Huſbandry in ancient time.

Late it was ere the Romans began to ſet their minds vpon Vines and Vineyards: for at firſt they tilled only corne fields for very neceſſitie, euen as much as might ſuffice to ſerue the city. The order and manner whereof, I will ſet in hand to treat of; not after a vulgar and common fort, but according to my viſuall manner hitherto more foundly; as hauing fought out with all care and diligence, not onely the ancient praſtice in times paſt, but the inventions alſo of late daies; & withall ſearched into the cauſes and reaſons of every thing, and found them out. My purpoſe is beſides, to ſpeake in this treatiſe of the fixed Starres; their riſing and ſetting, their apparition and occultation, together with their influences, as they are vndoubtedly obſerued and ſeen here vpon earth. And this, my meaning is to do after a plain and familiar fort, for as much as they, who hitherto wrote of this argument, haue handled the ſame fo ſubtilly, and penned

A penned it with ſo high a ſtile, as they may ſeeme to any man for to haue written books for Ora-
tours to reade, rather than to the capacity of plaine huſbandmen for to praſtice. Firſt and fore-
moſt therefore, I will for the moſt part deale by Oracles, that is to ſay, ſententious Sayes, for to
determine this queſtion in hand: concerning which, there are as many to be found in number,
and thoſe as true in effect, as in any other part and profeſſion of this our life whatſoeuer. And
leaſt any man ſhould think it ſtrange, that I call theſe rules of Huſbandrie, Oracles, who would
take them for leſſe, conſidering how they proceed from Time, a god moſt certaine, and as de-
livered and approved by Experience, the trueſt prophet of all others. And beſides I will with
Cato firſt.

CHAP. V.

¶ The praſe and commendation of Huſbandmen: what things are to be required in the
purchaſing or taking to ſome of theſe and land.

THE children (ſaith *Cato*) that are begotten by huſbandmen, prove moſt valiant, the hardieſt
ſouldiers, and ſuch as thinke leaſt harme of all others. In buying of land, take heed you be
not too hot and eager vpon the purchaſe. In the huſbanding of ground, ſpare for no paine
and trauell, but in the purchaſing thereof be you nothing forward: a thing other-bought, hath e-
uermore repentance, and had I wiſt, attending vpon it. They that are about a purchaſe, ought a-
bove all, to ſee how the ground is watered, what waies and avenues be about it, and what neigh-
bors be neare vnto it. Out of eury one of theſe points, matters of great importance and deepe
concluſions may be picked, and thoſe moſt certaine and inſallible. *Cato* addeth moreover and
ſaith, That there would be good regard had of the people conſtaining, and other grounds boun-
ding thereupon, whether they be well liking, faire, and trim to ſee vnto: For theſe be his words,
It is a good ſigne (quoth he) that the ſerm is well ſeated and in a commodious quarter, if all a-
bout looke well. *Attilius Regulus* (hee who during the firſt Punicke warre was twice Conſull of
Rome) was wont to ſay, That a man ſhould not purchaſe an vnwholeſome piece of land, were it
neuer ſo rich and fruitful, nor make choice of a barren ſoile, were it neuer ſo healthie. Now as
touching the healthfulneſſe of a place, a man may not alwaies conclude thereof by the color and
freſh hue of the inhabitants: for many times it falleth out, that thoſe who be vied to peſtilent
places, hold out well and haue their health, yea and by their lookes bewray no harme that they
take. Moreover, ſome quarters and coaſts there be, which at ſome times of the yeare ſtand found
and healthy enough, but I will count none wholeſome, but ſuch as be healthfull all the yere long.
An ill piece of land is that, which putteth the lord thereof to paine, and with which he is forced
to wreathe for to haue his health. *Cato* would haue this point eſpecially to be conſidered, that the
ſoile of a ferme (ſcituat as hath bin ſaid) be good of it ſelfe, and fertile: alſo, that nere vnto it
there be ſore of laborers: and that it be not farre from a good and ſtrong towne: moreover,
that it hath ſufficient meanes for transporting of the commodities which it yeeldeth, either by
veſſels vpon water, or otherwiſe by waies vpon the land. Furthermore, that the manour houſe
be well built, and the land about it as well huſbanded. Howbeit, herein I ſee many men to erre
much, and greatly to be deceived: for they hold opinion, that the negligence and ill huſbandry
of the former lord, is good for him that ſhall purchaſe land and come after him. But I ſay, there
is nothing more dangerous and diſadvantageous to the buyer, than land fo left waite and out of
heart: and therefore *Cato* giueth good counſell, to purchaſe land of a good huſband, and not
raſhly and hand our head to deſpite and feight by the ſkil and knowledge of another. Who
ſaith moreover, That as well land as men (which are of great charge and expence) how gainfull
ſoeuer they may ſeeme to be, yeeld no much profit in the end to the maſter dealer, when all
counts be call and reckonings made. He therefore iudgeth, that the Vine yeeldeth the beſt reue-
nue of all commodities belonging to a ferme; and good reaſon he hath ſo to ſay, becauſe about
all things he taketh order to cut off expence as much as may be. Next to it, he reckoneth Hor-
wards, ſuch eſpecially as haue water at command: and good cauſe why, provided alwaies that
they lie vnder a good towne ſide. In the third place he rangeth the Oſier plowes, and after them
Oſier reeds; then he counteth of medows, which our anceſſors called *Parata*, as a man would
ſay, Ready and provided. The ſame *Cato* being asked, What was the moſt aſſured profit riſing
out of land, made this anſwer, To feed Cattel well: being asked againe, VVhat was the next?
Cato (quoth hee) reſeſed in a ſeene. By which anſwers he would ſeeme to conclude, That the

most certain and sure revenue was that, which would cost least. Howbeit, this is not so generally a rule, but it may alter according to the diversitie of places, & sundry occasions occurrent. Herunto also is to be referred another speech of his, That a good husbandman ought to be a seller, [and not a buyer:] as also, That a man should make speed in his youth, and not delay to plant and stocke his ground; but not to build thereupon, before it be well and thoroughly stored that way: and euen then also, he should not be forward thereto, but take leisure ere he be a builder: for it is the best thing in the world (according to the common proverbe) To make vfe and reap profit of other mens follies: provided alwaies, that a mans land be not ouer-built, lest the expence of keeping all in good repaire, be chargeable and burdensome. Now when there is a sufficient and competent house builded thereupon, a good husband will vfe to repaire often thereunto, and take pleasure so to do: and verily a true saying it is, That the lords cie is far better for the land, than his heele.

C H A P. VI.

¶ How to chuse a convenient place for to build a manour house in the country. Also certain rules obserued in ancient time, as touching Husbandrie and tilling ground.

IN building vpon a mans land, this mean and moderation is commendcd, That the house be answerable in proportion to the ground: for as it is a bad sight to see a large domain and circuit of ground without a sufficient grange or home-stal to it; so it is as great a folly to ouer-build the same, & to make a faire house where there is not land enough lying to it. Like as there were two men at one time liuing, who faulted diuersly in this behalte; to wit, *L. Lucullus* and *Q. Scæuola*, for the one was possessed of faire lands without competent building thereto, whereas *Scæuola* contrariwise built a goodly house in the country, with little or no liuing adjoining to it: in which regard, checked he was by the Censors, for sweeping more floures than he ploughed lands. Now in building, there would be art and cunning shewed: for euen of late daies *C. Marius* (who had bin seven times Consul of Rome) was the last man that built an house within the territory of the cape Misenum, and he seated it so, as if he had pitched & fortified a camp right skilfully; in such sort, that when *Sylla* byrnamed *Felix* [i. Happy] saw his manner of building, he gaue out and said, That all the rest in comparison of him, were blind beetles, and knew neither how to build nor to encamp. Well then, a house in the country would be set neither neere vnto a fenny and doimant water, ne yet ouer-against the course and stream of a running riuer; and yet what saith *Homer* besides to this purpose? The aire and mists (quoth he, and that right truly) arising from a great riuer betimes in a morning before day-light, cannot chuse but be euer cold and vnholefome. How then? may it the country or climat be hot, an house must stand into the North; but in case the quarter be cold, it ought to affront the South: if the tract be temperate between both, it should lie open vpon the East point, where the Sun riseth at the Equinoxes.

As touching the goodnesse of the soile, and namely what signes and marks thereof it is, although I may seem to haue sufficiently spoken already in the discourse which I had of the best kind of ground, yet I am content to subscribe to other tokens thereof deliuered by other men, and especially by *Cato* in these words following: *When you see* (quoth he) *growing vpon any land, store of Walnort, Skeg trees, Bramblers, the little mild Bulbous Crow-toes, [called otherwife our Ladies Cow-tips] Chauer-grasse or Trifulse, Melilot, Oke, wilde Pyrites, and Crab-trees; know yee, that these doe shew a ground good for Wheat, and such like white-corne. So doth also the blacke mould and that of athes colour, testifie no lesse.* Where there is store of chalker or plaster, the ground is not so fit for corne, for all kinde of chalker doth heat ouermuch, vnlesse the same be very leanne. The like doth sand also, if it be not passing fine and small. And the effects abovesaid are much more seen in the plaines and champaigne vallics, than vpon the hills and mountaines. Our ancestors in old time thought it a principall point of Husbandry, not to haue ouermuch ground about one grange: for if they suppoled more profit grew by sowing lesse, and tilling it better: of which mind I perceiue **Virgil* was, And to say a truth, confesse we must needs, That these large enclosures and great domains held by priuat persons, haue long since bin the ruine of Italie, and of late daies haue vndone the prouinces also thereto belonging. Six Land-lords there were and no more, that possessed the one moitie of all Africke, at what time as the Emperour *Nero* defeated and

A and put them to death. Where, by the way, I may not defraud *Co. Pompeius* of the due glory answerable to that greatnesse of his, who neuer in all his life would purchase any ground that bordered vpon his owne land. *Mago* thought it no reason, but a very vngentle and vnkind part for the buying of land, to sell a mansion house; and in his conceit, it preiudiced much the weale-publick. And verily this was the principall point that he recommended in the entrance of his treatise and rules set downe for Husbandry, to as a man might perceiue very evidently, that hee required continuall residence vpon the land. Next to these principles aloue named, great regard would be had in chusing of good & skilfull bayliffs of the husbandry, concerning whom *Cato* hath giuen many rules. For mine owne part, it shal suffice to say thus much only, that the lord ought to loue his bayliffe very well, & set him next to his heart: but himself should not let him know so much. Moreover, I hold it the worst thing that is, to set slaues & condemned persons in their gnyes & chains, about tilling and husbanding of a ferme: neither do I like of any thing don by such forlorne and hopelesse persons; for lightly nothing thrives vnder their hand. I would put downe one saying more of our ancient forefathers, but that haply it may seeme a fond & rash speech, yea and altogether incredible, & that is this, *Nothing is lesse profitable, & expedient, than to labor a ground exceeding much, and to ouer-sill it.* *L. Rarius Rufus*, a man of very bafe and low parentage descended, & yet advanced to the Consular dignity for his prowesse in feats of arms, was otherwise very thrifty and sparing, after the manner of the old world; in so much as partly by his niggardlife and partly through the liberality of *Augustus Caesar*, he had gathered good together amounting to the sum of an hundred millions of Sesterces: all which masse of money, what with purchasing land to land in the Picene country, and what with bestowing such a deale of husbandry vpon it, more ywis of a vain glory and ostentation, than for any profit that he reaped thereby, he laid forth and spent euery whit of that stock; in so much as hardly he could finde any man that would take vpon him to be his executor, or to accept such as hardly he could finde any man that would take vpon him to be his executor, or to accept simply of the inheritance. What shall we say then? or what good cometh of such houses or lands so chargeable, as that they are like to cost a man his life, and that by famine? I hold therefore, that in all things a man is best, and bringeth greatest profit in the end. To till and husband ground well, is necessary; to ouer-do the same and to exceed, turneth more to the damage than the profit of the lord, vnlesse it were done by his own children, or to maintain the charge of keeping such hinds as otherwife times, that the gathering and inning of some haruest (if a man count all the pains employed and the mony of the purse) is nothing beneficial to the master. In like manner, Oliues would not alwaies be tended and looked vnto ouermuch: neither do some grounds require much diligence, but are the worse for such attendance: as may be seen (by report) in Sicily; which is the cause that new comers thither for to be tenants, and to occupy those lands, are many times deceived and put besides their reckoning.

After what manner then shall we proceed in the husbandry of our land to most benefit and behoofe? Learn a rule out of the Oracle or sententious riddle, which goeth in this forme, *Mals iouit* [i. Cheapeth, Best.] But herein, me thinks, good reason it is, that our old great grandfathers should be defended and excused for holding these strange and obscure paradoxes; y they (I say) who by such rules and precepts, tooke great care and paines to instruct vs how to liue. Would you know then what they meant by this word *Mals*? surely they vnderstood those that were cheapest and flood them in least. The chiefe point of all their prouidence and foresaith, was to goe the nearest way to worke, and to be at the smallest cost: and no marvell, for who were they that gaue out these thrifthe precepts? euen those, who reproched a victorious General (and one who triumphed ouer the enemy) for hauing a cupbord of silver plate weighing but ten pound: those (I say) who if their bayliffes of husbandrie chanced to die, whereby their lands in the country stood void, would make suit to be gone themselves thither, and to return to their own fermes; leaving behind them the glory of all their victories by them achieved: and to conclude, euen those who whilst they were employed in the conduct of armies, had their grounds looked vnto and tilled at the charges of the common weale, and had no other for their bayliffs than the noble Senators of Rome. From their mouths came these other oracles and wise sentences following: An ill husband is he, who is forced to buy that, which his ferme might afford him. A bad is that householder & master of a family, who doth in the day which might be don by night, vnlesse vnreasonable weather drive him to it: worse than either of these is he, who

doth that vpon work-daies which should haue bin done on play daies or idle holidiaies: but the work of all other is he, who when the weather is fair, wil chuse to work rather within close house than abroad in the open field: & here I cannot hold and rule my selfe, but I must needs alledge one example out of antient histories, whereby it may be vnderstood, How it was an ordinary matter to commence actions and to maintaine pleas in open court before the body of the people in the case of Husbandry: as also in what sort those good Husbandmen of old time were wont to defend their owne cause when they were brought into question. And this was the case. There was one C. *Furius Crepusculus*, late a bond-slave, and newly enfranchised, who after that hee was set at liberty, purchased a very little piece of ground, out of which he gathered much more commodity than all his neighbors about him out of their great and large possessions: whereupon he grew to be greatly enuied and hated; in so much as they charged him with indirect means, as if he had vsed forcery, and by charmes and witch-craft drawne into his owne ground that increase of fruits, which should otherwise haue growne in his neighbors fields. Thus vpon complaint and information giuen, he was presented and indited, by *Spartus Albinus*, an *Aedile Cuius* for the time being: and a day was set him down preempitorily for his personal appearance to answer the matter. He therefore fearing the worst, and doubting that he should be cast to pay some grievous fine, at what time as the Tribes were ready to giue their voices, either to acquit or condemne him, brought into the common place his plough, with other instruments and furniture belonging to husbandry: he presented likewise in the open face of the court, his owne daughter, a lusty strong lassie and big of bone; yea, and (as *Piso* telleth the tale) well fed, and as well clad: he shewed there (I say) his tooles and plough yrons of the best making, and kept in as good order, maine and heavy coulters, strong and tough spades, massie and weighty plough-shares, and withall his draught Oxen, full and faire. Now when his course came to plead his owne cause before the people, and to answer for himselfe, thus he began and said: My masters (quoth he) you that are citizens of Rome, behold, these are the forecrites, charmes, and all the enchantments that I vse (pointing to his daughter, his oxen & furniture abouenamed): I might besides (quoth he) alledge mine owne trauell and toile that I take, the early rising and late sitting vp ordinary with me, the careful watching that I vsually abide, and the painefull sweats which I daily indure; but I am not able to represent these to your view, nor to bring them hither with me into this assembly. The people no sooner heard this plea of his, but with one voice they all acquit him and declared him vnguiltie, without any contradiction. By which example verily, a man may soone see, that good husbandrie goeth not all by much expence: but it is pains taking and careful diligence that doth the deed. And hereupon came the old sayd law, so rise in euerie mans mouth, that the only thing to make ground most fertile and fruitfull, is the Masters eie. As for all other rules and precepts of Agriculture, respectiue to this or that peculiar point of husbandry, I will deliuer them in their proper places accordingly. And in the meane time I will not omit such as be more generall, as they shal come into my mind and remembrance. First and foremost, there offereth it selfe to me one about the rest, wherof *Cato* is the Author, and which of all others I hold to be most profitable and founding to ciuilitie; to wit, that in all our doings we aime at this, To haue the loue and good will of our neighbors: and that for many and sufficient reasons by him alledged, which I suppose no man will make any doubt of. *Imprimis*, hee giueth a good caueat, That our seruitors and people about vs be not surewd, but well ordered, and that none of our family be ill disposed to offer any wrong. *Item*, All good husbands agree in this, that nothing would be done too late and when the time is ouership. And againe, That euery worke should haue the due and conuenient season: to the same effect there is a third admonition, namely, That when the opportunity is once past, in vaine we seek to recall and recover it. As touching a rotten and putrified ground, we haue at large shewed already how much *Cato* doth abhor and curse it. And yet he ceaseth not to forewarne vs of it, and besides, to giue vs these rules following. What work fouer may be performed by a poore Ass, is thought to cost little or nothing, and to be done very cheape. Ferne or Brake will die at the root in two yeares, if you wil not suffer it to branch and grow aboue ground: and this shall you hinder most effectually, in case you knap off the head of the first spring with a wand or walking staffe: for the liquid iuice dropping downe from them, doth kill the root. It is commonly said also, that if they be pulled vp before the summer Sun-head, they will not come againe but die: as also, if they be ropt, or their heads whipt off with a reed: or if they be eared vp with the plough, so as there be a reed fastened to the

there

A share. Semblably, for to kill reeds, they giue order to plough them vp, with some Fern likewise laid vpon the share. A rushie ground must be broken vp and turned ouer & ouer with the broad spade: but if it be stony, it would be digged with a mattock or two tined fork. Rough grounds and giuen to beare shrubs, if a man would forske, the best way is to burne them vp by the roots. If the place lie low, and be ouer moist, the onely meanes to make it sound and drie, is to draine away the water by trenching. In case a ground doe stand vpon chalker or plaister, the ditches or trenches therein should be left wide open: but if the soile be more loofe & not so fast, they must be strengthened and kept vp with quick-set hedges, for feare of falling: or else they ought to be made in such sort, as both the sides thereof be well bedded and couched, bearing out a belly a slope, and not digged plum downe-right. Some would be closed vp aboue and made very strait and narrow, for to run directly into others that are more wide and large also, if occasion doe so require, the bottome of their channell would be paved with pebble, or laied with good grasse. As for the mouth and end thereof (to wit, for entrance and issue) they ought both of them to be fortified and vnderst with two stones at either side, and a third laied crossie ouer them. Last of all, if a ground run to wood and be ouergrowne therewith, *Democritus* hath taught vs the meane how to kill the same in this manner, Take Lupine flowers, let them be steeped one whole day in the iuice of Hemlock, and therewith besprinkle and drench the roots of the shrubs that ouer-run the place, and they will die.

CHAP. VII.

¶ Sundry sorts of corne, and their severall natures.

C Now that we haue thus shewed the way how to prepare a field for to beare corne, it remaineth to declare the nature of corne. And to speake generally of all graine, there are two principall kinds thereof, to wit, first Fourment, containing vnder it wheat and Barley, and such like: secondly, Pulse, comprising Beans, Pease, Chiches, &c. The difference obserued both in the one sort and the other, is so euident and plaine, that needlesse it is for me to vse any words thereof. And as for the former kind called Fourment, it is diuided also into sundry sorts, according to the severall seasons wherein they be sowne. First there is the Winter corne, which being sowed about the setting of the star Virgilia, i. in Nouember, lieth all winter long in the ground and there is nourished, as for example, Wheat, Rie, and barley. Secondly, Summer corne, which is put into the earth in Summer about the rising of the foresaid star Virgilia, i. The Brood-hen, to wit, in May, namely, Miller, Panick, Horminum, and Trio (two kinds of grain.) But note that I speake here of the manner vsed in Italy. For otherwise in Greece and Asia, they sow all indifferently at the retreat or reculation of Virgilia: and to come again to our Italy, some grain there is which is sown there, both in Winter and Summer: as also, you shall haue other corne sowed in a third fashion, to wit, in the Spring. Some there be who take for Spring-corn, Miller, Panick, Lentils, eich Pease, and the grain wherof * Fourment is made. But Wheat, Barley, Beans, Nawes, Turneps, and Rapes, they hold for Sementina, i. to be sowed at the proper and timely season of seed, in Autumne. In that kind of corne which comprehendeth Wheat, there is to be reckoned that grain which serueth for procuder and forrage, and is sown for beasts, & namely, that which they call drodge or bellimong. Likewise, in the other kind, to wit, of Pulse, the Vetches be commended: but that which is good indifferently both for man and beast, is the Lupine. All sorts of Pulse called in Latine Legumina, vnlesse it be the Bean, haue but one root apiece, and such be as hard as wood, and full of shrots, and those diuised into forked branches and the roots of the eich Pease run deepe into the ground. But all other corne vnder the name of Frumenta, haue many small fillets or fringes appendant to the roots: & otherwise branch not: as for Barley, which beareth and begins to flower within 7 daies after it is sowne. All sorts of Pulse appear aboue ground by the fourth day or the fifth at the vtmost. And yet Beans ordinarily do lie in the ground 15 or 20 daies. Howsoever in Egypt all Pulse cometh vp by the third day. In Barlye one end of the seed runneth to root downward, and the other into blade, and that * bloometh first. Now if you would know which end serueth for the one and the other; certaine it is, that the bigger and thicker part of the grain yeeldeth root, and the smaller the Greene blade. In all other seeds there is no such diuersitie, for from one and the same end breaketh out both root and Greene blade. All kind of corn carrying spike or eare, called Frumenta, shew nothing but the green blade during winter: howbeit, no sooner cometh the spring, but they begin to grow vp

* No maner
of big flower
before winter.

Bbb 3 into

inro straw, and to spindle vpward pointwise, I meane all that be of the winter kind. But Millet **G** and Panick run vp into an hollow item full of knots and ioynts, and Sesama by it self into a kee or hollow stem in maner of fenell and such like. The fruit or seed of all graine that is sowne or set, is contained within eares, as we see in (bearded) wheat and barley, and the same is defended as it were with a palisade of eales, disposed square in foure ranks, or is inclosed within long eodes and husks, as the Pulle kind; or els lieth in little cups, as Sesame and Poppie. Millet and Panick only put forth their fruit grape-wise and openly, without any partitions and defences, so as their seed is exposed to the little birds of the aire: for no otherwise they are defended, than within small skins and thin huls. And as for Panick, it taketh the name of certain panicles or chatts hanging from the top thereof, whereby the head bendeth and leaneth downward, as if it were weak and wearie of the burden. The stem or stalk thereof groweth smaller and smaller, **H** and pointed vpward: in so much as by little and little it runneth vp in maner of a little sprig, or sion, and there you shall see a number of seeds or grains clustered together thicke, in so much as they are sometimes bunched with an head a good foot long. As touching the Millet, the head thereof bearing seed round about is bent likewise and curbed, be set also with fingers, as it were, of hairy fillets. But to return to Panick againe, there be sundry sorts thereof: for some of it is found with a tuft or bunch, from which depend certain small clustered chatts or panicles, & the same also hath two knaps or heads, and this is called Mammofum, as one would say, the Panick with bigs or dugs. Moreover, you shall haue Panick feed of sundry colours, white, blacke, and red, yea and purple. Of Mill or Millet there be diuers sorts of bread made in many places; but of panick it is not so common: howbeit there is no grain more ponderous and weighty than it, or which in the seething or baking swelleth and riseth more; for, out of one Modius or pecke thereof there is ordinarily made 60 pound of dough for bread. Moreover, take but 3 sextares or quarts of it being steeped, and it will yeeld a measure called Modius, of thicke gruel or batter, **I** and used in Latine Puls. It is not fully ten yerres since there was a kind of * Millet brought out of India into Italy, and the same was of colour black, the seed or grain in quantitie big and faire, and for stem likewit to a reed. It riseth vp in height seven foot: the stalks are mighty and growe some call them Lobre or Phobaz. Of all sorts of come it is most fruitfull, and yeeldeth greatest increase: for of one grain a man shall haue 3 sextars or quarts again. But it loucht, yea & ought to be sown in a moist soile.

* Turkish
Millet

Moreover, some kinds of spiked corn begin to spindle and gather eare at the third ioynt, **K** others at the fourth: but there it lieth as yet hidden and inclosed. Now as touching these ioynts, wheat beareth vsually foure, beere Barly six, and the common spirt Barly eight, which is well to be considered: for no corn vseth to spier before it be fully knotted or iointed in maner abovesaid. And so foen as the said spier sheweth some hope of an eare, within 4 or five daies after at the most, they begin to bloom: and in as many daies space, or little more, they will haue done and shed their floures. And yet I must needs say, that all sorts of barley are a feuen night at the vtmost in so doing. *Farro* saith, that in foure times 9 daies this kind of corn cometh to perfection: but it ought to lay nine moneths before it be ripe for to be reaped and mowne downe. As for Beanes, after they be set or cast into the ground, first they put forth leafe, and afterward stalk, that shooteth vp euen, without any partition of ioynts or knots between. All other pulse **L** besides the Bean, haue a more follied and woody substance in the straw. Of which, the Chick peafe, the Ervile, and Lentils doe spread forth in branches. And some of them runne so low that they creep along the ground, vnclesse they be born vp and supported with some props, as for example Peafe, which help if they misse they proue the worse for it. Of all manner of Pulse, the Bean alone and Lupine beare but one single stalk apiece: the rest doe branch into very small sprigs or tendrils. Howbeit none of them but their stalk or straw is fistulous and hollow in maner of reeds. Some pulse put out leaues presently from the root: others again from the top or head only: wheat and Barly both the one and the other: and what corn fouer standeth vpon a stalk, beareth one leafe in the head or top thereof. But the leaues of Barly are rough, whereas in other corn they be smooth. Contrariwise, Beanes, Chiches, and Peafe haue many leaues. In spiked corn the leafe resembleth that which growth to reeds: in beanes they be round, and **M** follikewise in the most kinds of pulse, howbeit in peafe and Ervile we see they be somewhat longer. The leaues of Fafels or Kidney beanes are ribbed and full of veins: of Sesama and * Trio they be red and resemble blond. The Lupines only and the Poppies do shed their leaues, pulse

* Turkish
oecine

A pulse is long in the bloom, and namely Ervile and the Chick peafe; but Beanes continue longest, euen for the space of 40 daies together: howbeit every single stalk beareth not bloom so long: but thus it is, as one hath done and giuen ouer, another beginneth after. Neither bloumth the whole field at once, as spiked corn doth. Also, all kinds of Pulse doe cod at sundrie times, and not vpon the same day: beginning first at the bottome, and so likewise the floure riseth vp higher by little and little. All come growing in spike or eare, to soone as it hath done blooming, waxeth big and strong, and cometh to maturitie within lorry daies at the farthest: so doth Beanes also: but the Chick peafe receiveth her full perfection in very few daies: for from the time that it was first sowed, it groweth to be ripe in forty daies. Millet, Panick, Sesame, and all Summer corn, haue their full ripeness forty daies after their blooming. But herein there is **B** great diuersitie, according to the clyme and the soile: in which respects come ripeneth sooner or later. For in Ægypt Barley is ready to be reaped in the sixth moneth after it was sowne, and Wheat in feuen: but in the region of Hellas in Greece, the Barley tarieth feuen moneths, and in Peloponnesus or Morca, eight. As for wheat and such like hard come, longer it is ere it be ripe and ready for the scyle. All Come that groweth aloft vpon a stalk or straw, when it is ere it be the graines arranged spike-wise, and as if they were plaited and braided like a border of haire. In Bean stalks and other such like pulse, the eodes grow in alternatie course, some on the right side, others on the left, in order. Wheat and such like spiked come with stand the winter cold better than Pulse: but these yeeld a stronger food, and fill the belly sooner. Wheat, Rice, and such like grain are well wrapped within many tunicles. Barley for the most part lieth bare and **C** naked: so doth Arinca (a kind of Rice or Amel corn) and Oats especially. The straw of wheat and Rice is commonly taller than that of Barly. But the eiles of Barley are more rough and prickie than those of the other. Pol-wheat both red and white, yea and Barley also, is threshed and driuen out of the husk vpon a floure, and being thus threshed clean and pure, it is either ground or sowne againe without any parching or drying in a furnace. Contrariwise, the Beare come or Bearded wheat, Far, Millet, and Panick, cannot possibly be made clean, vnlesse they be first sended and so dried. These sorts of graine therefore vse to be sowed raw and rude with their very huls: like as the Beare corn or bearded Far men are wont to keep still inclosed within the husk against feed time, and neuer parch or dry it at the fire. Of all the sorts of grain before rehearsed, Barley is the lightest; for a Modius or pecke thereof seldome weigheth about 15 pounds, whereas the like measure of Beanes poiseeth 21. The bearded come Far is yet more ponderous than it, and Wheat more than all the rest. In Ægypt they vse to make certain frumienty meat or naked grotes of a kind of Rice or white Amel-corn, called Olyra, which is among them holden for the third sort of Spike-corn. In Gaul likewise they haue a kinde of frumentie come or gurts by themselves, named in their language Brance, and with vs in Italy and about Rome, **D** Sandalum: this grain is of all others most neat and faire, and this singular propertie it hath besides different from the rest. That ordinarily in euery measure called Modius, it yeeldeth more bread by foure pound weight than any other come husked and dressed in maner aforesaid. *Peririus* reporteth, That the people of Rome for 300 yerres together vfed no other meat than the grotes made of common Wheat. And as touching Wheat, there be many sorts thereof, distinguished by the names of the Regions and countries where they be found growing. Howbeit **E** for my part I thinke verily, that there is no wheat in the world comparable to ours, here in Italy, for it surpasseth all others both in whitenesse and also in weight: by which two marks especially, as it is knowne from the rest, so it is reputed for the very best. And if you take the wheat growing in the mountain countries of Italy, the best haply of foreign regions may match it, and that is the wheat of Beotia: the principall of all others next to it, is that which grows in Sicily; and then that of Affrick may be ranged in the last place: in a third rank is to be reckoned the Thracian and Syrian Wheat, and after them the Egyptian, in regard of the weight that it carrieth. Now these degrees of weight we gather by the proportion assigned to champion, an wrestler, whose allowance was much like to the Iuriue giuen to laboring horses, and as much in **F** maner would their panches both require and receive: for according as they could eate of the one sort more measures than of the other, * so arose these distinct degrees in the weight: as one said. The Greeks make great account of the Wheat growing by Pontus, and highly commend it: but this neuer came into Italy, neither know we what it is. The same Grecians preferred before all other grain, these three sorts, to wit, Dracontias, Strangias, and Selinusium; esteeming

* For whereas
of the Atheni-
on Wheat, *Strabo*
deny *Sextarius*,
(two quarts
and a half)
ere but sufficient,
these would ferue
and content
them of the
Roman (a
quart & half)
whyby it was
collected, how
such weight
it was
than that.

ming the goodnesse of the corn by the thickeffe and bignes of the straw, and attributing these three kinds by that signe and argument, to the goodnesse and riches of the soile : and therefore they preferred to sow this corn in a fat and barle ground. But the lightest in weight and poorest in substance, because it required much nutriment, they appointed to be sowed in moist places. Of this opinion and judgment were the ancient Greeks, during the reign of *Alexander the Great*, at what time as Greece was in the flower and height of her glory, as having the monarchie and soueraignie ouer the whole world. Howbeit, before his death 145 years or thereabout, *Sophocles* the Poet in a Tragedie entituled *Triptolemus*, praised the Italian wheat above all other : for in effect thus he saith word for word ;

Et fortunatam Italianam frumento canere candida.

And Italy, a land (I say) so happy and so blest,
Where stand the fields all hoare and gray with white Wheat of the best.

And in very truth our Italian wheat at this day carrieth the name alone in that regard. I wonder therefore so much the more at the modern Greeks of late time, who made no mention at all of this our wheat. Now at this present, of all those kinds of outlandish wheat which are transported by sea into Italy, the lightest is that which cometh out of France and Cheroneus, [i.e. the streits of Callipolis] for a Modius or peck thereof containeth not about 20 pound weight, weigh the very graine it selfe as it groweth, vncleaned, huske and all. The Sardinian wheat is more weighty than it by halfe a pound in a Modius. And that of Alexandria exceedeth the French halfe a pound and *one third part, in every measure before named. And this is the very poise also of the Sicilian wheat. The Boeotian is yet a full pound heavier : and that of Africk as much, and *three fourth parts of a pound more. In Lombardy & that tract of Italy beyond the river Po, I know full well that a Modius of their wheat weighed 25 pounds ; and about Clusium 26. But be the come whatsoeuer it will, this is the ordinarie proportion by the course of Nature, that being made into down-right household bread for soldiers, and to serue the campe, it ought to weigh as much as it did in come, and one third part ouer and aboue. As also this is a rule, That the best Wheat is that which to euery Modius will take and drink vp a gallon of water ere it be made dough. And yet some kindes of Wheat there be that will yeeld the full weight aforesaid in bread, and neuer count the water going thereto, & namely that which cometh out of the Balear Ilands ; for a Modius of that wheat yeeldeth in bread 30 pound weight ; yet otherwhiles it falleth out in some kindes of wheat (being blended two sorts together, as namely that of Cyprus and Alexandria, whereof neither exceed little or nothing more than 20 pound weight to the Modius) that the bread made thereof will arise to the ordinarie proportion : for the Cyprian wheat is not bright, but brown and dusky, and therefore makes a blacke kind of bread ; in which regard the Alexandrian wheat, which is faire and white, is mixed with it, and so both together do yeeld in bread 25 pound weight. The wheat of Thebes addeth a surplage thereto of one pound.

As for the manner of working and kneading dough, I like not their fashions who take sea water for that purpose, as most do that inhabit the sea coasts, thinking thereby to faue the charge of salt ; for I hold this very hurtfull and dangerous. Neither doe I thinke, that vpon any other cause mens bodies are made more subiect to maladies, than by this means. In France & Spain, when the Bruiers haue steeped their wheat or frument in water, and masted it with *drink of diuers sorts, as heretofore hath bin shewed ; they take the *skum or froth that gathereth aloft by the working of the wort, and vse the same in stead of leuen for to make their bread ; which is the reason that their bread is lighter and more bouied vp than any other.

Moreover, there is great difference in wheat by reason of the straw or stalk that bears it : for the thier' er that it is and more full, the better is the come taken to be. The Thracian wheat is inclosed and well clad (as it were) with many tunicles and coats ; thoroughly prouided by that means (and good cause why) to resist the excessive cold of that climate, which gaue the Thracians iust occasion also to cast about and deuise to haue a kind of wheat that remaineth vpon the ground not about three moneths, by reason that the snow ouerspreadeth the face of the earth all the yeare : euides ; and verily this kinde of come is come into other parts of the world, and lightly within three moneths after it is sowed, you shall haue it readie to be reaped. A pra-
cise

* 4 ounces.

* 9 ounces.

* Zythum &
surmi.
* Yeit or barm

A *Wheat* well knowne all the Alpes ouer, and in other cold and winterly regions, where (by report of the inhabitants) this kind of come doth wondrous well, and none prospereth better or groweth more ranke than it. Ou'er and besides, there is another kind of wheat that putteth vtter from euery root one stalk and no more in any place whatsoeuer the manner is to sow it in no ground but that which is light, and it neuer misseth. Also about the Thracian gulfes, there is wheat that within 40 daies after the sowing, will be ripe, and therupon it is called the Two-month wheat. And would you heare a wonder ? there is no wheat more weighty than it, and besides it yeelds no bran at all. In Sicilie and Achaia both, there is great vse thereof, and namely among the mountaineers of those two countries. Much seeking also there is after that come in the Isle Euboea, about Carystus. See how much *Columella* was deceiued, who thought that there was not to be found so much as any kind of three months wheat : whereas it is plaine, that such hath bene of old and time out of mind. The Greeks also haue a proper name for it, and call it Trimenon : Furthermore, it is reported, that in the countrey Baetiana, there is some come of that bignes, that euery graine is full as much as one of the eares of ours.

But to returne againe to our husbandry ; of all spiked come, Barley is sowed first : but I purpose to set down the very iust time and season appropiat to each kind, according to the seuerall nature of euery sort, which my meaning also is to declare. Mean while I cannot omit, that there is among the Indians, barley both sowne and also wild, whereof they make the best bread that they haue. As for vs Italians (to say a truth) we set most floure by rice, whereof (being husked and cleaned) we make grotes, like for all the world to those which other men besides doe make of barley husked. The leaues verily that this graine Rice doth beare, be pulposus and fleshy, resembling Porret or Leeks, but that they be broader : the stem groweth a cubit high, the floure is of purple colour, and the root round like a jem or pearle.

Barley [husked] was the most ancient meat in old time, as may appeare by the ordinarie custome of the Athenians (according to the testimonie of *Menander*) as also by the addition or surname giuen to sword-fencers, who vpon their allowance or pension giuen them in barley, were called *Hordearii*, [i.e. Barley-men.] The ordinarie drie grout or meale also Polenta, which the Greeks so highly commend, was made of nothing els but of barley : and the preparing thereof was after sundrie waies. The manner that the Greeks vsed, was first to steepe the barley in water, and giue it one nights drying, the morrow after they parched or fried it, and then ground it in a mill. Others there be, who (when it is well fried and parched hard) besprinkle it once againe with a little water, and then dry it before it be ground. There are some again, who take the eares of barley when they are green, beat & drue the corn out, and while it is fresh and new, cleanse it pure, which don, they infuse it in water, and while it is wet, bray it in a mortar : then, they wash it well in olier paniers, and so let the water run from it, and being dried in the sun, they pound or stamp it againe, and being thoroughly husked and cleaned, grind it into meale as is aforesaid. Now when it is thus prepared one way or other, to twenty pound of this barley they put of Line seed three pound, of Coriander seed halfe a pound, of salt about two * ounces and two drams : and after they haue searched them all well, they blend them together and grind them in a quern. That they would haue this meale to keep long, put vp into new earthen vessels all together both floure and bran. But in Italy they neuer vse to steep or soke it in water, but presently parch it, and grind it small into a fine meale, putting thereto the former ingredients, and the graine of Millet betides.

As for bread of Barley, so much vsed of our forefathers in old time, the posterity that liued after, found to be naught and condemned it in such sort, as they allowed it for prouender only to feed their beasts and cattel with ; But in stead thereof came vp the vse of * husked barley to be sodden for greuell, so highly commended as a most nutritiue and strong meat, and withal, passing wholesome for mans bodie : in so much as *Hippocrates* (who for skill and knowledge was the prince of all Physicians) hath written one whole booke in the praises onely of it. Now the best Prifana or husked barley, is that which cometh from Vitica. As for that which wee haue from Egypt, it is made of the flat barley which groweth vpon the eare in two ranks or sides onely. *Zurinus* saith, That in the realms of Granada, Andalusia, and Africk, the barley whereof the said Prifane is made, is smooth and naked in the eare without eiles or beard at all. He also is of opinion, that Rice and the graine Olyra, are all one. The manner of preparing husked barley and making Prifana is so commonly knowne, that I need not to say a word thereof.

As

* F. feed.

As for Tragum, it is a kind of Ptilane, made of Wheat, after the same order that the former of Barley. Howbeit, there is none of it to be found but in Egypt and Campanie. Touching Starch-floure called Amylum, it may be made of all kinds of wheat, and of the fine corn Siligo. Winter wheat, but the principall is that which they make of the three-month or summer wheat. We are beholden to the Island Chios for the invention of Starch, and euen at this day, the very best is that which cometh from thence: called it is in Greek Amylum, because it neuer came into the mill, nor was ground upon stones. The next to it in goodness, is made of a certaine Summer Wheat that is nothing ponderous and weightie. The way to make it, is to steep the wheat within certaine cooperie vessels, made of wood, in fresh water so much as will couer it wel. But it would not be forgotten, that the water must be changed five times in a day: and if it were so ferued also in the night, it would be the better, to that end, (that being thus soaked and softened, it might be well mixed and incorporated, yea, and retolued) as it were into a kind of paste, before that it become foure and bitter. This being done, it must be laid to drie either vpon linnen cloth, or else in twiggen paniers, that the liquor which is therein may draine away: afterwards vpon tiles, besmeared ouer with some leauen, it is poured forth to take the Sunne, to drie and harden against it. After the Chian Starch, that of Candie is most esteemed and liked of, and lastly, that which cometh out of Egypt. The good Starch ouer to be light, smooth, and euen, and withall, fresh made: for those properties hath *Cato* set downe already.

To returne againe vnto our Barley: the meale thereof is of great vse here with vs in Physick. And that which more is, a strange effect it worketh in Horles, Asses, and such like labouring beasts: for take Barley when it is dried and hardened at the fire, grind it to meale, reduce it into a paste, and make thereof gobbets: let these be put downe by a mans hand into their bellic, after the manner of cramming Pullen, and you shall loose fee, that this food and manner of feeding, shall make the beasts more strong and lustie, and their flesh more fast and compact.

As for Barley eares, some there be which haue but two rankes or rews: others againe haue more, euen to the number of fixe. In the very graine also there is much difference: for there be many of them longer than other, lighter, shorter, rounder, whiter, blacker, and last of all, enclosing to a reddish or purple color. This is the worst of all others for to make drie Grout or Polenta: and as for the white, it is best for that purpose, but will not abide any tempestuous or hard weather. And to say a truth, of all corne, Barley is the softest and tenderest, and will least endure any hardnesse: It would not be sowed, but in a drie and fine ground, laid light, and brought into temper: howbeit, good it must be, and well in heart. The chaffe and pugs that come of Barley, is supposed to be as good as the best: but for straw it hath no fellow, especially to make litter of. Moreover, in this regard, Barley of all other graine, is least subiect vnto blasting, for lightly it is cut downe before Wheat is mieldewed. And therefore it is, That the wiser sort of husbandmen in the country, sow no more Wheat than will serue for the prouision of their house only. Furthermore, they say, that Barley is sowed with the rake, namely, when the mould lightly couereth it: and therefore it cometh vp soonest, and bringeth most encrease and plentie. That which is gathered at Carthage in Spaine, within the moneth of Aprill, is sowed the very same moneth in Celtiberia, so as in one year it yeeldeth two crops. It is no sooner ripe, but they make greater haste to cut it downe, and to inne it, than any other corne: for the straw is very brittle, and the huske which contains the grain is as thin and small. To conclude, it is thought to yeeld the better groats if it be taken whiles it is somewhat green, rather than if it should haue the full ripeness.

CHAP. VIII.

¶ That all kinds of Wheat or Fourmentie corne grow not indifferently in euery place. Also, of other sorts of corne in the Lewant or East countries.

Y^Ou shall not find in all places the same kinds of Wheat: and where you meet with the very same, yet they bear not one name, but haue sundry appellations. The red bearded wheat named in Latin Far, and which in old time they called Adoreum; the winter wheat Siligo, and the

A the ordinarie white Fourmentie wheat Triticum, are the commonest of all others. And indeed these grow all in most countries. As for Arina it loueth Gaule best, and that is the native and proper country for it. Howbeit there is plenty thereof in Italy also. As for Zea, Olyra, and Typhie, there be sundry sorts of wheat and Rie peculiar and appropriate to Egypt, Syria, Silicia, Asia, and Greece. The Egyptians make of their wheat a kind of floure or sifted meale, but nothing comparable to the Italian. They that vse Zea or Spelt haue not the fine red Wheat Far. And yet we are stored therewith in Italy, and most of all in Campanie, where it is called by the generall name of Seed: which name no doubt was giuen vnto it for excellencie and singularity, as shall be shewed anon more at large. This is the very grain for which *Homer* the poet called the earth, *βλυστή γην*, i. yeelding the corn Zea: and not because the giueh life to all liuing creatures, as some would haue to be meant by that Epithete. Thereof is made also a kinde of starch, but grosser than the former, whereof we spake before: for no difference is there els. Of all kinds of wheat, Far (which is taken for the red bearded wheat) is most hardy, and best resisteth winter cold: it will wel abide the coldest soile that is, and that which is least labored and tilled: it may endure also hot and dry places: it yeelded the first food and meat to our antient forefathers in Latium; as may appear by this good argument, that publike presents and rewards by way of remuneration were giuen of Far, which they called Adorea, as hath bene said before. Moreover, that the Romans for a long time liued of a kinde of batter or gruell made of meale, and not of bread, is very euident by old records and Chronicles: for euen at this day such thick gruels or pottage be called Pulmentaria in Latine. And *Ennius* a most antient poet, when he would expresse the famin of a city that had endured long siege, reporteth, that the parents took by force from their children their sops, notwithstanding they cried pittceously for very hunger. Moreover, euen in our time wherein we liue, the sacred and ceremonious feasts by vs observed in memorial of our birth daies and natiuitie, standeth much vpon furnmentie, gruel, fritters, and pan-cakes. It seemeth also, that our gruels and such like pottage were as much unknown to Greeks, as their Polenta or dried groats were strange to vs here in Italy. There is no corn more hungry and greedy of nourishment than Seed [wheat], or that draweth more vertue and fat out of the earth for nutriment, touching the winter grain, called in Latine Siligo, I may be bold to say, it is the daintiest and most delicate wheat that is, for whitenesse, mildnesse, and lightnesse. It agreeth wel with all countries, such as Italy is, and that part of Gaul called Comata, i. Lombardy. Beyond this is also in Sauoy only, and the territorie of the Meninians, it will endure and hold the own well. Many in other parts of that country, within two yeares it turneth into the common wheat. The only remedy therefore is, to chuse forth the heaviest and weightiest cornes, and them to sow.

CHAP. IX.

¶ Of Pastry, of Grinding, and of Meale.

T^He best manchet bread for to serue the table, is made of the winter white Wheat Siligo, and the most excellent works of pastrie likewise are wrought thereof. And yet in Italie it passeth all the rest, in case that of Campanie be blended with another sort which doth grow about Pise: for the Wheat of Campanie is redder, but this of Pise whiter: and more weighty it is, if it come from a chalky ground, or haue chalk mingled among. Moreover, this is the ordinary proportion, that of the very pure corn of Campanie wheat, which they call guelded, i. wel husked and clenfed, a measure named Modius should yeeld four Sextars or quarts of fine meale: but of the vulgar and common grain, which is not so guelded, 5 sextars, and halfe a Modius besides of boyled floure: and for a coarser household bred, which they call the second bread, 4 sextars of meale, and as many of brans. Also of the Pisane wheat, one Modius should yeeld five sextars of good meale, and the rest equall to the former. As for the Clusine and Aretine wheat, in every Modius it answereth again six sextars of meale, that is to say, one more than the rest: otherwise they be all alike. Now if you list to range and boult it for cork flower to make bread, ye shall haue of manchet 16 pound, of course household bread three, and halfe a Modius of brans. But this proportion doth not alwaies hold, for it altereth according to the good or bad grinding vpon the mill: for that which is ground drytendereth againe more meale: but if it be wet or besprinkled with salt water, it maketh the fairer meale, and fuller of fine flower: and then

then shall ye haue more go away in brans. As for the word Farina in Latine, i. meale, it is deriued of Far, which in old time was the best & finest red wheat, as may appeare by the very name that it carrieth. Finally, A Modius of meale comming of the French Siligo, called Blanchen, or Ble-blanch, maketh in bread 22 pound weight: but of our Italian, 3 or 4 pound more in bread pan-baked: for what corn foulet it be, there must be allowance of two pound vantage ouer and about, for ouen-baked bread.

CHAP. X.

¶ Of the meale called Similago: of the white flower Siligo. Of other sorts of Meale, and of the manner of baking.

The best meale of that kind, which they call in Latine Similago, is made of the common wheat. If the come come out of Africk, it yeeldeth ordinarily for euery Modius, half so much in ordinarie meale, and five sextars besides of flower called Pollen: [for that is the Latine tearme which they vse in the finest of the common wheat Triticum, proportionable to that which in the other winter wheat Siligo, they call Flos. And great vse hereof there is in copper-smiths forges, and in work-houses where paper is made.] Ouer and besides, of courser grodgons for brown bread foure sextars, and as much of brans. More ouer, the ordinarie proportion goeth thus, that of one Modius of the fine meale Similago, there should be made 122 lous of bread: & that a Modius of the pure flower of Siligo should yeeld 117. As touching the price, thus it goeth commonly in the market one yere with another, when corn is at a reasonable and indifferent rate: A Modius of down-right meale is worth * 40 Asses: but if the meale be sifted and ranged from the grosse brans vntill it be Similago, it will cost eight Asses more: and if it be boulded yet finer to the nature of the fine flower Siligo, the ouer-deale in the price will be double. Another distinction or difference there was known of this proportion, when a Modius comming of wheat of Similago, was seen to answere 17 pound in bread: and as much of Wheat flower called Pollen, thirtie pound and foure ounces: besides, for second household bread, two pound and a halfe; and of the courtest or brownest as many, and six Sextars ouer and about of brans.

But to return to our winter white wheat called Siligo, it neuer ripens kindly & all together, as other corn doth: and for that it is so tender and ticklish, as that no corn will lesse abide delay and tarry on worke, great heed must be taken thereof; for so foune as any ripe, presently the seed sheds and falls out of the eare. Howbeit, lesse danger is it subiect vnto whiles it standeth in the field, than other kinds of wheat, for it beareth alwaies an vpright spike or eare: neither wil it hold and retain that mildew which blasteth corn so much, and turneth it into black powder. As for that kind of corn which they call Arinea, it maketh the sweetest bread: the grain it selfe is more fait & full than the fine red wheat Far, it carrieth a bigger eare, and is besides more ponderous and weighty. Seldom is it seen, that a Modius of this grain maketh full 16 pound. In Greece they haue much ado with it, to thresh it cleane and faster it from the hulls and eiles. For which cause Homer saith, that they were wont to giue it as prouender to horses, and such labouring garons; and the very same it is which he calleth Olyra. Howbeit this corn in Egypte goeth out easily vnder the flauie, is better to grind, and withal yeeldeth better, and is more fruitful. The Red wheat called Far is polled wheat (in Egypt) and carrieth no beard or eiles about it. So is the white winter Wheat Siligo, false only that which is named Laconica. To these may be adioyned other kinds also, to wit, * Bromos, the poll wheat Siligo, (differing from all the other of that name) and Tragos: strangers all brought from the Levant or East parts, and resembling Rice euerie one. Typhle likewise is of the same kind, whereof in Italy and this part of the world is made that husked come which goeth among vs for Rice, for it turneth into it. The Greeks haue a kind of wheat called Zera or Spelz: & it is commonly said, that both it and Typhaz (considering that they vse to degenerate and prone bastard) will turne to their kinde again, and become wheat, if they be husked before a man sowe them: howbeit this changewill not be seen presently, nor before the third yeare. As touching our common wheat, there is no grain more fruitful than it: this gift hath Nature endued it withall, because the meane thereof by to nourish mankind most; for one Modius thereof sowne, if the soile be good and agreeable thereto (such as Rich about Bractum, the champion country of Africke) will yeeld an hundred

Some take it
for a kinde of
Buley, or rather
Oats.

- A** hundred and fiftie fold againe. The procurator generall of that prouince vnder Augustus Caesar sent from thence vnto him one plant thereof (a wondrous thing and incredible to be reported) which had little vnder 400 straws springing from one grain & meeting all in one and the same root, as it appeareth vpon records by the letters sent, testifying no lesse. Likewise to the Emperour Nerva he sent 340 straws out of the same country, rising all from one onely come. But to goe no farther than to Sicilie; within the territorie about Leontium, there haue bene certaine fields knowen, wherein one graine putteth forth no fewer than a hundred stalks with eares vpon them: and not there onely, but also in many other parts of that Island. And this is ordinarie throughout all the kingdome of Granada, and Andalusia in Spaine. But about all the land of Egypt may make boast in rendering such interest to the husbandmen. Moreover, of all those
- B** kinds of wheat which are so plentiful, there is principal account made of that which branches, as also of another which men call Centigranum, i. the wheat that beareth 100 graines.
- To leaue this kind of graine, and to come to Pusle: there hath bene found in Italie, and goe no farther, one beane stalk laden with an hundred beanes. Touching Summer come, to wit, Sefama, Miller, and Panicke, we haue already spoken. As for Sefama, it commeth from the Indians, whereof they make a certaine kind of oile. The color of this graine is white. Like vnto it there is another grain called Erythium, which is rise in Asia & Greece: and I would say it were the very same, that with vs in Latine is named Irio, but that it is more oilous and fatty; and indeed to be counted a medicinable or Physicall plant, rather than a kind of come. Of the same nature, is that which the Greeks call Hormium: it resembleth Cummin, and is usually sowed with Sefama: howbeit no beast will eat thereof while it is greene, no more than they do of Irio afore said.

- To come now to the manner of husking and cleansing of corne: the feat is not so easily done in all, as in some; for in Tuscane, they take the eares of their red wheat called Far, when they be parched and dried at the fire, they pound or bray them with a pestill headed at the nether end with yron, or els fistulous and hollow within, yet bound about with a hoop or ring of yron, and the same withinforth toothed in manner of a star, so as if they be not heedfull in the stamping, the yron-work at the pestill end will either cut the comes in two, or els bruise and break them clean. In Italy (for the most part) they vse a reed or plain pestill, not headed with yron, to huske and dresse their corn; or els certain wheelies that are turned and driuen apace with water, which going very swift doe also grind the said come. But since we are fallen into this treatise concerning husking and grinding of corn, it shall not be amiss for to set down the opinion and resolution of Mago in this behalfe: First, for common wheat he giueth order, that it be well steeped and soaked in good store of water; afterwards, to be rid from the hulls and eiles that it hath, in a mortar: which done, it ought to be dried in the sunne, and followed a second time with a pestill. In like manner (saith he) should barley be vied: howbeit, two Sextars or quarts of water will be sufficient to besprinkle and wet twentie Sextars of barley. As for Lentils, he would haue them first parched and dried, and then lightly punned or stamped together with brans; or els to put vnto twentie Sextars thereof, a fragment or peece of a broken semelard brick, and half a Modius or peeck of sand. Erulle would be cleaned or husked as Lentils be: but Sefama, after it hath bin infused or soaked in hot water, he saith, ought to be laid abroad a sunning; then to be rubbed hard together; and afterwards to be put into cold water and therewith couered, so as the hulls or chaffes do flote and swim aloft: which done, to be laid forth a second time in the sun vpon linen clothes, for to drie. Now if all this be not done one thing after another and dispatched with the more speed and hast, it will soone vineour or catch a mouldiness, and besides lose the bright native hew, and looke wan and of a leaden colour. Now, say that corn be cleaned and husked, some one way and some another, it is ground afterwards in diuers sorts. If the eares be bolted by themselves alone for goldsmiths worke, the chaffe comming thereof is called in Latine, Acus; but if it be shrethed and beaten vpon a paved floor, eare, straw, and all together (as in most parts of the world they vse to doe, for to fodder cattell and to giue in prouender to horses, then it is termed Pal: about the refuse or chaffe remaining after that Panick or Sefama be cleaned, they call in Latine Appluda, howsoever in other countries it be otherwise named.

To speake more particularly of Miller, there is great store thereof in Campaine, and there they fetch much by it, for of it they make a kind of white growel or portage: also the bread thereof is passing suauie and sweet. The Tartarians also & nations in Sarmatia, feed most of this water

gruell made with Millet: as also with the crude and raw meale thereof vnfolden and vnbacked tempered with mares milk, or els with horse-bloud that runneth out of their master leg-vains, by way of incision made for the purpose with the phleame. As for the *Aethiopians*, they know no other come but Millet and Barley. Panicke is eaten in some parts of Gaule, and principally in Aquitaine or Guien: in Piemont also, and all about the Po, it is a great feeding, so there be beanes among, for without beanes they cannot skill how to dresse any thing for their daily food. The regions that confine vpon the Euxin sea or Pontus, haue no daintier meat than that which is made of Panick. To conclude, all Summer corn abouenamed, delight more to grow in moist and watery grounds, than to be wet with showres and raine from above. And yet I must needs say, that Millet and Panick care least for water or moisture, when they begin to put forth their blade. Last of all, there is no good husbandman but will forbid to sow Millet and Panick either in vineyards, or among trees that beare fruit, being persuaded, that the sowing thereof doth eat out the heart of the ground.

CHAP. XI.

¶ Of *Leuains*: the manner of making bread: sundrie kinds of bread: about what time Bakers were first knowne at Rome: of *Sienes* and *Serces* of *Rangers* and *Bul-ters*. Last of all, of the *Frumentic* called *Alica*.

THE meale of Millet is singular good for *Leuains*, if it be wrought and incorporat in new wine, for so it may be kept a whole year. The like is made of the better brans of wheat, if they be small, fat, and not too near rained, and the same be kneaded in new white wine of three daies old, and then dried in the sunne. Hereof is made a dough or past, and the same is reduced into certain round cakes or *Trofches* to serue for the making of bread, for these must be foked and dissolved in hot water with the floure of the corn Zea, and therein be foddren, which don, they vie to mingle it with the meale and floure to make past of, which they hold to be the best way of making bread. The Greeks haue set down this proportion, allowing to euery peck or Modius of Meale, 8 ounces of leuaine, and this they thinke to be sufficient. Now these kinds of leuains verily cannot be made, but only in time of vintage. But if a man would make leuains at any other time, he may take of barley meal tempered with water so much as it may be brought into a past, and when there be certain lumps or cakes herof made, weighing two pound apeece, they must be baked either vpon the hearth vnder hot embres, or els in an earthen pan ouer the coles, vntill such time as they looke brown and red withal. Afterwards they be put vp close covered in pots or such like vessels, & there remain vntill they wax fower. Now when a man would vie leuain, herof he taketh what he will, and dissolueth it as is aforesaid. In old time when they made barley bread, they vied no other leuain for it but only the meale of *Emule* or *Cich* peale, and ordinarie it was, to take two pound thereof for * two peckes and an halfe of meale: but now adies the order of our hushuies is, to make leuaines of the very same meale which is kneaded and wrought into dough, before salt be put thereto, which they seeth to the consistence of a pulp or thicke batter, and so let it lie vntill it become fower. And yet commonly they doe not boile their leuains but only reserue some of the past or dough, wherof they make their bread the day before. As touching the nature of *Leuain*, certain it is that it proceeded of fourenesse, like as it is generally held, that they be stronger of bodie who feed of leuained bread: for in old time it was verily thought, that of the weightiest and heaviest kind of wheat, there was made the holdest bread.

Concerning the sundrie sorts of bread that is made, it seemeth a needlesse peece of work to set them down euery one in particular: for sometimes bread taketh the name of the meats and viands that be eaten therewith as for example, *Oister-bread*, so called for that it was good with oysters: otherwhiles it beares the name of some daintie eates, as *Artologanus*, [i. pancake, fritter, or fine cake bread.] As for the bread called *Speticus*, [i. Hastie] it is so called, because it was made in hast. The manner also of the baking gueth denomination to some bread, as to *Furnace panis*, which was made in a furnace: to *Artoptius*, made in a baking-pan called *Artopta*: as also to that which was baked in an oven. Not long since also there was a new deuice of making bread brought out of *Parthia*, which because the past is drawne through water (and yet a spongius, light, and hollow substance it carries) they call water-bread, and giue it the denomination

A nation of *Parthicke* bread. But howsoeuer it be, the best bread is of the finest wheat floure, that hath passed through a small tamis bulter. Some countries there be, that knead their dough with milke or eggs, others also put butter thereto: but those be such nations as are not troubled with wars, since that they can haue while to set their minds on fundry sorts of pastry. The *Picenes* in times past inuented away by themselves of making bread, with the very matter or substance of the frumentic *Alica*, and surely that deuise holdeth still and is much vfed. The manner thereof is this: They take the said frumentic past and steep it in water nine daies, on the tenth day they work or knead it with the iuice of Raisons, to the fashion of the *Parthick* cake driuen thin and broad, after this they put it into earthen pots, set them in ovens for to fise & bake, that the said pots may there breake in funder: and being thus hard baked, it is not to be eaten vnlesse it be foked in some liquor, which ordinarily is milke, or mead especially.

B There were no Bakers known at Rome for the space of 580 yeres after the foundation of the citie, vntill the Persian warre. Before that time euery Roman citizen had his owne bread baked at home, and womens work commonly it was, like as at this day it is in most countries: for this appeareth by *Plautus*, who in his Comedie entituled *Aulularia*, maketh mention of * *Artopta*, a baking pan [which men haue usually in their houses:] and hereupon is growne much dispute and controuersie betwene learned men about this Question. Whether that verse were of that Poets making or no: for certain it is (according to the opinion of *A. Atticus Capito*) that at such mens bounds as kept great houses and delicate fare, there was no other bread eaten but such as Cookes werewont to make them, after the maner of finnels: for *Pistores* were those only then called, who husked and cleansed the bearded red wheat named in Latin *Farz*, and others Bakers than they, were there none. Neither had the *Romane* citizens in ordinarie, any Cookes as their household seruants, but hired them out of the market whensoever they had any meat to dresse.

C Diuers sorts of floures and bulters there be. The *Sarce* made of horse haire, was a deuise of the Frenchmen the tamis ranager for coarse bread, as also the fine floure bouter for mancher, (made both of linnen cloth) the *Spaniards* inuented. In *Egypt* they made them of *Papyr* reed and rushes. But now that we are entred so far into this matter as touching corne, I thinke it not amiss before I proceed any farther, to speak (with the first) of the frumentic called *Alica*, and the manner thereof being (as it is) so excellent and wholesome to be eaten, and which, no doubt, throughout all Italy, beares the name for the very best of all corne whatsoeuer. No question, but there is made thereof in *Egypt*, howbeit nothing to the other. In Italy, many places there be where it is to be had, as namely in the territories of *Verona* and *Pise*: but that of *Campain* carrieth the price and praise about all the rest, a champion or plaine country this is, for the space of forty miles lying as a vale vnder the hills and mountaines, subiect to watery clouds and tempestuous winds. The soile of this whole tract (to speake directly of the nature thereof and defer no longer) is light and dustie, if a man respect the vpper coate thereof, but vnderneath it drinks in much moisture, wherunto apt it is by reason of certain fitulous porosities therein, like a pumish stonewhich regard, the mountaines commanding these plaines (ill neighbors otherwhiles) do it much good and mend the soile very well, for many a found floure, which ordinarily falleth from the hills) passeth and runneth through it, as it were a colander, by means wherof, the ground standeth not drenched and foked with water, but is thereby more pliable & easie to be tilled. Now this soile hauing thus receiued floure of water, doth not yeeld it vp again boiling out at any springs, but keepeth and cherisheth it still within, as it were the radical and nutritiue humor, concocting the same to a very good temperature. All the yere long a man (shall see it down and standing with corne, one or other; for the same ground beares one crop of Panick, and two of the red wheat *Farz*: neuer relecth but beareth somewhat for say that some lands lye fallow between while, and are not sowed with corne, they yeeld roses in the spring of themselves naturally, and those far swifter than the garden roses: so fruitful is it and cannot abide to be idle and do nothing. *Hercupon* arose the proverb of this land of *Campaine*, that greater floure is there to be found of sweet pastures and odoriferous ointments, than of simple oyle in other countries whatsoeuer.

D E F And looke how much this tract of *Campaine* surpasseth all other lands in goodnesse and fertility, so much excelleth one quarter thereof (called in Latin *Labori*, and by the Greeks *Phlegreum*). All the rest, and goeth beyond it selfe. This plain aforesaid named *Labori*, is confined on both sides with the great cauleis or high waies raised by the Consuls, and thereupon called *Consulares*: the one goeth from *Puteoli*, the other from *Cumes*, and lead both to *Capua*.

But to come againe vnto our Frumentie Alica, made it is of the graine Zea, which before we G
 termed by the generall name of Seed. This corne for to make Frumenty, is to be pound in a
 wodden mortar, when it should be cleane from the huske : for if a man beat in one of stone,
 the hardnesse thereof would bruise and breake it. The best way of cleaneing and husking it, is
 with a pestill, such as bondslaves and prisoners do vse to stamp withall, and to work by task for
 their punishment: in the forepart therof it hath a circle of yron, made in fashon of a round Box:
 wherewith after the corne is drawn naked o^r of the husk, the very same instrument serueth a-
 gain to stamp and bruise the white marrow^r and floure thereof within. And thus by this means
 there be three sorts of Alica or Fourmentie aforesaid. The finest, which is the best : the meane,
 which is the second : and the greatest or grossest, which the Greekes call Apharema.

When all this is done, yet haue they not that whitenesse of their owne, for which cause they H
 are so much esteemed; as namely, those that are come now adays from Alexandria, which are ta-
 ken to be the best and to excell all other. And therefore there is chalk (a wonderfull thing to be
 spoken) mingled afterwards and incorporate therewith, and so by that means the Frumenty be-
 comes white and tender withall. Now this chalke or plastre is found between Putcoli and Na-
 ples, in a little hill which thereupon is called Leuco-gaon, [i. white earth.] And in truth when
 Augustus Cæsar, late Emperor of Rome, erected a colonie at Capua, and peopled it with Roman
 citizens, he assigned vnto the Neapolitanes (by vertue of a decree, now extant) an yerely rent or
 pension of twentie thousand deniers to be paid out of his owne treasure, in regard of the chalk
 which came from the hill aforesaid, being within their territorie and siegiorie. He rendereth
 also a reason inducing him thus to do, because the inhabitants of Capua, alledged, that they I
 could not make good Alica or Frumenty without that mineral of chalke. In the same hill there
 is also found a Brimstone mine, and out of the veines thereof, fountaines springing, called O-
 raxi, the water whereof is singular good to cleare the eyes, to cure and heale green wounds, and to
 fasten the teeth that are loose in ones head.

As touching a bastard kind of Frumenty, it is made verily for the most part of a Speltor Zea
 in Affrick, which there doth degenerat and grow out of kind. The ears that it carrieth, are broad-
 er and blacker than the other, and the straw is but short. They vse to cleane and huske it by
 stamping or braying it together with sand, and for all that deuise much ado they haue to fetch
 off the huls and huskes wherein the graine lieth enclosed: now when it is thus cleane and na-
 ked, it is not past halfe as much in measure as it was before. Which done, there is a fourth part K
 of plastre strewed & mingled among; and when al is together, they sift it down through a meal
 sieue. That which remaineth behind and passeth not through, is the grossest part thereof, and is
 called in Latine Exceptoria. That which was thus searced, is driuen againe through a narrower
 and finer sieue, and those groats that tarte in the ranger, the call Secundaria. In like manner doe
 they a third time, searcing it through so fine a sieue, that nothing can passe but the very small
 sand and poulder; and this last kind of Frumenty girts they name Cribraria. Another way there
 is besides in all places practised, to sophisticat, and counterfeite the right Frumenty groats in-
 deed: They chuse out of our common Wheat, the fairest, fullest, and whitest grains, which be-
 ing half foddren in an earthen pot, they lay out afterwards in the Sun, till they be as drie as they
 were at first; which don, they lightly sprinkle some water ouer, & then bruise them in a quearn L
 mill. Fairer Frumentie groats be made of Zea than of Wheat, and called it is Granum or Gra-
 natum, although in Alica that be counted a fault. To conclude, they that wil not vse chalk, do
 blanch and make their Frumentie white by seething milke with it, and mingling all together.

CHAP. XII.

¶ of Pulse.

IT followeth now to write of the nature of Pulse, among which, Beanes do challenge the first
 rank and principall place : for thereof men haue assaied to make bread. The meale of Beans
 is called in Latine Lomentum. There is not a Pulse weigheth more than it, and Beane meale
 makes every thing heauier wherein it is. Now adays they vse to sel it for prouender to feed hor-
 ses. And indeed Beanes are dressed and vied many waies, not only to serue all kind of four-footed
 beasts, but also for man especially. For in most countries it is mingled with Frumentie
 corn; and namely with Pannicke most of all, whole and entire as it is; but the more delicate and
 daintie

A daintie way is to break and bruise it first. Moreouer, by ancient rites and religious ceremonies,
 at the solemn sacrifice called Fabaria, the maner was to offer vnto certain gods and goddes
 Beane cakes. This was taken for a strong food, being eaten with a thick gretel or portage; how-
 beit, men thought that it dulled mans senses and vnderstanding, yea, and caused troublefome
 dreames in the night. In regard of which inconueniences, Pythagoras expressly forbade to eat
 Beanes; but as some haue thought and taught, it was because folke imagined, that the soules of
 such as were departed, had residence therein : which is the reason also, that they be ordinarily
 vsed and eaten at the funerals and obsequies of the dead. Varro also affirmeth, That the great
 Priest or Sacrificer called the Flamine, abstains from Beanes both in those respects aforesaid,
 as also for that there are to be seen in the floure thereof certain letters or characters that shew
 heauines and signs of death. Further, there was obserued in old time a religious ceremonie in
 Beanes for when they had sown their grounds, their maner was of all other come to bring back
 with them out of the fieldes some Beanes for good luck sake, presaging thereby, that their
 comewould returne home again vnto them; and these Beanes thereupon were called in Latine
 Refruiæ, or Referuiæ. Likewise in all port-fales it was thought, that if Beanes were entermin-
 gled with the goods offered to be sold, they would be luckie and gainfull to the seller. This is
 cerataine, that of all the fruits of the earth, this only will be full and found when the Moone is
 croissant, notwithstanding it were gnawed and halfe eaten with some thing before. Set them o-
 ver the fire in a pan with sea water or any other that is saltish, they will neuer be thoroughly
 foddren. They are set or sowne before the retrait of the Starre Vergilia, [i. the Broad-heel] the
 first of al other Pulse, because they might take root betimes and preuent the Winter. And yet
 Virgil would haue them to be put into the ground in the Spring; like as the manner is in Pic-
 mont and Lombardie, all about the river Po.

But the greater part of good Husbandmen are of this opinion, That the stalks or straw of
 Beanes sowne early or set betimes, are better than the very fruit it selfe, which hath had but
 three months being in the ground. For the cods and stalks only of Beans are passing good fod-
 der and forage for cattell. Beanes when they are blouming, and in their floure desire most of
 all to be refreshed with good store of rain; but after they haue don flourishing, they care for little the
 sowing of this Pulse in any ground, is as good as a mucking vnto it, for it enriches it mightily.
 And therefore towards Macedonie and about Thessalie, the manner is when Beanes begin to
 blossom, for to turne them into the ground with the plough. Beanes come vp and grow in most
 places of their owne accord without sowing; and namely, in certaine Islands lying within the
 Northern ocean, which our countrymen thereupon haue named Fabaria. Semblably, they grow
 wild commonly throughout Mauritania, but exceeding hard and tough they be, and such as
 possibly cannot be foddren tender. There are likewise in Ægypt to be found Beanes, with a stalk
 betwixt full of prickles or thornes; which is the cause that Crocodiles will not come neer them, for
 feare of hurting their eyes. The stennie of these Beanes is foure cubites in height, but exceed-
 ing thicke and big withall; tender it is notwithstanding, and soft, running vp euen and smooth
 without any knots or joints at al, it carries a head in the top like Chesboule or Poppy, of a rose
 red color; wherein are contained not about 30 Beanes at the most. The leaues be large: the fruit
 it selfe (or the Bean) is bitter in tast, and the smell not pleasant; howbeit the root is a most daintie
 meat, which the inhabitants do cat as well raw as foddren; and like it is to read & cane roots.
 These grow in Syria and Cilicia, as also about the lake Torone, within Chacis.

As touching other Pulse, Lentils be sown in Nouember, and so are Pease, but in Greece on-
 ly. Lentils loue a light ground better than a fat & heauie; they like also drie and faire weather.
 Two kinds thereof be found in Ægypt: the one more round and blacke than the other, the rest
 be fashioned as common Lentils. According to the manifold vse and diuers effects of Lentils,
 there haue sundrie names and denominations bene borrowed from them: for I find in writers,
 that the eating of Lentils maketh men to be mild and patient; whereupon they be called Len-
 tiand Lenes. As for Pease, it ought to be sowed in warme places lying well vpon the Sunne: for
 of all things it cannot abide the cold. Which is the cause, that in Italie and in other countries
 where the climate is tough and hard, they are not sowne vsually but in the Spring, and folke chuse
 a gentle, light, and loose ground.

To come now to the Cich pease, the nature of it is to be nitrous and saltish, and therefore it
 burneth the ground where it grows. Neither must it be sowne, vnlesse it were well reaped and

foked in water the day before: many sorts there be of these eich-pease, different in bignes, form, colour, and tast: for there are both blacke and white, and those in fashion shaped like to a Rams head, and therupon they are so called. There is a second kind named Columbinum, or by others Venerium. These are white, round, light, lesse than the former Rams-head eiches, which men do eat ceremoniously with great religion, when they meane to watch thoroughly all night long. There is a little eich-pease also, called Cicercula, made cornered and otherwile vneuen, like vnto a Pease. But the best eiches and most pleasant are those that come neerest in resemblance to the Erueile: and generally the red kind and the blacke are more firm and fast than the white: eich-pease grow within round cods, whereas other Pulse he contained in long and flat, according to the forme and figure of the seed which they hold: Pease by themselves haue a long round cod in forme of a Cylinder.

The Pulse called Phascoli, [i. Kidney Beans] vs to be eaten cod and al together. These may be set or sowne in what ground you list, from the Ides of October to the Calends of Nouember. Finally, all kinds of Pulse, so soone as they begin to ripen, are to be gathered or plucked hastily: for stay neuer so little, they leape out of their cods, and shed, and being once fallen, they lie hidden in the ground, like as the Lupine also.

CHAP. XIII.

Of Rapes or Newewes of Amitemum Turneps.

Now let vs proceed and passe to other matters: and yet in this discourse, it were meet to write somewhat as touching Rapes or Nauews. The Latin writers, our countrymen, haue slightly passed by and touched them only by the way. The Greeks haue treated of them somewhat more diligently, and yet among pot-herbes and worts growing in gardens; whereas indeed according to good order they would be spoken of immediately after Corne, or Beanes at least wile, considering there is not a plant of more or better vse than is the Rape or Nauew. First and foremost, they grow not only for beasts of the earth and the Fowles of the aire, but also for men. For all kinds of Pullen about a Farme-houise in the country, doe feed vpon the seed thereof as much as of any thing else, especially if they be boiled first in water. As for four-footed beasts, they eat the leaues thereof with great delight, and wax fat therewith. Last of al, men also take as great pleasure and delight in eating the leaues and heads of Rapes or Nauewes in their season, as they do of young Coly-flories, Cabbages, or any tender crops of hearbs whatsoever, yea, when they are faded, flaggie, and dead in the Barn, they are esteemed better, than being fresh and green. As for Rapes or Nauewes, they will keep long and last al Winter, both within the ground where they grew, and being well wintered, they will continue afterwards out of the earth lying abroad euen almost till new come: so as they yeeld men great comfort to withstand hunger and famine. In Piemont, Lombardie, & those countries beyond the Po, the people make the most account of gaine by gathering Rapes, next to wine vintage and corne harvest. It is not choise and daintie, of the ground where it will grow: for lightly it will prosper where nothing else can be sowed. In foggy mists, hard frosts, and other cold weather, it thrives passing wel, and grows to a wonderfull bignes. I haue seene one of their roots weigh aboue forty pounds. As touching the handling and dressing of them for our table, there be many waies and deuises to commend and set them out. Preserued they may be till new come, specially condit with sharp and biting Seniu or Mustard seed. Moreover, our Cooks know how to giue them fix other colours besides their owne which is pure and natural, they haue the cast to set euen a purple hue vpon them. And to say a truth, there is no kind of viands besides that, being thus painted & colored, hath the like grace. The Greeke writers haue diuided them by the sexe, and thereby made two principal kinds thereof, to wit, the male and the female. Nay, more than that, out of one and the same seed, according as it is sowed, they can make male or female, whether they please. For if they sow thicke, and chuse therto a hard and churlish ground, it will proue of the male kind. Also, the smaller that the seed is, the better it is esteemed, but of al Rapes male or female, three especiall sorts there be & no more. For some roots spread flat and broad, others are knit round like a ball; the third sort that runs downe into the ground with a long root in manner of a Radish, they call the wild Rape or Nauew: this bears a rough leafe and full of angles or corners; the juice that it yeelds is sharp, biting, and biting, which being gathered in harvest time & referred, mundi-

A mundifieth the eies, and cleareth the sight, especially being tempered with breast-milke. If the weather be cold, they are thought not only to thrive in biguette of the root, but also to prouee the sweeter, whereas contrariwise in a warme season they run vp all to stalk and leafe. The best simply are those that grow in the Nurse territory. For they are sold by the weight; and euer pound is worth a Roman Sesterce, yea, and otherwile twaine, if there be any scarcity of them. Next to these in goodness be those that come out of Algidum. Thus much of Rapes & Nauewes.

As for the Turneps of Amitemum, they be in a manner of the same nature that the Rapes are: for said, & cold they loue as well. Sown they are before the Calends of March; & foure quarts of their seed will take vp a whole acre of ground. The best Husbandmen, and such as are more exquisite in their practise of Agriculture, giue order, That the ground for Turneps should haue five tillthes, whereas Rapes or Nauewes are content with foure: but both the one and the other had need of a soile well enriched with dung or compost. By their savings also, Rapes will prosper the better and come vp thicker, if they be sowed in their hils, chaffe and all together. Moreover, they would haue the seeds-man to be naked when he sows them, and in sowing to protest, that this which he doth is for himselfe and his neighbors, and wishall to pray as he goeth. The proper season for the seednesse of them both, is between the feasts of the two gods; to wit, Neptune and Vulcan.

To conclude, there is a subtil and curious obseruation that many goby and do hold, namely this, To marke how many daies old the Moon was, when the first snow fell the winter next before; for if a man do sow Rapes or Turneps, within the foresaid compasse of that time, the moon being so many daies old, they will come to be vnderous great, and increase exceedingly. Men vs to sow them also in the Springs, but then they make choise of moist and hot grounds.

CHAP. XIII.

Of Lupines.

AFTER Rapes and Turneps, the Lupines haue greatest vse, and serue to be raunged next: for that they indifferently serue both men and also all foure footed beasts that be housed, either whole or clouen. Now for that the stalk is very shittle in moving, and therefore stieeth from the edge of the syth, the onely remedie therefore (that the mower may catch it) is to goe to worke presently after a good flower. And verily there is not a plant growing vpon the earth (I meane of such as are sowne of seed) more admirable than the Lupine, in regard of the great amity and sympathie betwene the earth and it. Looke how the Sun keepeth his course in our Horizon aboue, so doth it turne and go withall, inso much as the Husbandmen of the country go by no other clocke to know how the day passeth, in close and cloudie weather, than this obseruation. Moreover, it hath three seasons of blowing: it toucheth the earth well, but yet willingly it would not be coaered over with mould: for this is the onely seed that is sowne vpon ground without any ploughing or digging: it would grow to chuse, in a most grauelly, drie, and sandy soile, and in no case can it abide any tending or husbandry about it: so affected is it to the earth, that cast it vpon any rough ground, among bushes, leaues, briars and brambles, it will chide and spurne neither the lesse, & neuer in til it take root within the earth. If Lupines be sowed either in vineyards or vpon corne lands they enrich the same and make the ground better, as we haue before written: and so little need haue they of dung, that they stand in stead of the very best. To say a truth, there is no graine lesse chargeable to be sowne, than it; nay there is none collect nought at all, but it, for it needeth not so much as to be brought into the field; and why? it worketh it selfe presently in the same field where it grew; and shedding as it doth of the own accord, a man neuer needs to cast and throw it vpon the land, as other corne. It is first sowne, and last gathered: and lightly both these seasons fall out in the month of September, for if the Seed-nees present not the winter, so as it may haue good root before it commeth, it will be in danger of the cold. Over and besides, if it chance to lie bare and vncovered aboue ground, left carelessly without any keeping, and that no raine come vpon it presently for to drine it into the ground, it is safe enough and catcheth no harme; for so better it is, that no liuing creature will touch it: and yet for the most part the husbandmen besow a light furrow vpon it, and so couer it verie shallow. If the ground be salt and heauie, it lowereth that it which standeth vpon a red clay. And for the maintaining and enriching of this kind of soile, it must be turned vp or eied after

after the third flouring; but in case it be grauell or sandy, it will serue to do it after the second. Chalkie grounds onely and myrie it hatcheth, and therein it will not grow. As bitter as otherwise it is, yet if it be steeped and foked in hot water, it is mans meat also. Moreouer, one Modius, or peeke of Lupines is sufficient for to fatisfie and feed an Oxe or a cow at a time; and this kind of prouender will make beasts strong and healthfull. Moreouer, the meal of Lupines applied to the bellies of young children that haue the wormes, is a singular remedy. For the good keeping of Lupines, all men agree that they should be laid vp in some chimney or smoke place especially, for if they lie in a moist room, there be certain little worms that will nibble off and eat the tip or naill that it hath, and by that meanes marre it for cuer sprouting againe. Finally, if Lupines be eaten downe by beasts, while they be Greene in the leafe, the ground where they grew must presently be ploughed vp.

CHAP. XV.

¶ Of Vetches and Eruille.

Vetches also do manure and fat the ground where they be sowed; neither be they chargeable or stand the husbandman in much: they be sown with one tith; otherwise there needs no harrowing nor weeding: there is required no mucking; onely they would be covered with mould and the clods broken; for sowing of vetches, there be three sundry times; first, about the setting of the star Arcturus; that by the month of December it may get a good head for to be eaten with beasts; and it is generally holden, that being sowne in this season, it will bring the best feed; for say it be eaten downe then, it will carry the burden neuertheless: the second seed-nesse is in Ianuarie: the last in March; and being then put into the ground, it will run vp most to blade, and yeeld the best forrage for cattell. Of all feeds that are cast into the earth, it loueth drought most: it can brooke also such places well enough. The chaffe that commeth of the seed thereof, is excellent good; and better than any other, in case it were ripe when it was gathered. It robbeth vines of their nourishment, if it be sowed neere those trees where vines are wedded; in so much as a man may see euidently how they languish.

As touching Eruille, it asketh no great hand or trauell about it: yet thus much more attendance it requirith than Vetches, for that it must be weeded and grubbed about the roots. Besides, this kind of Pulse is of great vse in Physick; for *Augustus Caesar* was cured of a disease that he had, and recovered his health by the means of Eruille, as himselfe reporteth in some of his letters now extant. Moreouer, five Modij or pecks of Eruille sown, is sufficient to maintain and find a yoke of oxen. As for that which is sowne in March, it is hurtfull forage (men say) for kine and oxen: as also that which is sowne in Autumne, maketh beasts heauie and stuffed in the head: but that which is put into the ground in the beginning of the Spring is harmlesse.

CHAP. XVI.

¶ Of Fenigreeke: of Ric: of Dredge: of the prouender corne or Bolimong Ocymum: of Spanish Trefoile or burned Clauer-grasse, called in Latine Medica: of the Shrub Trifolite, named Cytisus.

For the sowing of Silicia or Siliqua, otherwise called Fenigreeke, there needs no more but to scarifie or scrape it lightly vp with a furrow not about foure fingers breadth deepe; for the lesse cost and husbandry that is bestowed about it, and the worse that it is vsed, the better it prospereth and yeeldeth greater increase: a strange thing to be spoken and seldom verified, that *Negligence should be any waies profitable*; and yet herein it proueth true. That which is called Secale and Farrago in Latine, (i. Ric) needeth no more adoe but to be harrowed & the clods well broken. There is a kinde of Secale or Ric, which the people called Taurines dwelling vnder the Alpes doe call Asta: it is simply worst of all other, and good for nothing but onely to driue away hunger; plentifull enough this corne is and yeeldeth good increase, but the straw is slender; blacke it is and of an vpleasant colour, howbeit exceeding weightie and ponderous: they vse it to mingle the red wheat Far therewith, and make thereof a Mascelline, to allay the bitterness thereof; and yet for all that, the bread which it maketh is most vsuall to the mouth and ill for the stomack. It will come vp in any ground whatsoeuer, and bring forth a hundred fold

ordina-

A ordinarily; neither doth it eat the ground out, of heart, but rather maketh it more battle, and fernes it instead of compost or mucke.

As for that kind of dredge or farrage which commeth of the refuse and light corne purged from the red wheat Far, it ought to be sowne very thicke, with Vetches otherwhiles mingled among. In Africke, the same mixture is made of Barley. All these are good onely for prouender and beasts fouage; as also a battard kind of Vetches called *Cracca, which pigeons loose so well, that if they be led once therewith, they will neuer leaue the place where they tasted it, nor lie far from thence. In time past our ancestors had a kind of fodder or prouender, which *Cato* called Ocymum, wherewith they *sowed to flay the garric in kine and oxen. This forrage was made of *beane stalks cut downe Greene as it stood before it was ioined and coddled. But *Sarra Manlius* taketh this dredge to be another thing, saying, that in old time they vied to put vnto ten Modij of beanes, two of Vetches, and as many of Eruille, and sower wont to blend all together and sow them in an acre of ground at the s. l. of the leafe, and (saith he) it would be the better balingom if there were some Greek Otus mingled withall, such as neuer shed the seed out of the haw: this manner of dredge was called vially Ocymum, and was wont to be sowne for a kind of forrage to serue kine and Oxen. *Farro* saith, that it tooke that name because it commeth vp so speedily as being deriued from the Greeke word *velox*, which significth, Quicke, or Swift.

As for the grasse or herbe Medica (a kind of Clauer or Trefoile) the Greeks held it in old time for a meere stranger, as being brought into Greece from Media during the Persian warres, which king *Darius* leuied against Greece: howbeit an excellent Simple it is, and worthe to be written of in the first place. And to begin withall, this singular property it hath, That with once sowing, it continueth about thirty yeares without any need of renewing. Like it is to Clauer or three leaved grasse, both in leafe and stalk, but that the stemme is parted by knots and joints. Moreouer, as it riseth higher and runneth vp in the stalk, the leaues grow narrower: of this herb alone and of Cytisus, *Amphilochus* compiled one whole book; howbeit, he wrote of them both confusedly. The ground wherein it is to be sowed, after it is well rid of stones and clenfed, must be broken vp and well tilled in the fall of the leafe. Soone after it needeth to haue another fallow and be harrowed withall, and then covered with hardles: this would be done two or three times (five daies between) and therewith it ought to be thoroughly dunged. This herb requirith a found dry ground, and yet such as is full of succulent moisture within, or else where water is

D neere at hand to command. The ground being thus prepared, ought to be sowed in the month of May following, for otherwise the froit would take it and marre all. Moreouer, requirith it is, that it be sowed very thicke, so as euery place be taken vp therewith, thereby to exclude all other weeds and giue them no room there to grow. To this effect therefore euery acre will take 20 Modij or pecks of seed. But take heed withall, that it be not burnt so soon as it is put into the ground, & therefore immediatly it must be covered with mould. If the soile be moist and giuen to bear other grasse, the seed is soon ouergrown and choked, and then all wil run to grasse, & turn to be a meadow: which grasse or coich when you see begin to ouerrun the ground, it must be all weeded out presently an inch deepe within the ground, and by hand rather than any weeding-hooke or thistle spade. Now, when this herbe Medica or Clauer grasse begins onely to floure cut it downe and so oftens it floureth againe, downe with it. Thus you may haue six mathes in one yere or four at the least. You must neuer let it spindle and beare seed: for better is it to take it thus in the growth, while it is but young and Greene grasse, for three yeares together, and the forrage or fodder is most profitable. Sowne (I say) it must be in the Spring, and weeded for the first three yeares. The green found afterwards ought to be pared away with hookes and spades close to the ground: for by this meanes you shall be sure, that all other weeds will die, and this herbe take no harme by it, for that by this time it is deeply rooted. If the weeds do get head and ouercome it, the onely remedie is by the plough, to turne vp the ground ouer and ouer so many times, until all other roots be killed. Moreouer, heed must be taken, that of this herbage or fodder, beasts do not eat their fill; for feare you be driuen of necessity to let them blood, and F take downe their rankenesse. The greener that it is, the more profit commeth thereof, for it drieth branch after branch, until at length it will crumble like dust or powder, and then is it good for nothing.

As touching Cytisus, (i. the Shrub Trifolite) which is a singular kind of pasturage, & passes all the rest, I haue written at full in my discourse of shrubs. For now at this present I am to prosecute

* Or rather dracube.

* Sigebert says saith Cato, which is clean contrarie. * Endall sigebert antiquum generis.

cure and goe through the treatise of other sorts of come and their nature, if I had once written somewhat in one part thereof as touching the accidents and imperfections that happen among them.

CHAP. XVII.

¶ *The faults incident to come, and their remedies. Also what corve is respectiue to this or that soile, for to be sown therein.*

The first and principall defect obserued in bread-come, and Wheat especially, is when it doth degenerate and turne into Otes: and not only it, but Barley also doth the like. Semblably, Otes otherwhiles serue the turne in stead of bread-come: as wee may see in some countries of Aimaie, where they do vually sow it, and commonly they haue no other portage there, than Oatmeale gruesell [which they call Abremouz.] The foresaid defect and imperfection is occasioned chiefly by the moist soile or ouerwet weather. Another cause there followeth also thereupon, proceeding from the feeblenesse and weaknesse of the seed; namely, when it lieth long fobbing in the ground, before it come vp: and hereto may be referred the faultines of the seed otherwife, namely, if it were worm-eaten or otherwife rotten at the time of sowing: and verily, no sooner appeareth it above ground, but the foresaid change or bastardie may be seene, whereby it doth appeare, that the cause is in the root.

A second defect or imperfection there is also incident to corn, which hath some neer resemblance to the Otes aforesaid; namely, when the graine being formed and newly come to the iust proportion of bigneffe (howbeit, not yet full and ripe) before that it is firm and hard, is smitten with a noisome blast, and so, like an abortiue fruit, decayeth and windereth away within the ear in such sort, as there is no substance left therein, but appeareth void and empty. Now these decaye and malignant winds hurt all spiked come, as well Wheat as Barley, at three several times, to wit, in their floure, presently vpon their blooming, and last of all, when they begin to ripen; for then, namely when they are vpon the point of maturitie, those blasts consume the grain, and bring it to nothing, which before was full: whereas at the two former seasons they hinder it altogether from knitting and growing. The hot gleames moreover of the Sun, betwene often clouding, do much harme to come.

Furthermore, there be certaine little wormes breeding in the root, that do eat it: which happeneth by occasion of much raine falling immediately after the seednesse, especially, when some sudden heat and drowth ensueth thereupon; which bindeth the earth about and so encloseth the moisture conceiued within, the very cause & nourice of putrifaction. Ye shall haue other such like vermin engender likewise in the very grain of the corn, namely, when the ear doth glow within, and is chafed with sultry hot rains.ouer and besides, there be certain [green] flies like small Beetles, called Cantharides, which do gnaw and eat the come. But all these, and such like worms or flies die presently, when the corn [which was their food] is gone. Moreover, Oile, Pitch, and Tarre, all manner of greace also, be contrarie to seed-come especially; and therefore take heed that at youf none such as hath caught oile, pitch, or greace. As for showers of raine, good they are for come, so long only as it is in the green blade: when come is blooming, be it either wheat or barley, or such like) raine is hurtfull. Mary Pulse takes no harme thereby, vlesse it be the Cich-peafe.

All kinds of wheat and other bread come, when they be toward ripenesse, catch hurt by showers, but Barley more than any. Besides all this, there is a certaine white hearbe or weed resembling Panicke, growing among come, and ouerspreading whole fields; which not onely hindereth come, but also killeth all the cattell that feedeth thereupon. For as touching ray or darnel, burs, thistles, and brambles, I may hold and reckon them, not so much for faults and imperfections of corn, as rather the plagues and infections proceeding from the very earth. And for blasting, which cometh of some distemperature of the aire (a mischief common as well to corn, as vines) it is as hurtfull as any other malady whatsoever. This vnhappie blast falleth most often in places subject to mists and dewes, and namely, hollow vallies and low grounds lying vnder the winde: for contrariwise, in drie quarters, and such as are mounted high, are not subiect to this inconuenience. Also we may number among the faults incident to come, their rankenesse; namely, when the blade is so ouergrowne, and the stalk so charged and loden with a heauie head that the corn standeth not vp right, but is lodged & lieth along. Moreover, when there falls

a great

A great glut of rain, in such case the ground stands with water, there befallerth vnto all corn and pulse, yea, and what soeuer is sowing, a certaine disease called in Latine Vrica; in such case, as the very Cich-peafe taketh hurt thereby, for by reason that the rain washed from them that salt quantity which was naturall therunto, it becometh sweeter than it should be, and loseth the kind taste. There is a weed that claspeth and tieth about Ciches and Eruiies, whereby it choketh and killeth them both: and thereupon it is called Orbanum, or Choke Eruiie. After the same manner dealeth * Ray or Darnel by wheat, wild Otes likewise, named by some Aegilops, with barley, as also the weed Securidaca, or Ax-fitch, which the Greeks also (for the resemblance that it hath to an axe head) call Peliccion, * with Lentils. These weeds (I say) kill come by winding about it. Another herb there is, growing neere to the city Philippi, which killeth Beans if the ground be fat and good, they name the said weed Ateramion; but if it be found in a hungry and lean soile, and namely, when being wet, some vnhappy wind bloweth vpon it, they call it Teramion. As for the graine of Raie or Darnel, it is very small, and lieth inclosed with a sharpe-pointed husk. The bread which hath any of this feed in it, soone causeth dizineffe and swimming of the head. And (by report) in Asia and Greece the masters of the common Bains and Stupes, when they would keep away the great reioyce of multitude thither, haue a deuise to cast Darnel seeds vpon burning coles, for this perfume will quickly fet them farther off. Moreover, if the Winter prove to be wet and waterish, ye shall haue in the Pulse called Eruiie, a little vermin ingendered there called Phalangion, and it is of the kind of these spiders. Likewise vpon Vetches there will breed naked dew-mails, yea, & otherwhile those little ones with shels or houses on their backs, which creeping from the ground, will gnaw & eat them, that it is a wonder to see what foul work they will make. Thus much concerning all the maladies and inconueniences (to speak of) incident to come. It remaineth now to treat of the remedies.

As touching the cure of those harms that come by hurtfull weeds to the corn in blade, if consisteth principally in two things: namely, either in the vse of the weeding knife or hooke, when they be newly come vp, or els in strewing ashes when the corn is a sowing. But as for those dangers that touch the seed or grain in the ear and cod, as also that settle about the root, they must be prevented by good foresaith, euen before it be thrown into the ground. It is generally thought that if seed-corn lie steeped before hand in Wine, it will be better able afterwards to resist all diseases what soeuer. Virgil giueth order to infuse or soke the Beanes that must be sown, in nitre and oile lees or dregs; and he assureth vs, that they will prosper mightily besides, and become exceeding great. But others are of opinion, that if for 3 daies before they be cast into the earth they lie in vrne & shere water mingled together, they will, being thus prepared come on apace, and thrine passing well. It is said moreover, That if Beans be thrice raked and rid from weeds, one Modius of them being whole and solid, will yeeld a Modius again after it is husked & broken. As for other seed-corn, it will escape the danger of the worme, if either it lie before among Cyprisse leaves bruised, or be sowed in and about the change of the Moon, namely, when the is not to be seen about the earth in our hemisphere. Many there be who praefice other remedies: & namely for the Miller, they would haue a road to be caried round about the field before that it be harrowed: which done, to be put close within an earthen pot, and so buried in the midst of the said field: and by this means forsooth, neither Sparrows will lie vpon the corn, nor any worm hurt it. Mary, in any case this same road must be digged out of the ground againe before the field be mowed, els will the Millet proue bitter in taste. The like experiment they say is of a Moldwarps shoulder, for if any corn be sowed or touched therewith before, it will come vp the better and bring more increase. Democritus had a deuise by himselfe for all feed & corn whatsoever, namely, to temper & soke the same corn in the iuice of the herb houseleek or Sen-greene, growing vpon houses either tiled or shindled, which in Greeke is called Aizon, and in Latine Sedum or Digitellum; for this medicine will serue for all maladies. The common praefice of our husbandmen is this: in case through the ouerwet sap or iuice in greene come, wormes take to the roots: for to sprinkle them with simple oile lees pure and clean without any salt, & afterwards to rake it in. Also, when the corn begins to ioint and gather into knots, then to cleanse the ground, and put off no longer, for feare lest the weeds do get head & ouergrow. This I am sure vpon mine owne knowledge, that there is an herbe (but what proper name it hath I write not) which if it be interred in the foure corners of a field that is sown with Miller, it will drive away Stares and Sparrows, which otherwife would by whole flights and flocks lie thereupon: and do much

much harme, nay I will speake a greater word and which may seeme wonderfull, There is not a bird of the aire one or other, that dare enter or approach such a field. Field-mice and Rats are skared away and will not touch corne, which before the sowing was either bestrewed with the ashes of weasels or cats, or els drenched with the liquor and decoction of water wherein they were boiled; howbeit this inconvenience insueth hereupon. That bread made of such corn will have a finach, and sent strongly of such cats and Weasels; and therefore it is supposed a more expedient and safer way to medicine our feed come with oxe gall, for to preserve it from the said Mice and Rats. But what remedy against the blast and mildew, the greatest plague that can befall vpon corn? Mary prick downe certaine Lawrell boughes here and there among the standing corne, all the said mists and mildewes will leaue the corne and passe to the Bay leaues, and there fettle. What shall we do then to corne when it is over-rank? Eat it me downe with sheep and spare not, whiles it is young and in the blade onely, before (I say) it be knotted; and neuer feare harm by the sheeps teeth as nere as they go to the ground: for let it be thus eaten many times, the corn will be the better, yea and the head will take no harme thereby but proue the fairer. If such rank corne be once cut down with the syth, & no more, certain it is that the grain in the eare will be the longer to fete, howbeit void and without any floure within it; for few such feed again, & it will neuer grow nor come vp. And yet about Babylon, the manner is to mow it twice first, and the third time to put in sheep to it for to eat it down; otherwise the corn would neuer spindle, but blade still, and run all to leafe. But being thus cut and cut again, and eaten in the end, ye shall haue it to increase and multiply 50 for one, * so fertile is the soile: and if the owner be a good husband besides, and vse the ground accordingly, he shall reap thrice as much, cuen a 150 fold. And what careful diligence is that which is here required? Surely neither much, nor difficult only he must be sure to keep the ground well with watering for a long time together, to the end that it may be discharged of the ouermuch fat within it, which by this means will be washed all away, and the ranknesse delaied. Yet as rich and fertile as this soile is, the two riuers Euphrates and Tigris (which vse to ouerflow and water the country) bring no slime mud with them, as Nilus doth in Egypt, wherby the ground is made so fat as it is: neither is the nature of the earth there, giuen to breed herbes that it should need any weeding: and yet so plenteous and fruitful it is, that it soweth it selfe against the next yere; for the corne that sheddeth in the reaping and mowing, being troden vnder foot into the ground, is as good as a sowing, and riseth of it selfe without any further labor.

Seeing then there is so great difference in the soile, I am put in minde thereby to fit every ground with feed respectively according to the nature and goodnesse thereof. This therefore is the opinion of *Cato*, that in a grosse and fat soile, there would be wheat and such like hard corne sown; and if the same be subiect also to mists and dews, there may be sown therein raddish, millet, and Panick, must be sowne first in a cold and waterish ground; and afterwards for change in a hot soile, *Item*, the red bearded wheat *Far* or *Adorem*, requieth a chalkie and sandy ground, and namely if it be well watered. *Item*, the common wheat loeth a drie soile, exposed to the Sun, and not giuen much to breed superfluous weeds. *Item*, Beanes will doe well in a found and fat soile. As for Vetches, they care not how little they be sowed in a moist piece of ground, and such as is apt to run to grasse. Moreover, for the fine winter wheat *Siligo*, whereof the best manchet is made, and also for the common frumenty wheat, there would be chosen an open & high ground, lying pleasantly vpon the Sunne, that it might haue the heat thereof to parch it as long and as much as is possible. As for Lentils, they doe like a good rough and stubbie soile, full of red earth, so as it be not apt quickly to gather a green-ford. * Barly would gladly grow vpon a summer ground new broken vp, or else such as be in heart to beare euery yere. And as for *Siligo* (barley) of three moneths, it would be sowne in a ground where it could not haue an earely or timely Seednes, & which is so fat and rich, as it may afford to beare crop, yere by yere: finally, to speak to the purpose indeed, this also is *Cato*'s witty resolution in one word for all: if the soile be light and lean, feed it with such grain or forage feed, as require no great nourishment, as for example, with *Cytrius*, and excepting the Cich-pease, with all pulse that are vsed to be plucked out of the earth, and not mowed downe: and thereupon indeed are these pulse called in Latine *Legomina*, because they are plucked and gathered in that fort: but in case the ground be good and fat, few such things as require fuller food and nutriment; and namely, all garden worts and pot-herbes; wheat, both the common and the fine; and Linseed. Then, according to this rule, a

keane

CHAP. XVIII.

A leane and hungry soile will well agree with barly, for the root is contented with lesse nutriment: whereas contrariwise we allow both lighter, and also more massive and richer ground for our ordinary wheat. In a low and wet piece of ground, it is good to sow the red wheat *Adorem*, rather than the common wheat *Triticum*: but both it and barley will fort well with a soile of a middle temperature. The hills yeld a firm, fast, and strong kind of wheat, but the grain is but small. And to conclude, the best kinds of wheat, to wit, *Far* and *Siligo*, challenge for their lot to be seated in a chalky soile, and therewith alwaies wet and loked in water.

¶ Of strange prodigies and wonders observed in corne: the knowledge and skill of eering and tilling the ground: also diuers sorts of plough-shares.

A Ibeit I haue in the title of this chapter purposed to write of prodigies seen in corne, yet to my knowledge, there neuer happened but once the like wonder and portentous light to this which I shall tell, and which befell in the time that *P. Atilius* and *Cn. Cornelius* were Consuls of Rome, that very yere wherein *Annibal* with his whole armie was defeated and vanquished: for then (by report) there was corne greiv vpon trees.

But so farre as I haue discoursed at large of the sundry kinds as well of corn as of ground, I will proceed now forward and come to the manner of ploughing the earth, after I haue first set downe before all things els, how easie the husbandrie is in Egypt: for there the riuier Nilus serving in stead of a good ploughman, beginneth to swel and ouerflow (as we haue before rehearsed) at the first new Moone after the Summer Sunthead. Hee beginneth faire and softly, and so increaseth more and more by little and little; but all the while that the Sun passeth vnder the signe Leo, hee higheth apace vntill hee be risen to his full height: being entered once into Virgo, his fury slacketh, then decreaseth he as fast, vntill hee be fallen againe into his wonted channell, which ordinarily happeneth by the time that the Sun is in Libra. Now this is obserued, That if hee rise not plumb about 12 cubits high, the people are sure to haue a famine of corn that yere: the like also do they make account of, in case hee passe the gage of sixteen cubits: for the higher that hee is risen, the longer it is againe ere hee be fully fallen, by which time the Seednesse is past, and men cannot sow the ground in due season. It hath bin generally received for a truth, That presently vpon the departure of this deluge and ouerflowing of Nilus, they were wont to cast their feed-corne vpon the stoen ground, and presently let in their swine after for to trample it with their feet into the earth whiles it was soft and drenched. And verily, for mine owne part, I beleene wel, they vsed so to do in old time: for euen now adaise also, much more ado they make not about it. Howbeit, this is certaine, that first they cast their feed vpon the slime and mud so foone as the riuier is downe, which commonly falleth out in the very beginning of Nouember: which done, they go ouer it with the plough and giue it a light tith, so as it may be couered onely and lie vnder a small furrow. Some few there be that afterwards fall a weeding, which point of husbandry they call *Botanimos*: but the most part, after they haue once sowed and turned their feed into the ground, neuer after make a step into field to see how their corne groweth, vntill they go once for all with syth on neck or sickle in hand, namely at the end of March; for then they fall to reaping and cutting it downe; so as by the moneth of May they sing in Egypt, *Haruest in*, and all is done for that yere. As touching this corne gathered in Basse Egypt, the straw is neuer a cubit long: the reason is, because the feed lieth very ebbe, and hath no other nutriment than from the mud and slime aforesaid; for vnder it is nothing but sand and grauell. But those that inhabit higher vp into the country, namely about Thebais, they be far better provided for come, because Egypt indeed (for the most part) lyeth low vpon marais ground. Toward Babylon likewise and Seleucia (where the riuers Euphrates and Tigris doe swell ouer their banks and water the country) the same husbandry is practised, but to better effect and greater profit, by reason that the people may let in the water at sluices and flood-gates, more or lesse with their owne hands, according as they list themselves. Also in Syria, they haue their small ploughs for the ones to rake a shallow fitch and make light worke: whereas in many places here with vs in Italy, eight oxen are little enough to euery plough, and to go away withall they must labor at it till they blow and pant again. It is an old said Saw, and may goe for an Oracle to be practised in all parts of husbandry, but in this parts of ploughing especially, *Beet ruled by*

D d d

the

* Falciter soli

* in multis
vitiis et
Pistarch.

the nature of every country, and see what each ground will abide. To come now vnto our ploughes. Of Shares, there be many sorts: first, there is that instrument called a culter, which serueth to make way before, cutting and cleauing the hard and thick ground as it goeth, before it be broken vp and turned a side; this sheweth by the flits and incisions that it maketh (as it were by a true line drawn) how the furrows that go after which cometh the broad bit of the plough (share indeed, lying flat-wise, and in earing casteth vp all before it, and cleareth the furrow. A second sort there is, commonly vsed in many places, and it is no more but a bar of yron pointed sharpe in manner of a beak-head or stem of a ship; and it may be called a Rostle. And when the ground is not stubborn but gentle to be wrought, there is a third kind vsed, which is nothing but a piece of yron not reaching all ouer the * plough head and shooing it to the full, but turning vp like a snout with a small point sharp at the end. This neeb is somewhat broader in a fourth kinde of shares, but as it is broader in blade and trenchant withall, so it is sharper also at the end; inasmuch, that both with the point forward & the edges of the sides, it not only pierces the ground before it pointant like a sword, but also cutteth the roots of weeds which it incountrith: a deuile inuented not long since in Rhoxia. As for the Gaules, they set too besides, certain final roundles or wheels; & a plough thus shod & harnaised, they call in their language * Planarati: the head of their share is broad, fashioned like vnto the bit of a spade: and thus they fow their grounds for the most part, new broken vp and not tilled nor eared before. And for that their plough-shares be large and broad, so much the easier turn they vp good turfs of earth and make broad furrows. Presently after the plough, they throw in their feed, and mould or couer it afterwards with yron-toothed harrows drawn aloft. Lands in this manner sown, need no other raking or weeding; for commonly they make not past two or three bouts in a land, and as many ridges. Finally it is thought, that in this manner there may be sown in one yere by the help of one yoke of oxen, 40 arpens or acres of land ordinarily; if the ground be gentle and easie to be eared; but if it be stiffe and stubborne, they shall haue worke enough to go through thirty.

CHAP. XIX.

¶ The seasons that be proper for tilling the ground: also the manner of cou-
pling oxen in yoke.

IN this operation of ploughing ground, I am of mind to follow that Oracle or Aphorisme of Cato, who being asked which was the first and principall point of Agriculture, answered thus, *Euen to husband, order, and tend ground well*: being demanded againe, what was the second, hee made answer, *To plough well*. And when the question was propounded concerning the third point of husbandry, he said, *That it consisted in manuring and dunging it well*. There be other necessarie rules besides, set downe by him as touching this matter; namely, Make no vnequall furrowes in ploughing, but lay them alike with one and the same plough. Passe not the kindly season, but care the ground in due time. In the warmer countries, lands would be broken vp and fallowes made, immediatly after the Winter Solstice or Sun-tide. In colder regions, touch them not before the spring Equinox or Mid-march. In a drie quarter, plough more early than in a moist; sooner also in a fast and compact soile, than in a loose and light ground: in a fat and rich field, than in a leanne and poore land. Look in what climat the Summer is ordinarily drie and hot, it is thought more profitable to care vp a chalky or a light and leanne ground, between the Summer Sun-tide and the Equinoxiall in the fall of the lease. If the climat be such as yeeldeth but little heat in Summer, and therewith many flowers of raine, where the soile also is fat and beareth a thick green-sound, it were better to break vp ground and fallow in the hottest season: where the soile is heauie, grosse, and fat, and wherein a man may tread deepe, I like well that it should be tilled and stirred in winter: but in case it be very light and drie withall, it would not be medled with but a little before * seednes. Here also be other proper rules set down by Cato, pertinent to Agriculture: Touch not (qd. he) in any hand a piece of ground that soon will turn to dust and mire. When thou doest plough indeed for to sow, imploy thy whole strength there: robust before thou take a deep ditch for all, give it a pin-fallow before; this commodity cometh therof, that by turning vp the turfe with the bottom vpward, the roots of weeds are killed. Some are of this opinion, that how soeuer we do els, a ground should haue the first braking vp about the springe: yea, in a land that thus hath bin once plowed in the spring, is called in Latin Veruacum; & hath the name of the foresaid time Ver[is] spring. Indeed ley grounds & such as

A rest each other yere, must be in this wise followed. Now if you would know what the Latines mean by Nouale, they take it for a field sowed euery second yere. And thus much of the land.

To come now vnto our draught oxen that must labour at the plough: they ought to be coupled in yoke, as close together & as straight as is possible, to the end that whilthey be at work and ploughing, they may beare vp their heads; for by that meanes they least doe gall or bruise their necks. If they chance to goe to plough among trees and vines, they must be muzzed with some frailes or deuises made of twigs, to the end they should not brouce and crop off the yong springs and soft tendrils. Moreover, there ought a little hatchet to hang euermore fast to the plough beam: before, therewith to cut through roots within the ground, that might breake or stay the plough: for better is it so to do, than to put the plough to it, to keep a plucking at them or to force the poore oxen to tug & wrestle with them. Also in ploughing, this order is to be kept, That when the oxen are * gone down with one furrow to the lands end, they turne and goe vp againe with another; so that in ploughing of a land they * rest betwene whiles as little as may be, but euermore go forward in their labour vntill they haue made an end of their * halfe acre, or halfe daies worke: and verily it is thought sufficient for a team of oxen to breake vp (at the first tith) in one day of restle or ley ground, one acre, taking a furrow or stich of nine inches; but at the second tith or stirring, an acre and a halfe; which is to be understood of an easie and mellow soile to be wrought, for if it be tough and churlish, it is wel if they care vp in the first, halfe an acre; and at the next time they may go through with one whole acre, how hard soeuer the ground be; for thus haue poore beasts their taske set, and their labour limited by Nature's lore and appointment. Euery field to be sown must be eared at first with straight & direct furrows; but those that follow after, ought to go by as winding. If a ground vpon the pendant or hanging of the hill be to be broken vp, the furrowes must go croffe and ouerthwart: howbeit, the point and beak of the plough-share must be so guided, that one while it beare hard above on the one side, and another while beneath on the other side: and verily in this mountaine worke, the ploughman that holdeth the plough hath toile enough, and laboreth at it as hard as the oxen do. Certes, there be some mountaines that haue no vife at all of this beak, but they care their ground with raking and scraping hooks only. The ploughman, vnlesse he bend and stoop forward with his body, must needs make sleight worke, and leaue much vndon as it ought to be; a fault which in Latine we call Preuarication: and this terme appropriate vnto husbandrie, is borrowed from thence by Lawyers, and translated by them into their courts and halls of pleas: if it be then a reprochfull crime for Lawyers to abuse their clients by way of collusion, wee ought to take heed how we deceiue and mocke the ground, where this fault was first found and discovered. To proceed, the plough-man euer and anone had need to cleanse the culter and the share with his stasse, tipped and pointed at the end like a thistle-spade: he must beware that between two furrowes, he leaue no naked balks raw and vntilled: also that the clots ride not one vpon anothers back. Badly is that land ploughed, which after the corn is sowed, needs the great harrows and clotting. Contrariwise, a man may know where there is good worke; namely, if the turfe be so close couched that there be no seams to be seen where the plough-share went: finally, it is a profitable point of husbandry and much praised (where the ground doth both beare and require it) For to draw here and there broad gutters or furrows, to drain away the water into ditches and trenches cast for the nones betwene the lands, that otherwise would stand within and drowne the corne.

CHAP. XX.

¶ Of harrowing and breaking clods. Of a certaine kind of ploughing vsed in old time. Of the second vltch or fallow called Stirring: and of cutting.

AFTER the second fallow called Stirring, done with croffe and ouerthwart furrow to the first; then followeth clodding, if need be, either with rakes or great harrowes: vpon which infurrowing; and when the seed is in the ground, harrowing a second time with the final harrow. In some places, where the manner of the country doth so require, this is performed with a tined or toothed harrow, or els with a broad planke fastened vnto the plough taile, which doth hide and couer the seed newly sown; and in this manner to rake or harrow, is called in Latine Li-rare, from whence came first the word Delirare, which is to leaue bare balks vncouered, and by a Metaphore and borrowed speech, to raze and speake idly.

* *Illegitima de-*
rum vitiis re-
spiciunt aqua-
gratule, hinc
que videtur, si-
gna frugis.
 1 Bickings.
 2 Striving.
 3 Crustiness.
 4 Searing v.p.
 5 Cast-
 downe.

It should seem that * *Virgil* prescribed, that the ground should have foure tilthes in all, by these words, when he said, I hat the corne was best, which had two Summers and two Winters. But if the ground be strong and tough, as in most parts of Italy, there needs a * *fift* tilth before sowing, and in Tuscany verily they giue their ground, otherwhiles no fewer than nine fallowes, before it be brought into tillage. As for Beans and Vetches, they may be sowed under furrow, without breaking vp the ground before; for this is a ready way, gaining time, saving charges, & sparing labour.

And here I cannot ouerpasse one inuention more as touching earing and ploughing the ground, deuised in Piemont and those parts beyond the Po, by occasion of some hard measure and wrong offered to the people and peasants of that country during the wars. And thus stood the case. The Salassians making rides into the vale lying vnder the Alpes, as they forraied and harried the country all ouer, assailed also to ouerrun their fields of Panick and Miller being now come vp and well growne, meaning thereby to destroy it; but seeing the nature of that graine to be such, as to rise againe and to cheeke this injury, they set ploughs into it, and turned all vnder furrow, imagining by that means to spoil it for euer. But see! what ensued thereupon: those fields thus misused (in their conceit) bare a twofold crop, in proportion to other yerres; & yielded so plentifull. I than harvest, as that thereby the peasants aforesaid learned the deuise of turning corn in the blade into the ground, which I suppose in those days when it came vnp, they called *Arazate*. And this point of husbandry they put in practise, when the corne begins to gather and shew the stem or straw; to wit, so soone as it hath put forth two or three leaves and no more.

Neither will I conceale from you another new deuise, practised and inuented first, not more than three yerres past in the territory of Treuiers, neer to Ferrara. For at what time as their corn fields by reason of an extreme cold winter, seemed to be frost-bitten and spoiled, they sowed the same again in the month of March, raking and scraping the vpper coat of the ground onely without more ado: and neuer in their liues had they the like increase when harvest came. Now as touching all other tillage and husbandry meet for the ground, I will write thereof respectiuelly to the severall kinds of corne.

CHAP. XXI.

¶ *Of the tillage and ordering of the ground.*

The fine Wheat Siligo, the red bearded Wheat Far, and the common Wheat Triticum, Spelt or Zea (generally called Seed) and Barly, when they be new sown, would be wel clotted and covered first, harrowed afterwards, & weeded at the last to the very root; al at such seasons as shall be shewed hereafter. And to say a truth, every one of these is a sufficient worke for one man to do in a day throughout an acre. As for the Sarclet or second harrowing, it doth much good to corn: for by loosening the ground about it, which by the winter cold was hardened, clunged, and (as it were) hid bound, it is somewhat enlarged and at libertie against the Spring tide, and full gladly admitteth and receiveth the benefit of the fresh and new come Sunshine daies: let him take heed who thus sarches or rakes the ground, that he neither undermine the roots of the corn, nor yet race or disquiet & loosen them. The common wheat, Barley, the Seed Zea (i. Spelt) and Beans, would do the better if they were thus sarched, and the earth laid loose about them twice: the grubbing vp of weeds by the root, at what time as the corne is sointed (namely, when the vnprofitable and hurtfull herbs are plucked forth and rid out of the way) much helpeth the root of the corn, discharging it from noisome weeds, procuring it more nutriment and feeding it apart from the other green sould of common grasse. Of all Pulse, the cich pease askech the same dressing and ordering, as the red wheat Far. As for beans, they passe not at all for weeding; and why: they ouergrow all the weeds about, and choke them. The Lupines require no such els to be done to them but only weeding. Miller and Panick, must be clotted and once harrowed vntill they be covered: they call vnto for a second raking & scraping about them, for to loosen the earth, and to lay fresh mould into them; much lesse to be weeded. As for Silicia or Siliqua; * *Fenigreeke*, and *Fasels*, * *Kidney-beans*, they are onely for clodding, & there an end.

Moreover, there be certain grounds so fertile, that the corn comming vp so thick & ranke in the blade, ought then to be kinbed (as it were) & raked with a kind of harrow set with teeth or spikes

* *Forso hein-*
te vntill it
be well till-
ed, as this
booke.

A spikes of yron: and yet for all this, they must be grafed or eaten downe besides neuerthelesse with sheepe. Now we must remember, that after such cattel hath gon ouer it with their teeth, the same corne then eaten downe, must of necessity be sarched, and the earth lightly raked and raised vp fresh againe. Howbeit, in Baetria, Africke, and Cyrene, there needs no such hand at all: for the climate is so good, so kinde, and beneficiall, that none of all this paines is required: for after the feed is once sowne, they neuer visit it but once for all at nine months end, at what time they returne to cut it down and lay it vpon their thrashing floors: the reason is, because the drought keepeth downe all weeds; and the dewes that fall by night, are sufficient to refresh and nourish the corne.

Virgil is of opinion, That fallowes would be made every year, and that our corn field should rest betwene whiles, and beate but each other year. And surely, I doe find this rule of his most true, and doubtlesse right profitable; in case a man have land enough for to let his grounds play them, and rest every second year. But how if a man is streighted that way, and hath no such reach and circuit lying to his liuing? Let him help himselfe this way: let him (I say) sow his good red wheat Far against the next year, vpon that ground from whence he gathered this year a crop of Lupines, Vetches, or Beans, or some such grain as doth enrich and muck the ground. For this also is principally to be noted, that some corne is sowne for no other purpose, but by the way as it were to aduance and help others to fructifie: howbeit, small fruit and increase (to speak of) ariseth thereby, as I haue obserued once for all in the booke immediately going before, because I would not willingly reiterate and inculcate one thing often. For herein regard especially ought to be had, vnto the nature and property of every soile.

CHAP. XXII.

¶ *Of certaine countries exceeding fertile and fruitfull, of a Vine bearing grapes twise in one year, of the difference and diuersitie obserued in waters.*

There is in Affricke or Barbary a city called Tacape, situate in the midst of the sands, as men go to the Syrts and Leptis the great: the territory lying about which city, by reason that it is so well watered, is marvellous fruitfull, and indeed passeth a wonder and is incredible. Within this tract there is a fountain, which serueth abundantly for three miles well neer, every way; the head thereof verily is large enough other wise, howbeit the inhabitants about it are serued with water from thence by turns, and dispensed it is among them at certain set hours, and not other wise. There standeth there a mighty great date-tree, hauing vnder it growing an oliue, vnder which there is a fig-tree, and that ouerspreadeth a Pomegranat tree, vnder the shade whereof there is a Vine: and vnder the compasse thereof, first they sow Frument or cared corne, after that Pulse, and then worts and herbs for the pot, all in one and the same year. Every one of these reheared, liue, joy, and thrive vnder the shade of others. Every four cubits square of this soile (taking the measure of a cubit from the elbow, not to the fingers ends stretched out in length, but clasped together into the fist) is sold for * 4 deniers Roman: but this one surpasseth all the rest. The vines in the said territory beate twice a year, and yeeld their grapes ripe for a double Vintage. So exceeding fruitfull is the soile, that vnlesse the ranknesse thereof were abated and taken downe, by bearing fundry fruits one vnder and after another, so that it were imploied to one thing alone, the inhabitants should neuer haue any good thereof: for by reason of the ouer-ranknesse, each seuerall fruit would perish and come to nought: but now by meanes of plying and following it still with seed, a man shall gather one fruit or other ripe, all the year long. And for certaine it is knowne, that men cannot ouercharge the ground, nor no feed the fertilitye of it sufficiently.

Moreover, all kinds of water are not of like nature nor of equal goodnesse, for to drench and refresh the ground. In the prouince of Narbon, now Languedoc, there is a famous well or fountain named Orge, within the very head whereof there grow certaine herbes, so much desired and sought for by kine and oxen, that to seeke and get a mouthfull of them, they will thrust in their whole heads ouer their eares, vntill they meet therewith: but how soeuer these herbes seeme to spring & grow within the water, certain it is, that notwithstanding they are not, but by rain from above. And therefore to conclude & knit vp all in one word, Let every man be wel acquainted with the nature both of his own land which he hath, and also of the water wherewith he is serued.

* *As I haue*
By which re-
ason one
acre would
cost aboute 200
pounds sterling
so much in pro-
portion of the
whole, as this
cubit is vnder
our halfe yard
or 18 inches.

CHAP. XXIII.

¶ Of the diuers qualities of the soile. Also, the manner of dunging or manuring grounds.

IF you meet with a ground of your owne, which we called heretofore by the name of Tencra, the flourie indeed and principall of all others; after you haue taken off a crop of Barley, you may very well sow Millet thereupon; and when that is inned and laid vp in the barn, proceed to Raddish. Last of all, after they be drawne, there may be barley or common wheat sowed in the place, like as they do in Campanie; for surely such a piece of ground needs no other tillage, but often sowing. Another order there is besides this in sowing of such soile; namely, that where there grew the red wheat Adoreum or Far, there the ground should rest all the four winter months, and in the Spring be sowed again with Beans; so that it alwaies be imploied and kept occupied vntill Winter without any intermission. And say that the ground be not altogether so fat, yet it may be ordered so, that it be euer bearing by turns in this sort, that after the Frumenty or Spike come be taken off, there be pulse sowne three times, one after another. But in case the ground be ouer poore and lean, it must be suffered to rest and take repose two yeares in three. Moreouer, many husbandmen do hold, that it is not good to sow white corne or Frument vpon any land, but such as lay fallow and rested the yeare before.

Howeuer it be, the principall thing in this part of Agriculture, consisteth in dunging, whereof I haue written already in the former booke next to this. This one point only is resolu'd vpon by all men, that none of our grounds ought to be sowed, vnlesse they be manured and mucked before. And yet herein must we be directed by certain rules peculiar and proper thereunto, as follow. Millet, Panick, Rapes, Turneps, or Naveus, ought neuer to be sowed but in a ground that is dunged. If there be no compost laid vpon a ground, vpon it Frument or bread-corne, rather than Barley. Likewise in grounds that rest and lie fallow euery other yeare, albeit in all mens opinion, they are thought good for to beare Beans, yet notwithstanding beans loue better where-sooner they come to be sowed in a ground but newly mucked. He that mindeth to sow at the fall of the leafe, must in the month of September before, spread his dung, turn it in with the plough, and so incorporate it with the soile presently after a shower of rain: euen so also, if a man purpose to sow in the spring, let him in the winter time dispose of his mucke vpon the lands and spread it. The ordinary proportion is, to lay 18 tumbrels or loads thereof vpon euery acre. Throwe abroad it must be also before it be dried, and ere you sow, or els so soone as the feede is in the ground, that it may be harrowed in with the corne. But in case this manner of dunging be neglected, it followeth then before that you do harrow, to strew the short small dung in manner of dust gathered out of Coupes, Mues, and Bartons, where foule are fed; or els to cast Goats treading vpon the land, as if you would sow feed, and then with rakes and harrowes to mingle it with the soile.

To the end now that we may determine fully as touching this care also, belonging to dung, euery sheep or goat and such small cattell, should by right yeeld ordinarily in dung one load in ten daies; and euery head of bigger beasts ten load, for vnlesse this proportion and quantity of muck be gathered, plain it is, that the granger or master of husbandry, hath not don his part, but failed in lusing of his cattell. Some hold opinion, that the best way of mucking a land is, to fold sheep and such like small cattell thereupon, euen in the broad open field; and to this purpose they inclose or impark them within hurdles. In a word, a ground not dunged at all, groweth to be cold; and again if it be ouermuch dunged, the heart thereof is burned away. And therefore the better and safer way is to muck by little at once and often, rather than to ouerdo it at once. The hotter that a soile is, it stands by good reason, that the lesse compost it requieth.

CHAP. XXIIII.

¶ Of good feed-corne. The manner of sowing ground well. How much seed of euery kind of graine an acre will take. The due seasons of seedtime.

THe best corne or Zea for feede, is of one yeare age, two yeares old is not so good: that of three, is worst of all: for beyond that time, the heart is dead, and such corne will neuer flourish. And

A And verily this that is said of one sort may be verified of all kindes. The corne that setleth to the bottome of the mowh in a barn toward the floore, is euer to be reserued for feede. And that must needs be best, because it is weightiest, for therein lieth the goodnesse: neither is there a better way to discern and distinguish good corn from other. If you see an eare of corn hauing grains in it here and there staring distant afunder, be sure the corn is not good for this purpose; and therefore it must be cast aside. The best graine looketh reddith, and being broken between ones teeth, retaineth still the same colour within: the worse corn for feed is that which sheweth more of the white flower within.

Furthermore, this is certain, that some grounds take more seed, and some lesse. And hereby verily do husbandmen gather their first prestige religiously, of a good or bad harvest, for when they see the ground swallow more seed than ordinary, they haue a ceremonie to say & beleue that it is hungry, and hath greedily eaten the seed. When a man is to sow a moist ground, good reason there is to make the quicker dispatch, and to do it betimes, for fear lest rain come to rot it. But contrariwise in dry places it is not amisse to stay the later, and attend till rains follow, lest by lying long in the earth, and not conceiuing for want of moisture, it lose the heart & turn to nothing. Semblably, when a man sowerth early, he must bestow the more seed and low thick, because it is long ere it swel and be ready to chit. But if he be late in his seednes, he should cast it thin into the ground, for thick sowing will choke and kill the seed. Moreouer, in this fear of sowing there is a pretty skil and cunning, namely to cary an euen hand, and cast the seed equally thorowout the whole field. The hand (in any case) of the seeds-man must agree with his gate and march: it ought alwaies to go iust with his right foot. Herein also this would not be forgotten, that one is more fortunate and hath a more lucky hand than another: and the seed will prosper better and yeeld more encrease that such a one sowerth: an hidden secret surely in Nature, and whereof we can yeeld no sound reason.ouer and besides, this is to be considered, that corn comming from a cold soile, must not be sowne in a hot ground; nor that which grew in a forward and hasty field, ought to be transferred into lateward lands. Howsoever, some there be that haue giuen rule clean contrary: howbeit they haue deceiued themselves with all their foolish curiositie.

Now as touching the quantitie of seed that must be giuen, according to the varietie both of ground and grain, these principles following are to be obserued: in a reasonable good ground of a mean temperature, an acre in ordinarie proportion will ask of common wheat Triticum, or of the fine wheat Siligo, 5 modij, of the red wheat Far, or of * feede [or we call a kind of bread corn] ten Modij, of Barly fix; of Beans as much as of common wheat, and a fift part or one Modius ouer; of Vetches 12; of Cich pease the greater, Cichlings the lesse, and of pease three; of Lupines ten; of Lentils 3; [as for these, folk would haue them sowed together with dry dung] of Ervile fix; of Silicia or Feni-greek fix; of Phascols or Kidney beans foure; of Dradge or Balmong for horse prouender, 20; but of Millet and Panick 4 Sextars. Howbeit herein can be set down no iust proportion, for the soile may alter all. And in one word, a fat ground will receiue more, and a lean lesse. Besides, there ariseth a difference another way, in this manner; if it be a massie, fast, chalky, and moist ground, you may bestow in one acre thereof six Modij, either of common wheat or of fine Siligo; but in case it be loose and light, naked, dry, and yet in good heart and free, it will aske but foure. For the leaner that a ground is, vnlesse it be sown scant, and the straw come vp also thinner, the shorter eare will the corne haue, and the same light in the head, and nothing therein. Be the ground rich and fat, ye shall fee out of one roe a number of stems to spring; so that although the grain be thin sown, yet will it come vp thick, and beare a faire and full eare. And therefore in an acre of ground you shall not do amisse to keep a meane between foure and six Modij, hauing respect to the nature of the soile. And yet some there be who would haue [of wheat] five Modij sown at all aduerture, and neither more nor: lesse, whatsoever the ground be. To conclude, if the ground be set with trees, or lying on the side of an hill, all is one, as if it were lean, hungry, and out of heart. And hereto may be reduced that notable

F Aphorisme, worthy to be kept and obserued as a diuine Oracle: Take not too much of a land, weare not out all the fatnesse, but leaue it in some heart. ouer and about the rules aforesaid, Accius in his Treatise called Praxidicus, comes in with of his own; Sow your ground [saith he] when the Moone is in any of these signes, Aries, Gemini, Leo, Libra, and Aquarius. And Zoroastres hath another Astronomical observation by himselfe, That the Sun should be

entred

* or rather (as
ter Columella)
39 daies.

* He meaneth
Zea or Spelt.

entred into Scorpio, and past twelue degrees thereof, the Moone being at the same time in G Taurus.

Now followeth the deep question to be discussed and determined, As touching the fit time and season of sowing corn: which I haue put off and deferred to this present place. And this would be handled and considered vpon with exceeding great care and regard, as depending for the most part of Astronomie, and requiring good insight in the course and motion of the Planets, in the order also and influence of the fixed stars: and therefore I purpose to lay abroad the opinions and judgments of ancient writers principally in that behalf. To begin therefore with *Hesiod*, hee deemed the prince and chiefe of all those that gaue precepts of Agriculture; hee hath set down one certain time of Seednes, to wit, presently after the fall or occultation of the Star *Virgil*, i. e. the Brood-hen and no maruell, for he wrote that book of his in *Bœotia*, a countrey in the very heart of Hellas or Greece, respectiue to his own countrymen and that climate: and in very truth that was the time of sowing there, as we haue noted and specified already. The best Authors of name, and who haue written most exactly of this argument, are all agreed vpon this point and conclusion, saying, That as all fowles of the aire and foure footed beasts haue their due season of ingendering; euen so there is a certaine time when as the earth is as it were in the rut, and hath a lust to be conceiued. The Greeks in general termes haue described that season in this wise, namely, When the earth is hot and moist. *Virgil* giueth a precept to sow the common wheat *Triticum*, and the red bearded wheat *Far*, after the retreat or departure aforesaid of the Brood-hen *Virgiliæ*. As for *Barly*, he would haue it cast into the ground betwene the *Æquinox* in Autumne, and the winter Sun-set: but *Verches*, *Kidney-beans*, or *Lentils*, at the setting or going downe of the star *Boote*. Which being so, it would do well to digest the rising and falling both of these stars and also of others, into their set dayes; to shew (I say) at what fixed time they appear, and when again they are hidden. Some there be who are of opinion, that it is good sowing euen before the occultation of the said star *Virgiliæ*, but in a dry ground onely and in hot countries: for so (say they) will the seed swell and mortifie the better; which the naturally humiditie of the earth is sufficient to putrifie and prepare so, that when the next rain falleth, it will be ready to sprout and chit within a day. Others attend and wait seuen dayes after the retreat of the foresaid Brood-hen, for the rain that commonly falleth about that time. There be again that begin to sow in cold regions immediately after the *Æquinox* in Autumne: but in hot countries they be later in their seednes, for fear that the corn would be winter-proud and grow ouermuch before the cold weather come. But all writers accord herein, that it is not good sowing before the winter Solstice, when the daies be at the shortest: the reason is verie pregnant and apparant, for winter seed if it be sown before mid-winter, will sprout and spring at the seuen-nights end; so after that time, you shall haue it lie in the ground forty daies before it make any shew of coming vp. Many make hast and put their seed into the ground betimes, hauing this prouerbe vntually in their mouth, *Well may ouertimely and hasty sowing oftentimes faile, but late sowing shall euer misse and deeme the master*. Contrariwise, others there are of this minde, That it were better stay vntill the spring to do it wel and surely, rather than to sow in a bad Autumne, and hazard the losing of all. If there be no remedie therefore but to take the spring season, a man must make choice of the time betwene the midst of Februarie [at what time as the West wind *Favonius* doth rise and begin to blow] and the *Æquinox* in March. Some haue no regard at all to the constitution and figure of the heavens in this case, thinking the rising and falling of stars, the course and motions of celestiall bodies to be frivolous matters and nothing pertinent to this purpose; but content themselves only with observing the cardinal seasons of the yeare, and some other times, in a generality. In the spring (say they) sow *Linsseed*, *Otes*, and *Poppies*, and so hold on vnto the festiuall holydaies of *Minerva*, called *Quinquatrus*; like as at this day throughout all *Lombardie* and beyond the Po, they go by no other rule. As for *Beans* and the fine wheat *Siligo*, put them into the ground in the moneth of *November*. Let the winter red wheat *Far* take his fortune and be interred, from the end of September, vntill the midst or fifteenth day of October. Others goe beyond that day, and continue their seednesse vnto the Calends or first day of *November*. Now as these men haue no regard at all to the speculation of Nature, and the course of the starres; so the other before named are given too much thereto, and wrapt they are so high among the stars and planets, that their own eyes be dazeled therewith: and besides, their subtilties and quiddities do blind others, considering that the practice

A Ife of these matters must passe through the hands of rustical peasants, who are so far off from conceiuing Astronomy, & the constellations aboue, that they know not one letter of the book, nor neuer learned their A. B. C. Howbeit, we cannot chuse but confesse, that the true reason and knowledge of Agriculture, depends principally vpon the obseruation of the order in heauenly bodies: for *Virgil* saith very wel, That before all other things, a husbandman should be skilfull in the winds and haue the foreknowledge and prediction of them: also to haue an insight into the nature and influence of the starres, and in one word, to obserue both the one and the other, as well as the Sailers and mariners at sea. Certes, a hard peece of worke it is, infinite; and smial hope I haue that euer I shall be able to drue into their heads that are so ignorant & grosse of conceit, this high learning and heauenly diuinitie, as touching the Planets, the fixed starres, together with the reason of their orderly motions and celestiall powers: howbeit considering the great profit that may arise and grow therupon to mankind, I will cast a profer and giue the attempt to make ploughmen *Astrologers*, or *Astronomers* at leastwise, if it may be. But first my purpose is, to lay open before their eyes certain difficultys (which troubled also some of the ancient writers, and those not vnskilfull in this part of Philosophy) as touching the course and order of the Starres: which being not onely discovered, but also affoiled and cleared, their minds with better contentment may goe from the contemplation of heauen to the rest of Natures workes, and see those things by the effects, which they could not possibly foresee by their causes.

CHAP. XXV.

¶ The times and seasons of the rising and setting of Starres, digested into order, as well by day as by night,

* i. Evening and morning

I N the first place, there offereth it selfe vnto vs one difficultie aboue the rest, so intricate, as hardly is it possible to resolve vpon it, namely, as touching the vray daies of the yere, how many they be, in number, and the reuolution of the Sunne, how and when he returneth againe to the same point? For whereas some do account the solare yere to be 365 daies just, others adde therunto certaine quadrants or foure parts of day and night together, to wit, six houres euery yere, which being put together, make the fourth yere *Bissexile* or *Leape yere*: so as it is in manner impossible to assigne the certaine daies and houres of the Starres apparition or occultation.ouer and besides, how obscure, how darke and confused all this matter is, appeareth manifestly herein, That the times and seasons of the yere prefixed by ancient writers, fal not out accordingly, and namely, in the obseruation of the winter seasons & tempests by them set down: for onewhile you shall haue them to prevent and come sooner by many daies than ordinary, which the Greekes call *anomalion*: another while to draw back and come later, which they terme *epigemon*. Yea and for the most part this happeneth, by reason that the influence of the celestiall starres reacheth sooner or later to the earth, and thereafter sheweth the effects: so as, the common people, when they see the said foule weather past, and all cleare and faire againe, say then and not before, That such a planet or Starre hath performed his course, and is vpon the point of his Tropick or return againe. Moreouer, considering that all these occurrences depend much vpon those stars which be set & fixed in the firmament, yet shall we haue the Planets play their parts besides, which by their motions and operations, worke no small effects vpon the earth, as we haue shewed before: and namely, causing betwene whiles stormes of raime and haile out of course no marvell then, if they trouble our heads and put vs out of our account, interrupting that order of the fixed Stars, vpon which we conceiued and built our hope of the faire season, and our new spring. And herein, not we only that be men faile of our reckoning, but other liuing creatures also be deceiued, which naturally haue much more sense and understanding of these workes of Nature, than we, in as much as their whole life standeth thereupon: for the Summer-birds (as great fore-fight as they haue of such seasons and tempests) are ouer-taken and killed by Winter frosts and cold, coming sooner than they looked for, and before they be gone out of the countrey, as also winter foules miscarrie by the hot weather of summer, continuing longer than it was wont, and holding on still after they be come. Hereupon it is, that *Virgil* expressly willerth vs to learne thoroughly the skill of the wandering Starres or Planets also, and principally giueth vs warning to marke the course of that cold Planet *Saturne*.

But

But now to come more particularly to the signs which fore-taken the Spring: some there be that goe by the Butterflie, and hold that their brood coming abroad, is an assured token that the Spring is come, for that these creatures so feeble, are not able to abide any cold: howbeit, this was checked that very yere, wherein I wrote this Booke or History of Natures work: for seen it was and marked very well, that 3 flights of them one after another were killed with the cold weather that surprised them three, for that they were stirring too early, and came abroad over-foone. Yea, and the very birds who are our guests in warm weather, visited vs five or sixe daies before Februarie, & made a goodly shew of a timely Spring, putting vs in good hope, that al cold weather was gone: howbeit, there ensued a most bitter after winter straight vpon it, that nipped and killed them in manner euery one. Hard and doubtful therefore is the case, that whereas first and principally we were to fetch our rule from the heavens to guide and direct vs, then afterwards we should be driuen to goe by other signes and arguments mere conjectural. But aboueall, the cause of this incertitud, and difficultie, is partly the conuexity of the cope of heauen, and partly the diuerse climats observed in the globe of the earth, by means whereof, one and the same star seemeth to rise at sundrie times in diuerse countres, and appears sooner or later to some than to others: and therefore the cause depending thereupon, is not in all places of like validity, nor sheweth the same effects alwaies at the same times. And yet there is one difficultie more, arising from those Authors who writing of one and the same thing, haue deliuered diuers opinions, according to the sundry climats wherein they were, at what time as they observed the figure and constitution of the heavens. Now were there of these Astronomers three I Sed, to wit, the Chaldeans, the Egyptians, and the Greeks. To which there may be added a fourth, which among vs *Cæsar* the Dictator first erected: who observing the course of the Sun, and taking with him also the aduise of *Sofigenes* (a learned Mathematician and skilfull Astronomer in his time) reduced the yere vnto the said revolution. Howbeit, in this calculation of his, there was found an error, and thort he came of the marke, which he aimed at, by reason that there was no Bissextile or leap yere by him inserted, but after 12 yeres. Now, when it was observed by this reckoning, that the sun had performed his revolution sooper than the yere turned about, which before was wont to preuent the course of the Sun, this error was reformed: and after euery fourth yere expired, came about the Bissextile aforesaid, and made al freight. *Sofigenes* also himselfe, albeit he was reputed a more curious and exquisite Mathematician than the rest, yet in three severall treatises that he made, retracting or correcting that in one booke that he had set down in another, seemed euermore to write doubtfully, and left the thing in as great ambiguitie & vndermined as he found it. As for these writers whose names I haue alleadged & prefixed in the front of this present volume now in hand, they haue likewise deliuered their opinions as touching this point, but hardly shal you find two of them in one & the same mind. Lesse maruell then if the rest haue varied one from another, who may pretend for their excuse the diuers tracts and climats wherein they wrote. As for those who liued in the same region, and yet wrote contrarie, I canot tel what to make of them: howbeit, I care not much to set downe one example of their discord & disagreement. *Hesiodus* the Poet (for vnder his name al there goeth a Treatise of Astrologie) hath put down in writing the matutine setting of the star Vergilie (which is the occultation thereof by the raies and beames of the Sunne toward morning) to begin ordinarily vpon the day of the Equinox in Autumne. *Thales* the Milesian saith, That it falleth out vpon the five and twentieth after the said Equinox. *Anaximander* writeth, That it is nine and twenty daies after and finally, *Euclidon* hath noted the 48 day following the said Equinox, for the retreat or occultation of the forenamed Brood-hen star Vergilie. Loc what varietie there is among these deepe clearkes and great Astrologers.

For mine owne part I hold well with *Cæsars* calculation, and will keep me to his obseruations as neere as I can, for that the same wil fit best with our meridian here in al Italie. Yet neuertheless I will not stick to set downe the opinions of others, because my desigine tendeth not to one particular place alone, but I purpose and professe to represent vnto the reader the vniuersall history of Nature, and the whole world. But my meaning is not to rehearse the names of euery Author one by one (for that were a tedious peece of work, and would require a long train of superfluous words) but only to put down the regions of euery climate, and chat as succinctly and briefly as I can. Whereby the way I must aduertise the Readers, that they remember wel this one thing, how when for breuities sake I name the land or region *Artica*, they must with-
all

A all vnderstand the Islands Cyclades: when I name Macedonia, I comprehend therewith Macedonia and Thracia: vnder Egypt I comprise Phoenice, Cyprus, and Cilicia: vnder Boeotia, the regions of Locris and Phocis: and in one word, alwaies the tracts and Countries adiacent and confining together. *Item*, In making mention of Hellespontus only, I take together with it, Chersonesus, and all the continent or main firme land, as far as to the mountaine Athos: in naming Ionia, I reckon also Asia the lesse or Natolia, and the Isles thereto adioyning: vnder the name of Peloponnesus I count Achaia, and other lands in that climat lying to the West. Finally, the Chaldeans shall make demonstration, as in a map, of Assyria and Babylonia. As for Africke or Barbary, Spaine and France, maruell not if I passe them ouer in silence: for there is not a writer in all these Nations, one or other, who hath either observed or penned downe the time when these fixed stars rise or fall. Howbeit it were no hard matter to come to the knowledge thereof in those climats and countries also, by the meridional lines and conformities of the Parallele circles, which I digested orderly in the first booke of this work. For thereby a man may vnderstand the vniforme agreement in the position of the heauen, not only for whole Climats and countries, but also for euery feuerall city by it selfe, vnder the same meridian or Parallel: follow in it the known parallels of these regions which we haue named, and taking with all the eleuation of any circle pertaining to euery such land as a man wil seeke, and respectiue to the rising of the stars, according to the equal shadowes throughout all those parallel circles. Moreover, it ought to be shewed and declared, that ordinarily the times and seasons haue their temperature and influence euery foure yeres together: and those lightly return the same without any great alteration, from yere to yere daily according to the course and recurrence of the Sun, during that term: many in eight yeres they sensibly do increase, namely by what time as the Moon is in her hundredth revolution.

Now all the knowledge of the heavens pertinent to Agriculture, standeth principally vpon three sorts of obseruations, to wit, the rising of the fixed stars, the setting of the same, and the four cardinal points, to wit, of the two Tropicks or Sunsteads, and the double Equinox, which diuide the whole yere into foure quarters and notable seasons. Where note, that the rise and fall of those stars before said is to be considered and taken two waies. For first when the Sun approacheth vnto them with his beams, they be hidden and no more seen: likewise after his departure they shew themselves again: and as the one, me thinks, might haue bin more aptly called an Apparition than a Rising, so we should haue framed our tongue in common speech to haue termed the other Occultation, rather than Setting. Secondly, according as the said stars begin either to shine out or be hidden in the morning before the Sunne be vp, or at euening after the Sun is set, they be said to rise and goe downe, and thereupon are named Matutine or Vespertine, Oriental or Occidental, according as the one or the other hapneth vnto them in the twi-light, morning, or euening. Certes, when they are to be scene Matutine or Vespertine, it must be at the least three quarters of an houre either before the Sun is vp, or after he is downe: for within that space there is no looking after them. Moreover, some stars there be that rise and fall twice. But take this with you, ere I proceed further, that all this speech of mine is to be vnderstood of the fixed stars, which being settled fast in the sky, moue not of themselves and in no wise of the planets.

As touching the foure cardinal seasons of the yere, whereby it is diuided into foure quarters; limited they be according to the light more or lesse, and as the daies be longer or shorter: for so soon as the winter Sunsted is past, the daies do lengthen; and by that time that 90 daies and three houres be gon and past, they be iust as long as the night, and this is called the Spring Equinox. From which very day, for ninety three daies together and twelue houres, namely vnto the summer Sun-stead, the daies be longer than the night, and so continue vntill the Autumne Equinox, at what time the daies and nights be equall againe; from which time they shorten and decrease as they grew in length and increased before, for eighty nine daies together, and three houres, vntill the foresaid winter Sunstead, when as the daies be shortest. And here you must note, that in all these additions of houres at this present, I mean those only that be Equinoctiall, which diuide the day and night equally in foure and twenty parts, and not the common houres of any other day artificiall whatsoeuer. Also take this with you, that all these distinctions and diuisions of the foure seasons, begin alwaies in the eight degree of those figures vnder which the Sunne is at those times: as for example, The winter Sunstead or shortest day

* Ortus & oc-
tus Heliacæ.

* Ortus & oc-
tus Cosmici.

of the year, called in Latine Bruma, falleth out in the eight degree of Capricorn, which lightly is vpon the * 18 day before the Calends of Ianuary. The Spring Æquinox, when nights and daies be of a length, in the eight degree of Aries. Semblably, the summer Sunstead, or longest day of the year, is alwaies when the Sun is entred eight degrees into Cancer. Last of all, the other Æquinox in Autumne, when day and night is equall, lighteth vpon the eight degree of Libra. And certes, seldom or neuer shall you see any of these foure daies without euident shew of some notable change in the weather. Again, these cardinal seasons or quarters of the year admit also their sub-divisiones still into some notable and special times, obserued in the * very middle space from the one and the other. For betwene the summer Sunstead and the Æquinox in Autumne iust vpon the five and forty day after the same Sunstead, the retrait or setting of the star called in Latine Ficulæ, i. the Harp, beginneth the Autumne. Likewise, betwene that Æquinox and the winter Sunstead or shortest day of the year, the Matutine or morning fall of the star Virgilie, vpon the three and fortieth day after the said Æquinox, setteth the beginning of the winter. So likewise vpon the five and fortieth day between mid-winter or the shortest day of the year, and the spring Æquinox, the blowing of the Western wind Favonius beginneth the Spring. And last of all, vpon the three and fortieth day from the sayd Æquinox toward the summer Sunstead, at what time as the star Virgilæ doth rise Matutine, begins the Summer.

* 18 of December.

* Called Interuallæ after-ward in this chapter: and contain much about six weeks.

* Called by our Husbandmen Gorse-moone.

But to returne again to our Agriculture, begin I will at the Seednes of Frument come, that is to say, at the rising or apparition of the starre Virgilæ in the morning, without making any mention at all of other petty stars, for to interrupt the train and course of our treatise, & to heap difficulties one vpon another, considering that the fierce and vehement star Orion is departed a great way off from vs by that time. I am not ignorant, that many fall to sowing corne long before, and prevent this time, beginning their Seednes within 11 daies after the Æquinox in Autumne, namely, at the approach and rising of the star Corona, i. the Crowne; promising themselves assuredly to haue rain vpon it for certain daies together. Xenophon would not haue vs begin to sow before that God giue vs some good signe and token for to do. And Cicero our countryman expounding this saying of Xenophon, taketh the raines in * November to be that signe which God giueth: whereas in very deed the true and vndoubted rule to goe by, is to make no great hast into the field for to sow, before the leaves begin to fall: and this euery man holdeth to be at the very occulation or retrait of the star Virgilæ. Some, as we haue before said, haue obserued it about 3 daies before the Ides of Nouember. And for that the said star is so euident in the heauen, and easie to be known of all others, called it is by the name of a garment hanging out at a Brokers shop. And therefore by the fall or retrait thereof, as many men as haue a care and foresight to prevent the couetous dealing of the merchant-Tailor (as commonly such occupiers lie in the wind for gain) guesse aforehand what winter will follow: for if it be a cloudie season when the star retireth, it threatens a rainy winter, and then these merchants presently raise the price of the clothes which they sel: but if the weather be faire and cleare at the setting or occulation thereof, it sheweth a pinching and hard winter toward, and then they hold other garments also very deare. But this Husbandman of ours, who cannot skill at all to looke vp and to learn the order and position of the heauens, must spy this signe of winter amongst his briars and brambles: he must find (I say) the time of Seednes as he looketh downe vpon the ground, namely, when he sees the leaves fallen and lying vnder his feet. Thus may a man know the temperature of the climat, and the year, according as he perceiues the leaves be fallen more at one time than another, sooner also in some places, and later elsewhere. For as the season is forward or late, as the climate also is affected, so are the trees knowne to shed their leaves accordingly. And in very truth this is the truest signe of all others. And the best thing therein is this, that being generall throughout the whole world, and yet peculiar to each place, it neuer faileth. A man might make a wonder herat, if he did not see and remember, that vpon the very shortest day in the year, euen in midwinter when the Sun is entred Capricorn, the herb Penroyal vieth of it selfe to floure, either set in chaplets, or otherwise hanging and sticking in the flames; so willing is Nature to shew vs all her secrets, and to keepe nothing hidden from vs. For loe what signes and marks she hath giuen vs, whereby we might know the time of sowing corn: and verily this is the only true and infallible direction grounded vpon approoued experience, and the same shewed first by dame Nature: for by this dropping & fall of leaves what doth she els teach

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A teach and counsell vs but to haue our eye vpon the ground, and to cast seed into it, assuring vs of a certain supply of dung and compost, by ouerpreeding the ground, and cast seed into it, that soon will turne into muck: what doth the else (I say) but by couering the earth in this manner with leaves, shew how careful she is to defend it against hard frosts and pinching winds, and in one word, thereby putteth vs in mind to make the more hast and get our seed vnder mould: As for Varro, he is of the same opinion for beans also, and willet vs to obserue the said rule in sowing them at the fall of the leafe. Others are of this mind, that the best sowing thereof is in the full Moone. But for Lentils, we should attend the last quarter toward the change, to wit, from the 25 day to the thirtieth. Also, that Vetches must be sowed at the said age of the Moone: for in so doing we shall preferre such pulse from the naked snail. Howbeit, some others there be that indeed would haue these kindes of Pulse to be sowed at this time of the year and age of the Moone for prouender and forrage to be spent out of hand: many if we would keepe the same for feed, then we should take the season of the Spring.

B Besides those rules and tokens about specified, there is one more, which Nature vpon an extraordinary prouidence ouer vs, hath presented vnto our eies after a wonderfull manner, which Cicero expresth in these termes

*Im vero semper viridis, semperque grauata
Lentiscus, triplici solita est grande fœtu:
Ter fruges fundens, tria tempora monstrat arandi.*

C The Mastick tree
All times, you see,
Is clad and richly dight,
With green in cold,
With fruit three-fold,
A faire and goodly sight.

As she therefore;
By Natures lore,
Doth fruit thrice yearly beare:
So thereby we
Know seasons three,
Our land to duly care.

Of which three seasons, one is appropriate for the sowing both of Poppy and also of Linseed: But since I haue named Poppy, I will tell you what Cato saith as touching the sowing thereof: vpon that land (quoth he) where you mean to sow Poppy, burn your winding rods, the cuttings also and twigs of vines, which remained and were left at the pruning time: when you haue burned them, sow wild Poppy seed in the place; for it is a singular medicine being boiled vp to a syrup in honey, for to cure the maladies incident to the chawes and throat. As for the garden Poppy, it hath an excellent and effectfull vertue to procure sleep. And thus much concerning Winter come and the Seednes thereof.

CHAP. XXVI.

¶ A summrie or recapitulation of all points of Husbandry: and to what out-works in the field a husbandman should be employed, especially to euery month of the year.

E B Vt now to compasse vnder a certain briefe Abridgement or Breviarie, all points of husbandrie together: At the same time before named, to wit, at the falling of the leafe, it is good also to lay dung vnto the roots of trees; likewise to mold and bank vines: and one workman is sufficient for one acre. Also, where the nature of the ground will beare it, the husbandman shall not do amisse to disbranch and lop his tree-groues, to prune his vineyards, to hollow the ground of his seminaries and nourish-plots with marke and spade, and dresse the mould light; to open his sluices and trenches for water-courfe, to drie and drain it out of the fields; and finally, to wash his Wine-presses first, and then to shut and lay them vp dry and safe. Item, after the Calends or first day of Nouember, let him set no hens vpon eggs until the winter Sunstead be past: when that time is come and gon, let hens hardly, and let them coue 13 eggs; marie better it were all Summer long to put so many vnder them, for in winter fewer will serue: howbeit neuer vnder nine.

F Democritus giueth a guesse what Winter we shall haue, by the very day of the Winter Sunstead: for look what weather is then and for those daies about it, the like winter (he supposeth)

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will enfue, Semblably, for the Summer he goeth by the other Sunstead or longest day of the year: and yet commonly for a fortnight about the shortest day in the year (to wit, during the time that the fowles Halcyones do lay, couve, and hatch their eggs in the sea) the windes lie, and the weather is more mild and temperat. But as well by these signes as all other whatsoever, we must guesse the influences and effects of the stars, according to the euent, within some latitude of time; and not so precisely to limit and tie them alwaies to certain daies prefixed, as if they were bound to make their appearance peremptorily in court, iust then, and faile not.

Moreover, in mid-winter mieddle not arail with vines, touch them not in any hand, but let them alone. What then is the husbandman to do? Mary then (quoth *Hyginus*) after seuen daies be once past from the Sunnestead, he is to refine his wines from the lees, and let them fettle, yea and to poure them out of one vessell into another, provided withall, that the Moon be a quarter old. Also about that season (to wit, when the Sun is in Capricorn) it is not amisse to plant cherie trees, and let their stones, then is it good also to giue oxen Malt to feed them; and one Modius or p.cke is sufficient to s.ue a yoke at one refection: allow them more at once, you glut them and fill them full of diseases: but at what time soever you make them this allowance, y.lesse you hold on thirty daies together, folks say, they will be scabbed and mangie when the Spring commeth, that you will repent for cutting them so short. As for felling timber trees, this was the proper season which we appointed heretofore. All other winter works for a husbandman to be busied in, would be done in the night for the most part: fit vp he must late, and rise betimes by candle light, and watch hardly about them, for that the nights be so much longer than the daies: let him a Gods name find himself occupied with making Wicker baskets and hampers, winding of hurdles, & twisting of frailes and paniers: let him twine twine wood taperwise with links and lights: and when he hath by day light made ready and prepared thirtie poles or railes for vines to run on, and sixty flakes or props to support them, he may in the evening make five poles or perches, and ten forks or supporters; and likewise as many early in the morning before day light.

But now to come to *Casars* reckoning of the times & digestion of the celestiall signes: these be the notable stars which are significant and do rule that quarter which is between the winter Sunstead and the rising of the Western wind Favonius. Vpon the third day (saith he) before the Calends of Ianuarie, which is the 30 day of December, the Dog-starre goeth downe in the morning: vpon which day in Attica and the whole tract thereto adioyning, the star Aquila, [i.e. the Eagle] setteth (by report) in the evening, and loseth her light. The euen before the Nones of Ianuarie, i.e. the fourth day thereof, by *Casars* account [I mean for the meridian of Italy] the Dolphin star riseth in the morning, and the morrow after, the Harp-star Fidicula; vpon which day, in Egypt, the star Sagitta [i.e. the Arrow] setteth in the evening. Item, from that time to the sixt day before the Ides of Ianuarie [i.e. the eighth day of that moneth] when as the same Dolphin goeth down or retireth out of sight in the evening, vtuall we haue in Italy continual frost and winter weather: as also when the Sun is percieu'd to enter into Aquarius, which ordinarily falleth out sixteen daies before the Calends of Februarie [i.e. the seuenteenth of Ianuary]. As for the cleare and bright star, called the star Royal, appearing in the brest of the signe Leo, *Talero* mine Aurtior saith, that eight daies before the Calends of Februarie, to wit, the 25 day of Ianuarie, it goeth out of our sight in the morning: also ouer-night before the Nones of Februarie [i.e. the fourth day of the same moneth] the Harp-star Fidicula goeth down and is no more seene. Toward the later end of this quarter, it is good and necessarie to dig, and turne vp fresh mould with mattock and spade, against the time that roses or vines that be set, whereof ever the temperature of the climat will beare it: and for an acre of such worke, sixty labourers in a day are sufficient to doe it well. At which time also old trenches and ditches would be scoured or new made. For morning worke before day the Husbandman must look to his iron tooles that they be ground, whetted, and sharpened; that their steels, helues, or handles, be fitted and set to their heads; that shaken tubs, barrels, and such like vessels, be new cowped, bound with hoops, and calldrest; that their staves be well scraped and cleaned, or else new set into them. And thus much of this Winter Quarter, as farre as to the coming of the Western winde Favonius.

Now as touching the entrance of the new Spring, which is from the rising of the said winde to the Equinox in March; *Casus* sets downe for it the time, which for three daies together is variable

A riabie and inconstant weather, to wit, seutene daies before the calends of March, which is the thirteenth of Februarie. Also 8 daies before the said Calends, which is the 22 of Februarie, vpon the sight of the * first Swallow; and the morrow after, vpon which day the star Arcturus riseth Vespertine, i.e. appeareth in the evening. In like manner, *Casus* hath obserued, that the said wind hath begun to blow three daies before the Nones of March, to wit, the fift of March, iust with the rising or apparition of the Crab-star Cancer. Howbeit most writers of Astrologie do assigne the first entry of the Spring and the coming of this wind, to the 8 day before the Ides of March, which is the eight of that moneth, when as the star Vinemiator, i.e. the Grape-gatherer, beginneth to appeare: at what time also the Northernly starre called the Fifth, ariseth: vpon the morrow whereof, to wit, the ninth day, the great starre Orion sheweth himselfe in his lkenesse. In the region Attica where Athens standeth, it is obserued, that the star Milvus, i.e. the Kite or Gled, appeareth then in that climat. *Casus* moreover noted, that the star Scorpio rises vpon the * Ides of March, those fallall Ides (1 day) that were to vnfortunate vnto himselfe: also, that vpon the 15 Calends of Aprill, which is the 18 of March, the foresaid Milvus, i.e. the Kite-star, appeareth to them in Italic, and three daies after, the Horse-star is hidden toward the morning. This is the frehest, the most busie or stirring, internal or time between that husbandmen haue, and yet therein they be oftentime deceived, for commonly called they are not to their work the very same day that the wind Favonius should by coure blow, but when it begins to be aloft; which is a point to be considered and obserued with right great regard: for if a man would take heede and make well, this is that moneth wherein God giueth vs that sure and infallible sign which neuer faileth. Now from what quarter or coast this wind doth blow, and which way it commeth, albeit I haue shewed already in the second booke of this florie, yet will I speake thereof more distinctly and exactly anon; mean while, from that day (whensoever it happeneth) on which that wind beginneth to blow, come it sooner (as namely, when it is a timely and forward spring) or come it later, if it be a long winter (or it is not alwaies the * sixth day) iust before the Ides of February) from that time, I say, must the rustical passants fertle to their work, then are they to goe about a world of toilsome labour, then must they plie their businesse and make speed to dispatch those things first that may not be defer'd & put off, then or neuer would their summer three month come be sowne, their vines be pruned in manner aboue said, their Oliue trees dressed and trimmed accordingl: Apple-tree stocks and such like fruits, are then to be set and grafted; then is the time to be digging and deluing in vineyards, to remove some young plants out of their seminaries, and digest them in order as they must grow, and to supply their plots with new seed and imps: Canes and Reeds, Willows and Oiers, Broom also would then some be set, and others cut downe: Elmes, Poplars, and Plane trees, ought then to be planted, as hath been said before: then is the meetest season to cleanse the come fields, to fardle and rid the winter corn from weeds, and especially the bearded red wheat far in doing whereof, this must be the certain rule to direct the husbandmen, namely, when the roote of the said far begins to haue foure strings or threads to it. As for Beanes, they must not be medled with in that order, before they haue put out three leaues; and then verily they must be lightly gone ouer, and cleaned rather with a light hooke, than otherwise. When Beanes be bloumed, for 15 daies together they ought not to be touched. As touching Barley, it would not be * fardled or raked, ^{saith} but in a drie ground, and when the weather holds vp. Order the matter so, that by the Equinox in March, all your pruning and binding of Vines be done and finished. If it be a vineyard, four men are enough to cut and tie an acre of vines: and if they grow to trees, one good workman will be able to overcome fifteen trees in one day. This is the very time moreover of gardening and dressing rose-plots or roses (whereof I mean to treat apart and severally in the booke next following) of drawing vinets also, knots, and fine florie works in gardens: this is the only season to make trenches and ditches the ground also would now be broken vp for a fallow against the next year, according to the mind and counsell of *Virgil* especially, to the end that the Sunne might thoroughly parch and concoct the clots, and thereby make it more mellow for the Seednes. Howbeit I doe like better of their opinion (as the more thrifite and profitable of the two) who aduise to plough no ground in the mids of the Spring, but that which is of a mean temperature: for if it be rich and fat, presently the weeds will ouergrow and take vp the seans and furrows againe, say it be poore and leane, the hot weather coming so soon vpon the fallow, will dry it too fast, spend all the moisture, and kill the heart thereof, which should maintain the seed

* Whereupon the said wind Favonius, is called *Quintidies*, namely and *Quintidies*.

* 13 of March: for vpon that day was he murdered.

* i the seuenth of Februarie.

* saith

put her horns dire& straight forth, the presages thereby some great tempest at sea presently to follow, ynesse it be so that she haue a guirland or circle about her, and the same cleer and pure; for then there is good hope that there will be no foule nor rough weather before the full. If at the full, one halfe of her seeme pure and neat, a signe it is of a faire season; if it be red, the wind will be busie; if enclined to blacke, what else but raine, raine. Doe you see at any time a darke mist or cloud round about the body of the moone? it betokeneth winds from that part where it first breaketh; and in case there be two such cloudie and mistie circles enuironing her, the tempest will be the greater: but how if there be three of them for failing, and those either black, or interrupted, distracted and not vniued? surely then there will be more storms & more. The new moone whiles she is croissant, if the rife with the vpper tip or home blackish, telleth beforehand that there will be store of raine after the full, and when she is in the wane, but if the nether tip be so affected, the rain will fall before she be at the full. But what if that blacknesse appeare in the middle of her body betwene; then (saith *Varro*) it will poure of rain in the very full. A full moone hauing about her a round circle, sheweth that there will be wind from that part, where the said circle is most splendant. If her horns appeare when the rife, more grosse and thicke than ordinarie, look soon after for a terrible tempest and and stormie weather. If she shew not in our Horizon before the prime or fourth day after the change, and the West wind blow withall, then that moone throughout threatneth cold and winter weather; and if the day after the full she seeme extraordinarily enflamed, the menaceth vnto vs sharp shoures and bitter tempests. Finally, in euery moon there be eight points and so many daies (according as the lighteth vpon the angles of the Sunne) which most men obserue onely, and take their presages of future weather by, to wit, the third, fourth, eleuenth, fifteenth, nineteenth, one and twentieth, seuen and twentieth, and the very day of her conjunction or change.

In the third houe, a man may know the disposition of the seasons by the fixed starres, and therefore it behooueth to obserue and marke them. They seeme otherwhiles in the sky to flit and run too and fro, and then we shal not be long without great winds, rising from that quarter where such appeared and gaue token.

The starrie skie, if it shew cleare and bright al ouer, and in euery part alike, during that particular season [namely, between the occultation of the Harp star, and the Equinoctiall point] which I propoed and set downe heretofore, it is a fore-token of a faire and drie Autumne; but yet cold.

If the Spring add Summer both, passed not cleare without some raine and wet weather, it will be an occasion that the Autumne following shall be drie, and lesse disposed to wind; howbeit, thicke, muddy, and enclined to mists. A faire and drie Autumne, bringeth in alwaies a winde winter.

When all on a sudden the stars lose their brightnesse and looke dim, and that neither vpon a cloud nor a mist in the aire, it signifieth either raine or grievous tempests.

If the starres make semblance as if they flew vp and down many together, and in their flying seem whitish, they denounce winds from that coast where they thus do shoot. Now if it seeme to the eye, as if they ran and kept one certaine place, those winds will hold and fit long in one corner; but in case they do so in many quarters of the heauen, they betoken variable and inconstant winds, going and coming, and neuer at rest. [When you see a circle about any of the other fixe planets or wandering stars, you shall haue powing shoures soone after.] Within the signe Cancer, there be two prettie stars which the Mathematicians call *Astell*, [i. little *Affes*] betwene which there seemeth to be a small cloud taking vp some little roome, and this they name in Latine *Præsepia*, [i. a Crib, Cratch, Bowzey, or Manger:] now if it chauce that this Racke or Crib appeare not, and yet the aire bee faire and cleare otherwise, a signe it is of cold, foule, and winter weather. Also if one of these two little stars, to wit, that which standeth Northerly, be hidden with a mist, then shall you haue the South wind to rage; but in case the other which is more Southerly, be out of sight, then the Northeast wind will play his part.

As touching the Rainbow, if it appear double as if there were two of them at once, it telleth of raine toward. A Rainbow presently after raine, is a signe of faire weather; but this is not so certaine, neither will it hold long. Also, when a man seeth new circles still about any planets, there will be much raine soone after.

In Summer time, if there chauce to be more thunder than lightning, it threatneth winds from

from that coast where it thundreth: contrariwise, if it lighten much & thunder little, looke for rain plentie; when you see it lighten, and the skie otherwise cleare & faire, it is a token that rain and thunder will follow thereupon, yea and rigorous cold weather besides: but the cruellist and most bitter impressions of the aire, ensue vpon such lightnings, as come from all the foure quarters of heauen at once: if it lighten, from the Northwest only it betokeneth rain the day following; if from North, it is a signe of wind from thence; if from the South, Northwest, or full West, it happen to lighten in the night & the same bee faire, it sheweth wind and rain from out of those coasts: more thunders foretew winds, but if they be heard at noon, they presage rain.

As touching clouds, if you see the racke ride apace in the aire, the weather being faire & drie, looke for wind from that quarter whence those clouds doe come; and if they seeme to gather thick in that place, disappeared they will be and scattered when the Sun approacheth: but more particularly, if this happen from the Northeast, they portend rain; if from the South, storm and tempest: if at the Sun setting the rack seeme to ride from both sides of him into the open aire, they shew of tempests toward: if the clouds be very blacke, flying out of the East, they threaten rain against night; but if they come out of the West, it will surely raine the morrow after, if the clouds be disparted many together out of the East, and sic like fleeces or flocks of wooll, they shew rain for 3 daies after: when clouds fly low, and seeme to settle vpon the tops of the hills, looke shortly for cold weather, contrariwise, if you perceiue those tops of mountains cleare without mist or cloud, the weather will soone take vp and turne to be faire: when the clouds seeme to be heavily charged and full, and yet looke white withall (which * constitution of the aire is called commonly the white weather) there is an haile-storme at hand: moreover, be the skie neuer so cleare, the least cloud appearing therein, is enough to engender and foretew wind and storme: mists if they come downe and fall from the mountains, or otherwise descend from heauen and settle vpon the vallies, promise a faire and drie season.

Leauing the stars and clouds above, let vs come to our fires that we make and keep in our houses here beneath, for they are to be raunged in the next place of our prognostication. If the fire then burne in the chimney pale, and keep there with a huzzing noise, we find by experience it foreshewes tempest and stormie weather: as also wee may be sure of rain, in case we see a fungous substance or foot gathered about lampes and candle snuffs: if you see the flame either of fire or candle mount winding and waing as it were, long you shall not be without wind. The like is to be said of fire and candle light, if either they seem to go out of themselves, or to kindle and take fire with much adoe. Also, when we discern in the fire a number of sparkles gathered together and hanging one to another: or if when the pot is taken off from the fire, the coles stick to the bottome and sides: or when the fire being raked in embres, keepeth a spitting and sparkling from it also, if the ashes lying vpon the hearth grow together and last of all, when the live coles thineth brighter or scorcher more than ordinarie, all these be signes of rain.

Goe we a little lower to the water, for that element also giues signes of the weather: and first of all, if you see the sea within the haue, after the flood is gone, in a low and ebb water to bee calme, and yet heare it keep a rumbling noise within, it foreshewes wind; if it doe thus by times and fits one after another, resting still and quiet between whiles, it presages cold weather & rain. Item, if in calme and faire weather the sea stand or water banks rebound and make a noise, it is a token of a bitter tempest: so it fares also with the very sea it selfe, for if it be calme, & yet make a roaring, or if the some thereof be seen to scatter to & fro, or the very water to boile & bubble, you may be bold to foretell of tempests: the Puffins also of the sea, [i. fishes named in Latin *Pulmones*] if they appear swimming about water, forefigne cold weather for many daies together: oftentimes the sea being otherwise calme, swells, & by heaving higher than ordinarie, sheweth she had wind good store enclosed within her, which soone after will breake out into a tempest.

Let vs come aland againe, and marke the disposition of woods and hills: you shall heare the mountains and forests both, keep a sounding and rumbling noise, and then they foretell some change of weather, nay you shall marke the leaues of trees to moue, flicker, and play themselves, & yet no wind at all stirring, but be sure then you shall not be long without. The like prediction is to be gathered by the light downe of either poplars or thistles flying too and fro in the aire; also of plumes and feathers floating vpon the water. Goe down lower to the vales & plains: if a man chauce to heare a buffing there, he may make account that a tempest will follow. As for the rumbling in the aire, it is an vndoubted signe and token thereof.

Moreover, the verie bruit and dumb creatures preface and giue warning what weather there will be. To begin with the fishes of the sea: the dolphins playing & disporting themselves in a calme water, doe certainly fore-shew wind coming from that coast whence they fetch these frisks and gambols: contrariwise, if they fling and dash water this way and that way, the sea at that time being rough and troubled, it is an infallible signe of a calme and of faire weather toward. The Cuttle or little Calamarie Loligo, launching it selfe and flying about the water; the Cockles & winkles cleaving and sticking hard to the grauell, the Sea-vrchins thrusting themselves into the owle and mud, or otherwise balaisted & couered with sand, be all signes of tempests neare. The like may be said of Frogs, when they crie more than their custome is, and of Seamewes also, when they gagle in a morning betimes extraordinarily, semblably, the Cormorants, Gulls, Mallards, and Ducks, when they keep a proining of their feathers with their bills, foreshew wind and generally, when you see other water-foule to gather and affemble together and then combat one with another, or Cranes make haste to flie into the midland parts of the maine. The Cormorants and Gulls flying from the sea and standing lakes, and Cranes soaring aloft in the aire still, without any noyse, doe put in comfort of a faire and drie season: so doth the Howlat also, when she cries chuint in raime weather: but if it be then faire and drie, we shall be sure to haue soule tempests for it afterwards: Ravens crying one to another as if they lobbed or yexed therewith, and besides clapping themselves with their wings, if they continue this note, doe portend winds; but if they giue ouer between-whiles, & cut their crie short as if they swallow it backe again, they preface rain and wind both. Iacke-dawes, if it be late ere they returne from their reliefe abroad, foretold cold and hard weather; so do the white-birds when they affemble and flock together, as also when land-foule (and the crow especially) keep a crying against the water, clapping their wings, washing also & bathing themselves. If the Swallow flie low and so neere the water, that she flap the same oftentimes with her wings, it is a sign of rain and foule weather. Semblably, all other birds that nestle in trees; if they seem to make many flights out, but returne again quickly to their nests. Moreover, if Geese hold on a continuall gagling out of all order vntrunably, a man may guesse no better by them, no more than he can of the Heron which he seeth heavy and sad upon the sands.

And no maruell that these riuier-foules, or generally any other birds of the aire whatsoever, should haue a secret preface and foreknowledge of the disposition of the aire, for the very four-footed beasts of the earth doe make shew thereof by their behauiour. The sheepe and such small cattraile, leaping and playing wantonly, dancing also as vnwardly without measure, doe testify some change of weather: nay the dull and heauie oxen holding vp their noife and muzzles, snuffe and smell into the aire, yea and keep a licking against the haire [toward rain.] Also when you see the foule and filthie hogs, rend, teare, and fling about them bottles of hay, and yet they care not for it when they haue done, because it is no meat for them: likewise if you percieue the pismires or ants either lying close and idle, full against their nature (whose proprietie is to be industrious and euer busie) or encountering one another in battailewise, or else carying their eggs abroad out of their holes. Finally, when the mads or earthwormes come forth and appeare, a man may be bold to foretell of a change in the weather.

What should I say more? It is knowne for certaine, that Clauer-grasse or hearbe-Trefoile will looke rough against a tempest, yea and the leaves thereof will stand staring vp as if it were afraid thereof. And to conclude and make an end once of this discourse, whensoever you see at any featt the dishes and platters wherein your meat is serued vp to the board, sweate or stand of a dew, and leauing that sweat which is refolued from them either vpon dreffer, cupbord, or table, be assured that it is a token of terrible tempests approaching.

An

An Index pointing to the principall matters contained in the first Tome of Plinius Naturalis historie.

A B	A E
A Badax, a rocke in Affricke.	331.d
Abdomen, what it is.	344.d
Abdecti, 436.k. of two sorts. ibid. good for sick.	ibid.
Abide what they are.	102.k
Abstinence of Iulius Diator.	166.g
A C	
Acacia, Egyptian thorne.	390.lm
Acacia, a gum.	391.g
Acapon the best kinde of honey.	478.f
Acarnania drowned.	401.f
Acca Laurentia, source to Romulus, and his sister-mother.	549.e
Accord among beasts.	308.lm
Acodon, a kinde of good honey.	317.b
Acata the description thereof. 74. b. drowned in Corinth gulfe.	401.f
Achilles Island famous, and why.	83.c
Achilleum, a kinde of sponge.	262.b
Acilius Sibenelus a good husband.	411.e
Aconitum a kinde of comest.	15.e
Acone the best maske. 458.m. of diuers sorts.	459.m
Acre what it was at Rome.	550.g
Actum what measure is Rome.	565.e
Actyon what it is.	458.m
A D	
Adaree what it is.	483.d
Adis for the Egyptian Date.	344.lm
Ad-Gallina, what place.	553.f
Adelphides, Dates, why so called.	387.e
Adreagly why so called.	551.a
Adreum.	562.m
Adreus, a tree.	541.e. 399.c
Adulteries imagined among the gods. See gods.	247.b
Adonis, a fls.	
A E	
Aegilops, an oke.	459.e
Aegia what it is.	487.b
Aegle, free from the stroke of lightning. 27. e. her nature.	273. d. burmeth her selfe, ibid. f. offix kinder. 271. d. quicker of sight than men. 305. f. how they build, breed, and hatch. 172. l. their manner of preying. 273. a. they die for famine. ib. their feathers deuoure other birds feathers. 273. b. they prey upon deere. 273. c. they be at mortal warre with dragons. 273. d. an Aegle leue vnto an virgin. ibid. e. f.
Aegle, the chiefe standard of a Roman legion.	273. c
Aegle imagined to be Iupiters armour-bearer, & why. ib. b.	273. c
Aegephalus, a bird without a plume.	343.c
Aegypt not subject to earthquakes, and why. 38. b. brag of antiquitie, and wherein especially. 98. l. c. Aegypt a mighty country. 545. f. free from lightning, and why. 25. d.	
Aemilius Paulus sacked in one day 702 cities in Macedonia.	77.e
Aelus how he is said to gouerne the winds.	62.a
Aequinox of spring. 581. c. of Autumne.	ibid.
Aelo a kinde of flauke.	274.k
Ethiopian, why blacke.	268.m
Ethiopia the description. 96. their manners.	ibid. g
Echylus the Poet killed with a Torosife shell.	271. f
Actites a precious stone. 272. k. medicinale.	ibid. l
Etna the hill alwaies burning.	47. b
A F	
Affricke full of strange beasts. 202. k. plentiful in corne.	430. k. description thereof. 392. d
Affricus wind.	22. l
A G	
Age vnmeet for generation.	303. a
Agellus, who so called, and why.	166. b
Agrophage, what kinde of people.	147. e
Agriculture. See Husbandry.	
Agion.	282. a
Agrippa who so called.	139. d
Agrippa his infortunitie.	180. e
Agrippina, two unhappy emps of his.	482. e
Agarick, where it groweth. 461. b. how it is gathered: ib. for what it is good.	ibid.
Ague of Antipater the Poet yearly on his birth-day, when upon he died. 184. g. C. Meceas neuer free of an ague. ib.	
A I	
Aire element. 2. l. giueth life for all things. ib. by the power thereof the earth hauegeth. ib. the properties thereof. 18. m. no Aire of egles in Klodes.	285. c
Aiax, the name of an Elephant. 194. k. he died for shame of a disgrace.	ibid.
A L	
Alauda, a legion of the Romanes.	321. a
Albaues, people cited like owles, alwaies gray headed, and see better by night than day.	154. d
Alce, what kinde of beast.	200. d
Alciades, a stout wine-knight.	447. e
Alcipe deliuered of an Elephant.	157. f
Alcman a Poet in Greece died of lice.	339. d
Alcea, a kinde of drapping.	246. k
Alexandria the description thereof. 99. b. who built it. 125. b. called Seleucia, and why.	ibid.
K. Alexander the great his victory at Arbela. 35. a. his care to know the nature of liuing creatures. 200. l. how he honoured Homers books. 108. l. 171. c. he feared the family of Pindarus the Poet. 171. d. his commendement for his statue.	175. b
Alburnum in wood, what it is.	486. a
Al-beale, what it is.	497. e
Alca, of three sorts.	568. e
Ggg 2	Alca

The Table to the first Tome

Alica Exceptilla, Secundaaria, Crebraria. ib. k. where and how it is made. ibid.g
Almonds defcribed. 446.b
Almond trees having no greene leanes. 473.f. when to be planted. 522.k. how sweet Almonds are made bir- ter. 539.f

A . . .

Amal- *Amalobena*, a serpent. 259.f
Amelichum, what it is. 208.g
Ambre, where ingendered. 85.c
Ambrosia the bachelors, left dry land. 86.f.
Amia a kinde of fish. 39.e
Amma a kinde of fyle. 243.d
Ammoniacum a gummy, why so called. 375.e also kind thereof. 375.d. the best and the price. ibid. how it is sophis- ticated. ibid.
Amomus. 365.d
Anagium. 395.e also price. ibid. d. sophisticated. ibid.
Anonnum, why it encreaseth in aromatical ornament. 382.l
Anonnum, why it will not lye in Arabia. 478.l
Ansaca, what it is. 430.d
Anylum how it is made. 562.g. why so called. ibid. sundry sorts thereof. ibid.

A N

Anatavia. See Morphos.
Anadrache an herbe. 399.e
Androceides his sage counsellor Alexandr. the Great. 412.b
Androgini, who they be. 154.m
where Ladie Andromeda was expsed to a monster. 110.l
Angroloha, a goddesse. 59.c
Anthus, a bird neighing like an horsf. 293.a
Anigensis, a famous minstrell. 484.g
Antichboxes. 129.b
Antiball hit fullblood. 195.e
Antes, transformed into wolves. 207.c
Antibia fishes how they be caught. 268.m, 269.c
C. Antonius nicknamed Hydrida. 231.e
Anti, their common weale. 338.k. their forecast. ibid. how they live. ibid. their passage wearish gubbe stones. 328.l they only burie their dead. 328.a. they live not in Sicilia. they cast up gold in India. 329. a. where, as big as wolues. ibid. they deuoure men. 329.d. gold wold bid. ibid. they will not touch some kinde of liuer. 342.g. himselfe too. 547.g. againe about fishes. ibid.
Antrophophagi, what they are. 154.b
Antipades, whether there be any such. 31.b

A P

Apaches, who they be. 166.b
Apes most like to mankind. 231.e differ from monkeys. ib. crastive to beguile themselves. ibid. play at chesse or tables. ibid. dice. apes fondler their little ones. 231.f
Apes store up vitallus within their cheekes. 207.c
Aphepera what it is. 568.g
Apicula a fumous glutton. 296.g
Apis, the Egyptian bee use. 226.g. honoured among them. ibid. ferueth as an oracle. ibid.
Apice a tree. 399.d
Apulpha, she the worst sponger. 265.a
Appages, what minds. 21.c
Apocletis, what they be. 148.b
Apothecaries, craft wlio first practised. 288.R
Aprua, a kinde of fish. 265.d

Apparition of fixed starrer at set times. 587.d
Appula what it is. 556.f
Aples beare names of countries. 438.k. Camerica, Graeculabid. Gemella, wbo. 442.b. Serica, why so called. 442.b. why so called. ibid.
Aspid a serpent. 438.l. Mismela, Orbulana, Epitracula, Orthostastica, Spadonia, Metaxo, Panmicia, Pulmonata. ibid.
all Apples red on the Sun side. ibid.
Asper Dacian. 439.a. winter apples. 438.m
Aples of euard. 440.l. how to be kept. ibid.g
What Aples will flye, and what will not. ibid.
Apples bees bearing fruit twice a year. 474.m
quince Apples. 438.i. Apples Apple, Matias, Seilian, Mantio, Claudian, Scantian, Septian, Quertian, Petilian, ibid. Apples what fruit properly. 437.f
Apples have eternized the name of their first inventors & graffers. 438.i. Apples trees deuently rooted at Rome. 440.a. the best of all other trees. 540.d. diseased. ibid. how they be made fruitful. 545. Apples how kept from rotting. 574.d. Apples trees whenso be graffed. 518.z
Aprorum, a kind of Pomogranate. 398.b

A Q

Aquacetique, pine nuts confected. 436.g
Aquisila. 438.l
Aquiname described. 87.d

A R

Arabia, why so called Hapay. 365.f, 371.d
Araneum, an imperfection in wines and olives. 540.a
Ararare, what point in husbandry. 580.b
Araxis or *Oraix*, springs medicinalle. 568.b
Arbus tree defcribed, and the fruit. 447.d
Archery & arrowes have conquered halfe the world. 482.k
Canstest excellent archers. ibid.
Arcturus the star caule of tempests. 19.e
Arctura a strange lake. 137.b
Argalis a bird. 288.l
Argem, a fluyt what wood it was made. 399.b
Archeuthere, who excelld therein. 175.b
Arismaphis, with one eie in their fore-head. 154.b
Arissa, a graine all one with Olyra. 568.k. it makes sweet bread. ibid. hard to be cleayed. what kind of corn. 559.c
Artisan mingled boy with wine. 412.b
Artis mounted upon a dolphin back. 239.f
Artimenes the Median had a hairy hart. 340.k. flew three hundred Lacedemonians alone. ibid.
Artiste employed by K. Alexander the Great about the lining creatures. 200.m
Arries of men not all of a iustmesure. 549.d
Arriphe, people, their life and strange manners. 121.a
Armenacia. See Abicellis.
Armor beard, ruffling in heanen. 28.g
Armata, a man riding like four-footed beests. 147.e
Artemon, a man like to Antiochus King of Syria. 161.d
Arteries from the heart minister vitall blood to all parts. 340.b. how to observe in their pulse or beating. 345.b
Articulatio, a disorse proper to vints. 540.h
Artisans excellent. 156.l
Artologamus. 578.b
Artopha, what it is. 567.b
Artropitum panis. 566.m
Aruncus, what it is. 220.e

Arum

of Plinies Naturall History.

Afrasia or *Asara-bacca* described. 365.b
Africa, place where no windless was yielded. 36.b
Africæ, Arabia, why so called. 143.m
Afropedeus recontrer once that was carried forth as dead. 175.a
Aff-tree, where it is always green. 48.g. aff-tree described. 46.g.
A. commended by Homer. 48.f. the wood of the aff in India like to Citron. ibid. aff of two kinds. 46.f.
the leaves profitable to what beast. 46.g. the juice of the leaves medicinal. ib. the shadow scares serpents. ibid. the leaves drive away serpents. 46.h
Affa a kind of Rio. 57.d
Aff-the description thereof. 96.a great part thereof undrinkable by reason of cold. 120.m
Afia. See Oty.
Alphalathu, a fowls 37.g. the price. ibid.b
Alphallites, lake of Soudane. 101.f. no living creature therein. ibid.
Alpe trees turne to be Poplar. 54.c
Alpo the serpent hath her affection, and is a swift runner. 309.a. ditches betwixt her passion by the teeth. 337.e the nature of Alpi. 208.b
Altabine, the god of Cinamom plants. 307.a
Alpes of fuel burnt, much less by beyond the Pa. 507.a. ferre to crocod grownd. ibid. of the same nature that salt. 54.f.
Alpes of time-kits increase olive trees. 507.e
Alpes cannot away with cold. 223.b, when they first reach. 338.b their scalcif and leeches. 213.d. of great price. 223.a. their manner and time of generation. ib.b. the cause that they bring by breeding. ibid. the forest good meat. ibid. e. there other properties. ibid.c
Alpes of India with one borne. 351.b
Alpes wild. 20.g
Alpruin tree. See Citron tree.
Alpsme, people without a mouth. 156.i
Alpsromers their commendation. S.m.g.a. who most excellent. 17.d. labor three selves. 586.b
Alpsromie necessarie for agriculture. ibid.a
Altrologie art for first devised. 189.d
Altrolgers opinion touching the length of mans life. 181.f
Alturconet, what horses. 121.m
Alturiu Celeris, prodigious sender. 246.k

A T
Atabulus, an unlucky wind in Apulia. 575.b
Ateramm. 92.b
Atlas hill. 92.g. the strange tree; thereon growing. 92.b
Atlentes people, their strange manners. 96.i. they dream not in sleep. ibid.
Atlanticke seas come time the continent. 40.l
Atomis, what it is. 367.e

A V
Augurio and *Auspices* by birds, who first invented. 189.c honored in Rome. 211.f
Augustus Cesar, whether he were happy. 179.c. his fortunes compared. ibid. he defied Procneius to kill him. 179.e. sufficient diets and force nights. ibid. few saw his lineal descent onto the fourth degree. 162.l. his conduct discovered many feys. 52.k. superstitions in prefiguring that his left foot was put on dew before their light. 41
Aureye, people who sleeping only on the dinels beneath. 96.i

Aniola burnt quicke. 184. b. he reviveth in the summer. 1st fire. ibid.
Anelictus Calamus, a kind of reed. 483.b.e
A X
Axis, an Indian beast. 206.k

B A
Babylon territory exceeding fruitful. 576.i
Babilyn the cite described. 136.b
Babilyn, poettes, what they are. 228.i
Baccharis. 364.l
Bacchi, a kind of cordfish. 245.a
Bacchus, when borne, how. 128.e
Bacchus if men were a coronet or garland. 456.m
Baccherites, have some common tongues. 548.m
Bactrian, a plentiful country for corn. 581.a
Bactrian corne exceeding big. 561.
Baqou what he is. 387.b
Basilides of husbandry. 555.a
Bakers when they began in Rome. 557.b
Balaufia, See Pergranate flowers.
Bald-wannin, See Plagues.
Balena what fish. 235f. 236.l
Balena and *Pristis*, greatest fishes in Indiac ocean. 235.f
Balls of the cheeks forbidden by law to be scratched. 336.i
the fear of ballsfulness and modesty. 378.l
Balm trees of three sorts. 478.e
Balmes growth now where but in Iurie. 478.e
Balmes brought to Rome. 376.i. how they are prepared and ordered. ibid. k. their description. ibid.
Balmes trees (sauced) by the Romans at the destruction of Jerusalem. 376.k
Balm fruit or grain. 377.e
Balm grains how sophisticated. 377.e
Balm bark. ibid.
Balm liquor most precious. 376.i. Balm liquor how sophisticated, and how discovered. 377.e. Balm liquor how it is drawn. 376.m. Balm liquor which is best. 377.c
Eufalandre Cassia. 377.e
Bands or bindings in husbandry, of what trees and places they are to be made. 445.b
Barbate, a kind of hawk or eagle. 272.k
Barbers first entertained in Rome. 190.m
Barble fishes. 246. b. divers description and nature. ibid. why called in Latine, Matili. 246.i
Barks of trees in their hide. 486.b
the barkes moisture of trees is their blood. 486.g
Barks of trees how to be used. 541.e
Barking of trees. 487.d
Barks of fuscary trees, how employed. 461.d
Barks of trees different. 477.a
Barley attender corne. 562.l. how to be cut down, and at what time. 558.k
Barley how it is sowed and sown. 503.e
Barley where it groweth twice a year. 574.g
Barley death degenerate into wheat 502.b
Barley a moist ancient meat. 561.c. condemned. 562.b
Barley used in Physicks, and to feed cattle. 562.i
Barley different in ear and otherwise. 562.i
Barnes, how and where to be built.

The Table to the first Tome

of Plinius Natural History:

Barraine beasts loose fat. 344.k
Barvainsse of earth, how it is found. 504.i
the Baskiss. 196.l. his properties. ibid. his venom. 207.a
killed by the wasail. ibid.
Battails first fought. 189.a. Battaille at Sibaris. 197.d. in
two battails in one day, both on sea and land. Nume-
mus deflected the Persian. 140.b
a Bat or winged mouse only amongst the fables. haliteth. 337.d. Bats bring forth young. 301.f. the only bird
that smelt with. 302.g
Bay trees: see Lawrell. Bay leaves purge the gorge of birds. 211.c.
B D
Baldium. 363.m. sophisticated. 363.a. See Brochos. the
triall. 363.b. the price. ibid.
B E
Beani principal of all pulse. 568.l. beane meale. ibid. beave
stalks in Egypt full of prickles. 569.d. beanes how to
be prepared before they are set or sown. 575.d. beanes and
vetches sown under furrow. 580.g. beanes yielding
great increase. 565.b. beanes forbidden by Tythagoras
to be eaten. 569.a. the arch Flamin abstineth from
beanes. wherefore. 569.b. beanes used in porrales. 569.b
when they are to be set or sown. ibid. b. kidney beanes.
570.l. beanes sowing doth enrich a ground. 569.c. beanes
growing of their own accord. ibid.d.
Beares: opely have no marrow at all. 544.m. how they en-
gender. 302.l. beares have the tenderest sculls. 332.l.
beares cure themselves with pissmires. 211.c. beares. their
manner of generation. 215.f. their young imperfect.
316.g. they grow exceeding fat. ibid. b. their fat medi-
cinable. ibid. they seek to the herbe Wake-robin. ibid. i.
they are subiect to dimisse of sight. ibid. i. weak in the
head. ibid. k. their braine venomous. ibid. i. bunted in the
flow-pale at Rome. ibid. l.
Beasts accounted for gods. 2.e. beasts of India very bigge.
155.b. beasts engender in the inhabitable places of the
earth, and the reason. 11.b. beasts that drinke lastly,
bleed most at their death. 346.b. beasts bring forth young
according as they are whole hooved or cloven. 303.a.
beasts, which bring forth their young perfect, which imper-
fect. ibid. beasts will not touch where beares have brea-
ted. 256.a. beasts faine. fowled commonly rest on their
right side. 350.k. beasts by whom first killed. 190.k.
Beech wood highly esteemed. 486.m. a beech groue finely
kept and consecrate to Diane. 496.g.
Bees: their order and nature. 312.i. when they go abroad.
ibid. i. their swift worke. ibid. their care of their kinde.
ibid. their regard of their worke. 313.a. their munition.
ibid. b. their greatest harmes amongst the bees.
ibid. d. they hurt no wine. ibid. they wander not from
their hives about festive parces. ibid. they send out flies.
ibid. e. how they watch. ibid. their foresight. 314.g.
how they lade themselves. ibid. b. their severall offices.
ibid. bees of two sorts in one hive. ibid. k. they goe with
the wind. ibid. l. their pollicie against the wind. ibid.
they punish slothfulness. ibid. their cleanliness. ibid.
their silence tunc at night. their hatred to the drone.
315.b. their buildings for their Captaines. ibid. c. how
they are driven away. 316.k. bees, when they are
nourished with sleape only. 317.e. they abhor a theefe.
ibid. their fidelitie to their king. 319.g. bees settled on

Plate his mouth. ibid. d. bees in the campe of Generall
Drausin. ibid. why sometimes they fight. 320.g. bees
after they have stung, be no better than drones. ibid. k.
drone bees are biggest. 315.a. they take up least lod-
ging. ibid. Of bees worke, three foundations. 313.b.
whom they will sting. 320.k. bees are often sick.
320.m. bees sorrow for their dead king. 321.a. bees
performe a sollemnitie of exercise. ibid. e. they live not
above seven yeares. ibid. how they are prepared. 322.g.
bees will not touch a dead carkeffe. ibid. i. bees only
make their own meate. 328.i.
Beetles how no thing. 326.k. they are remedies for children.
ibid. they are delighted in refuse. 355.e.
Beetlephon his letters in tables. 394.d.
of the Belly. 342.k.
Bellies that be fattest. cause grossefesse of capacities. 142.f.
Bellus, inventor of Astronomie. 136.b.
Benor Behen. 374.f. a use onely for sweet ointments. 46.
Benacus a lake in Italy. 248.g.
Bentia river. 51.f.
Bervic different. 34.f.
Beribicus Island sometimes joined to Bithinia. 40.i.
B I
Bills given to birds in stead of moneths. and their age.
336.l.m.
Bison a kinde of wine medicinal. 41.f.
Bitters gunde themselves. 212.m. where they breed, their
nature. 213.a.
Birch tree described, and how it is employed. 418.g.
Birds: a. a. a. 281.b.
Birds: how it was made. 497.a.
Birds: young when they ordinarily doe breed. 287.c. birds
very few have garnes in the liners. 341.f. birds hatched
with their tails forward. 272.e. birds having neither
veins nor arteries. 345.c. birds with hooked talons
prey on. 278.k. birds how they translate their egges
from place to place having no hooked talons. 289.a.
birds differ: from another in sight and age. 291.f.
birds how they drinke. 295.c. birds of diverse fashions.
ibid. birds flying, alter their notes. 285.e. new birds.
293.k. birds there be none without feet. 351.d. birds
la geage how to be understood. 296.l. birds of prey
least full. 297.f. birds that lay most. ibid. birds
how they engender. 298.g. birds how they differ
in laying and covering. ibid. 300.k. birds small be
fruitful. 301.d. black birds counterfeiting mans speech.
295.d. black birds are gone for a time. 284.g. blacke-
bird change both law and tune. ibid.
Birds: strange for number, for defects and superfluitie.
163.b.
Birds of childrens conceivance. 198.k.
Birds of four months live: also at the cleanness. A child
legitimate borne within thirteene months, after the sup-
posed father deceased. 159.a.
Bismont or B. n. of Germanie. 199.f.
Bissexle yeare. 585.b.
Bitches differ in their litters. 303.c. bitches engender with
Tigres. 219.e. with volucres. how long they goe with
young. 220.b. their whelpes blind. ibid. b.
Bichys, Women mitchys, who have a double fight in their
eye. 155.a.
Biting

Biting if a mad dog cured by Eglantine. 220.k.
Bismum comparable to the water of Syx. 47.d.
Bismum a strange slime. 163.e.
B L
Bladder where it is placed. 343.f. bladder not true. 367.c.
bladder onely there found, where is lung and blond.
343.f. of the bladder in man and beast. 343.f. bladder
being wounded cannot be cured. 344.g.
Blinded corne. 574.f.
Blast how they are occasioned. 574.l.m. blast: suddaine
their names and nature. 24.k.
Blattie flies are nourished in darkness. 326.m.
Blazing starres. See comets. Volusius Saturnus how bee
v. c. d. bleed. 346.b.
Blossoming time of trees how long it lasteth. 473.b.
Blond apples. 438.l. blond. nined. See Raine. blond fat and
grosse breedeth anger and cholere. 345.f. of blond a dis-
cense. ibid. blond of males blacker than of females. ib.
blond containeth a great prison and treasure of life.
346.g. it is without fence and feeling. ibid. blond that is
thinnest, cansteth strenght in creatures. ibid. blond that
is thinnest maketh men wise. ibid. where it is but little
maketh men fowlesfull. ibid. blond of bulls fowles con-
gath. ibid. it is posson to be drunke. ibid. blond of asses maketh
fat and grosse. ibid. blond of man thinnest a best. ibid.
blond is but little in those that be fat. ibid. blond cast up
by many at the mouth. ibid. blond quickest encrease
of all parts of the body. ibid. blond changing with anger
and furie. ibid.
in blossoming time raine hurtfull to corne. 574.k.
B O
Boe, mightie great serpents. 199.c. why so called. 16.
Bodies of men and women different beside the distinct parts
of sex. 165.e.
Boats of one entire piece of wood. 490.g.
Botica, focalled of Battis. 51.d.
Boasts of India. 224.k. bred by king Pyrrhus. ibid. l.
their manner of engendering and breeding. ibid. of sce-
ding. 223.a. when they are to be drunke and yoked.
ibid. b. sufficient for sacrifice. ibid. c. knowne to speake
ibid.
Botides flaming lances in the shie. 17.b.
Bombyces, reeds or canes. 454.g.
Bombycina, garments of silke. 322.m.
Bombytis the greater kinde of Bombyces. 322.l.
Bombyx, a fine breeding in Assyria. ibid. their hard needles.
ibid. how they engender. ibid.
of Boues. 345.a.
Bonafus, what manner of beast, and his properties. 200.b.
Bondwoman brought forth a serpent. 157.f.
Bones of Asses found in Iruil. 345.a. bones of some men
without marrow. 165.f. bones: sometime found in the
hearts of beasts. 340.i.
Bore, his owne Physitian. 210.m. bore served whole unto
the bond. 230.l.
Boreas wind. 23.a.
Borysthenes river. 154.i.
Bozphori the Freighters (Thracians and Cimmericians) 117.f.
why so called. 115.a. Bozphori, sometime land. 40.l.
Botanofus, what it is. 577.a.
Boutlers and Ringers. 567.c.
Box tree wood commended in the root most. 467.c. box tree

serueth for arbours. ibid. of box tree three kinde. ibid. l.
where it delighteth to grow. ibid. d. the waste of the
stone and wood. ibid. box tree beards varietie of
fruits. 476.g.
B R
Brake, see Ferne. ibid.
Braine of a Datetree. 386.m.
Brambles of three sorts. 485.c. with a blacke berry, with
a rose, and a red berry. ibid. the bramble Idan, which
is Rappin. ibid.
Brauce, what corne. 559.d.
people Branded with hot yrons. 116.b.
Brasse, where first found. 80.m. brasse-founder: the first.
188.k. brasse forges and furnaces, who demised. ibid. k.
Brawne of wilde bores in great request. 230.l.
Brawne the coldest part of mans body. 332.m. they are
without blood or veins. ibid. by seething they waxe
hard. 333.a. without flesch, blond, filth or ordure. ibid.
braines: the fort and castle of the senses. ibid. braines
and eier die first. 340.g. of braines and the braine-pain.
332.l.m.
Bread of Iudary sorts, according to the meat eaten there-
with. 566.l. bread: Parthick or water-bread. 567.a.
Breadth of the carth. 48.f.
Bread of Lions singeth. 255.a. bread of beares pebble
and deadly. ibid. bread of men by what meanes it is in-
fected. ibid. b. bread of man shall returne into the aspe.
ibid. it is corrupted by much drinking of wine. ibid. bread
of Elephants, what vertue it hath. 355.e.
Breeding time implants. 471.e.
of the Brest in man and beast. 343.e.f.
Brest apples. 438.l.
Bricks and tile who demised. 188.k.
Bricks and tiles ranged. See Raine
Brimstone mine. 568.i.
Brim of the eye: ibid. being wounded, cannot be drawne toge-
ther. 336.g.
Brittanie, an Island reconquid. 86.k.
Brocci, who they were. 336.l.
Brocci what it is. 363.a.
Brood-bes starre. Virgilica. 588.b.
setting of brood-bes. 589.f.
Broome, where and when to be set. 523.c.
Brusum in maple. 467.a.
Bruta, what tree. 371.a.
Brutum a promontory. 51.b.
Bryon (Aromaticum) what it is. 375.d.
Bryon a weed in the sea. 401.e.
B V
Bubety, what plaies they are. 580.k.
Bubulcus, surname to the house of Iunij, whereupon. 16.b.
Bucephalus the citie. 221.a.
Bucephalus King Alexanders horse. 220.l. his description
and are qualities. 16.m.
Bucklers of what wood they be made. 590.k.
Buller horse of eight gallons. 331.f. buller horse how it is
used. 332.g.
Building upon land in the country. 554.e.d.
Ball baiting. 225.a.
Buying and selling woodwits. 187.a.
Bulls wild untamable. 206.g.
Bulls. 437.a.
Bumassi,

The Table to the first Tome

Bumefli grapes.	405.a	Camelopardalis, what kinde of beaſts.	205.d
Bumefia, a kinde of Aſh-tree.	405.f	Campaine in Italy a moſt fruitful country.	567.e.f
Bunches in wood.	487.d	Caneel. See Caſia.	
Bura citie.	41.a	Caneſ. See Reed.	
Burning and burying of dead-bodies after diuerſe ſorts.	186.l.m.	Canes of India ſerue betwene joints, for boats	482.m
Butter bath the vertue and properties of oyle.	340.k	Canes of diuerſe ſorts.	483.b
Butterfly how it is bred.	329.e	Canes and reeds how they grow.	ibid.a
Butterflies no good ſigne of the Spring.	586.g	Canarium what ſacrifice.	551.b
Buteo. See Tricorches.		Canacum.	374.b
Buteo gave the name to the houſe of Fabij in Rome.	274.k	Canetia, the workemen that made the ſtatue of Diana at Epheſus.	491.c
Buzardi good meat.	296.k	Canopus the name of a ſtarre, where and in what manner it appeareth, and where not.	34.d
Buzardi. See Buteo.		Canopus, a goodly ſtarre ſeen in Tropicane about the pole	ibid.
B Y			
Byzantium territory of Affricke.	505.e. moſt fruitful	Antarctick.	120.i
ibid.		Canterum in a Vineyard, what it is.	528.i.k
Byzia a caſtle of Thracian king, hated of Swallowes, and why.	278.l	Cantharethus in Thrace. 327.a. why ſo called.	ibid.
C A			
Cadyri in an Oke, what it is.	400.l. the uſe and manner thereof.	ibid.	
Cadyri, what it is.	406.i	Cantharethus, a kinde of red marle.	506.b
Cadmus, where borne.	108.g. firſt found out for to write	Capparis, the plant of the fruit capres.	400.i
prof.	ibid.	Cappſication to be praiſed after raine.	546.b
Cafae wind.	23.a	Cappſication what it is.	444.k
Cacina his praſiſe by Swallowes.	283.a	Cappſicum what it is.	ibid.b
Cafari and Caſones, why ſo called.	160.i. ſuch community	Cappadocians how they took their names.	116.b
fortunate.	ibid.	Captimulg, what birds.	292.i
Ceſar his breſt-plate made of Enghliſh pearle.	256.k	Carabum promontory.	49.a
Ceſar Dictator his liberall inuices.	440.b	Carbunculus, burning carb.	503.b
Ceſar ripe out of his mothers belly.	160.i	Carbunculus in corne, what it is.	598.i
Ceſar his quickneſſe of ſpirit.	168.k	Cardamomum ſoure kinds.	365.e
Ceſar repented him of his clemencie.	ibid.l	Cardiaca, diſeaſe of the heart.	341.a
Ceſar his fidelitie concerning writing.	168.m	Cardo, what it is.	598.i
Ceſari Thronos, a ſtarre.	34.f	Carduus, what manner of trees.	466.m
Ceſaria, a citie in Mauritania.	53.d	Carduus, what it is.	476.g
Ceſus Hirinus invented ſteues for Lampries in Aſia.	267.c	Carpeotum.	367.d
Ceſus Marius firſt advanced the Eagle in the Romane enſigne.	273.c	Caryoa a date, why ſo called, and the wine thereof.	387.d
Ceſus Caligula the Emperour his ſaying of Surrentine wines.	414.b	Caryopunt, what drug.	397.e. the worth.
Ceſa Cecilia. Looke Tanagull.		ibid.	
Calpe, a Promontory.	51.b	Caryota, an extract, what kinde of fruit.	447.b
Calpe a mountaine.	ibid.e	Caryota and the tooles, whoſe inuention.	188.l
Calcuſe, a kinde of Purple.	259.b	Caryota territory.	452.m
Calidula Iſland.	316.b	Carthagen, what it is.	370.g
Calamus Aromaticus.	375.a	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calculation of the yeare by Ceſar the Author followeth.	586.l.	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calamaries, fiſhes.	244.b	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calamith firſt uſed by Lizardis.	210.l	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calceſe, a kinde of Purple.	259.b	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calidula Iſland.	316.b	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calamus Aromaticus.	375.a	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calculation of the yeare by Ceſar the Author followeth.	586.l.	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calamaries, fiſhes.	244.b	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calamith firſt uſed by Lizardis.	210.l	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calceſe, a kinde of Purple.	259.b	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calidula Iſland.	316.b	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calamus Aromaticus.	375.a	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.
Calculation of the yeare by Ceſar the Author followeth.	586.l.	Caſia, the ſweet ſpice where it groweth.	373.e. the plant deſcrib.

of Plinies Natural Hiſtory.

Catorchites, what kinde of Dater.	421.a	Cheefe of the beſt ſort made in Dalmatia.	ibid.l
Catoblephus, what kinde of beaſt.	226.l	Cheefe excellent at Patuſum.	ibid.m
Cati and Corculi, why ſo called.	173.b	Cheefe of diuerſe ſorts.	349.a
Cauſe of vomit.	342.l	Cheefe a diſcourſe.	348.l
Cannians naturally ſubject to the ſtreching of the ſpleene.	331.k	Cheefe a tree bearing armes of a mighty beſteſ.	478.m
Cannus preſaged it fortune to M. Craſſus.	445.a	Cheerrie trees when to be graſted.	523.b
Caucas, a people without trees, their habitation and country deſcribed.	455.a.b	Cheerries of a middle kind between berries & grains.	446.g
Caucas, a kinde of Sander.	218.i	Cheerrie trees brought into Italy. ibid.b. they will not grow in Egypt.	ibid.
C B			
Cee Iſland.		Cheerries, Apronian, Alban, Cacialan, Italian, Drucean, Pſimian, of Portingall, Laurean, Macedonian.	448.b
Cedar gum.	414	Cheerries how they be kept.	ibid.i
Cedars, which be beſt.	424.g	Cheſnuts rather not be called Maſt than nuts.	446.d
Cedar oyle.	489.a	Cheſnuts deſcribed, ibid. their kernels ground into meale for bread. ibid. how to be eaten.	ibid.
Cedar for Maſts.	490.g	Cheſnuts called Sardanian nuts, and why.	ibid. named
Cedar of diuerſe kinde.	388.l.m	ibid.	ibid.ia
Cedrelus, 389.a. a tree the timber thereof everlaſting.	ibid	Cheſnuts, Tarentine, Balanitis.	ibid.
Cedron, what it is.	434.ki	Cheſnuts, Salarian, Corellian, Meteran, Cockina.	447.a
Celendine recanted by Swallowes.	210.l	Cheſnuts which be beſt.	ibid.
Celtium, a kinde of Tortoiſe.	241.e	Changhi fiſh momy.	285.e
Celine. See Lotoſe.		Chine-bone. 339.e. the uſe of it.	ibid.
Celtium, what it is.	565.b	Chin, man omity hath.	337.a
Celtium, what it is.	205.e	Children how they be hatched.	298.l
Cephelus a beaſt.		Children begotten and borne, at what age of the parents.	165.a.b
Cephelus or Sereus, young drons Bees, and how they be fed.	318.i	Children not alwaies anſwerable to their parents in every reſpect.	160.k
Cerata, a kinde of Comer.	15.e	Children twelue diſtinct caſt away at one ſlip from a woman.	160.k
Ceruus a Maſt-tree. 458.m. the maſt thereof.	ibid.	Children of the Dake carry the marke of their parents in the fourth generation, 161. a child's change of age.	158.b
Ceruas, what it is.	598.i	Children breed their teeth in the ſeuenth month of their age.	164.b
Ceraſta ſerpens. 208.g. Ceraſta ſerpens haue hornes of fiſh.	331	Children about three at a birth, is monſtrous.	157.d
C H			
Chapeneſe of all wilds in Rome. 551. d. the cauſe thereof.	ibid.f	A Child returned into the mothers wombe.	158.g
Chalcedon, why called the citie of the blind.	114.g	Chimera, a hill in Phocia, burning both night and day.	47.b
Chamedaphne.	452.m	blacke Cholter cauſe of fury.	341. e. caſt up by vomit
Chamecerast.	448.b	deadly.	ibid.
Chameleon lights are very big.	341.a	Choromanda, what people.	156.h
Chameleon vult their whole eies.	351.f	Cibis his ſaying counted Oracles. 173.e. how he died and was honoured.	ibid.d
Chamelas.	398.k	Chronicles who firſt deſcried.	189.f
Chamerope, what they be.	387.a	Chryomela, a kinde of Quince.	436.b
Chamamyſine.	424.b	Chydai, ceruaine Dates.	388.g
Chani fiſhes without males.	244.m	C I	
Characius, a kinde of reedor caue.	483.e	Cich-peaſe and the nature thereof, how to be ſonne.	569.f
Charitoblephus, a ſhorb within the ſea.	402.k	570.g. ſundry kinds of cicbes.	370.g
Charcole of Oke-wood.	459.c	Cich-peaſe how coddid.	ibid.
Charcole of young tree beſt.	ibid.	M.T. Cicero the elder his praife.	172.m
Charcole how it is made.	459.d	M. Cicero the younger challenged for a drunkard.	428.g
Charcole worſt made of the Oke Hatiphleas.	ibid.	Ciceruina.	370.g
Charme to drine away baile.	547.f	Cicero his commendation.	ibid.
Charmidas his memory.	168.g	Cici, Looke Ricinus.	211.d
Chasma what it is.	17.b	Cicubie, medicinale to diuerſe birds.	288.m
Chasitrie rare examples.	173.f	Cicilia, the deſcription thereof.	374.f.g
Chati or Chaſti upon diuerſe trees.	459.d	Cinnamologus a bird.	208.m
Chaus a beaſt.	205.e	Cinnamon.	374.f.g
Chelone, a ſhallowe.	338.l	Cinnamon groweth in Aethiopia. 372. i. exchanged for what commoditie.	374.k
Chelone, See Ringenders.	343.b	Cinnamon plant deſcribed.	ibid.
Chenocetes.	281.b	ibid.	ibid.
Cheſe a ſhewme to barbarous nations.	348.k	ibid.	ibid.

The Table to the first Tome

Cinnamon the best.	373.a.b	Coggyria a tree the proprietie of it.	399.c
Cinnamon of two kinds.	ibid.b	Come stamped with the image of sheepe, kine, and oxen.	405.a
Cinnamon the price.	ibid.	550.l.	
Cinnamon root set into the ground in the temple of Augustus.	ibid.c	Colaris, a sort of cad-fish.	245.e
Cinnamon earland dedicated by Orisipian.	373.d	Colan, a gut so called. 343. a. in it is the point of the col- licke.	ibid.
Cinnamon forb will not prosper in Syria.	478.l	Colofratia, a disease that cometh of Bee-stings.	348.b
Circos, a kind of Hawke.	274.k	Columbinum Cicor.	570.g
Circos, Islands (by the setting of the sea) joyned to the con- tinent.	39.e	Colour of the king of Bees.	318.i
Circus, the name of a wind.	23.b	Colours: in the eye, why they are.	335.b
Circumference of the world.	49.e	Colymbades, what Olives.	432.g
Citron tree, 359. c. the fruit a counterpoison.	ibid.	Comagenuum, precious composition.	381
Citron tree fruitfull. 359. d. it is likest not to be in strange countries.	ibid.	Comata, parts of France.	332.e
pome. Citron kernils good against a stinking breath.	ibid.e	Comarum, what it is.	447.e
Citron tree.	395.c	Comet: white with silver haire. 15. f. faggie and like a mane: when such a one appeared, and the continuance of such when they doe appeare.	16.g
Citron tables.	ibid.	Comets what they doe fore-taken.	ibid.g
Citron tree beareth not but in Assyria.	478.k	Comets neuer lightly seen in the West part of the beaue.	ibid.i
Cincke coronets fix, given to Manlius Capitolinus.	ibid.	16. b. were worshipped for gods.	ibid.i
Cincke coronets, 456. b. compared with all others.	ibid.	Combat betweene Bulls and Elephants.	195.f
Cincke coronets first given to Sicius Dentatus, 454. e.	ibid.	Combat betweene an Elephant and a Roman.	ibid.e
Cincke coronet or garland, whereof it was first made, 457. b.	ibid.	Commodities in a ferme, which be most gainefull.	553. e
lames appertaining to Cincke coronets.	ibid.d	Compositi, first foundation of Bees worke.	343.g
Cincke coronet at Rome comparable to the best among the Greekes.	ibid.c	Conception, at what time.	164.h
C L		fignet of Conception, 159. a. of a boy and a girl, still.	ibid.d
Clamato via, a bird.	277.c	Conception double.	160.d
Clapping of hands: rejoice Bees.	231.e	Conchylium, a shell-fish.	246.a
of Claws a discomf.	351.c	Conchylium, what fishes.	128.b
Cleopatrahers lausib expence.	257.a	Conger, a fish.	246.b
Q. Cleopatrahers rich pearls.	ibid.	Conformation what it was.	1550.i
Cleopatra found out the signes in the Zodiacke.	5.e	Conies kinde every month, 302. d. they admit supersta- tion.	ibid.
Clerus a bitter thing found in hony combs.	318.l	Conies exceeding fruitfull. 232. b. why they be called in Latine Cucurbit.	ibid.i
Clema herieck years.	182.b	Conies haire employed for cloth.	ibid.k
Cleodas of Iland.	579.e	Conies admit superstation.	ibid.
Cleodem the son of Asope, his expence and riot in pearls.	257. d.	Conies under mine a towne.	212.g
Clog: hanging from Asope trees all but the Larch.	463.	Conies with double liuers at Grenada in Spaine.	342.g
Cloth of gold when it was invented.	226.i	Cokes in price.	246.g
Cloth: of dures colours: women.	228.i	Coupaus, a dwarf.	165.c
Cloids, their shapes.	29.c	Conuolutus, a worme that breedeth in a Vine.	547.b
Cloanes, a fice.	362.b	how it is remedied.	ibid.
Cloina or Cluina, a bird.	277.c	Copantus, a hill in Baithiana, burning by night.	47.e
Clopa, a fish, killed another called Attalus.	243.a	Coracimus, the best fish in Aegypt.	246.m
C N		Coracini, fishes.	245. b
Cneffon, Cneeros.	398.k	Corallum his grafting.	520.l
C O		Cord, what they be.	226.l
Cocks go about with chickens when the hen is dead, 299. e.	ibid.	Cordus, his recovery from death.	184.l
Cocks watchfull and desirous of glory, 279. c. Astronomers.	ibid.	Cordyle, fishes, a kinde of Tunies.	243.c
ibid. Sentinels, id. they lose sovereignty and win it by fight.	ibid.c.d	Cordum, what kinde of boy.	596.g
Cokes dreadfull to the Lion.	ibid.e	Cork tree. 461. e. the bark thereof, ibid. the offe it is put into.	ibid.
Cokes of kinde fofsters.	ibid.	Cornet, who they be.	166.i
Cokes beare great sway in Antiques.	279.f	Cornell tree, how it beareth. 473. c. the wood how to be employed.	490.b
Cokes carved and made capons.	280.b	Cornell berries preferred.	546.d
Coke fighting.	ibid.	Corn offered to the gods in Nama his time.	447.e
a Coke fiske.	ibid.	Corn parched for sacrifice.	ibid.e
Cocobus. See Vine Basilica.		Corn sowing, grinding, and breading who devised.	187.e
Cottara, what it was.	412.k	Corn sowing, grinding, and breading who devised.	550.b
Cochites, who they were.	335.b	Corn game names to families in Rome.	ibid.
Cod-fish.	245.b		

of Plinies Natural History

Corne given as a reward to worthy warriors.	ibid.	tries.	224.f
Corne cheap at Rome.	551.b	Creatures hurtfull to strangers and none else.	ibid.f
Corne divided into two generall heads, Fourment and Puffe.	557.c	Creatures without blond haire no liues.	341.d
Corne of all sorts when it cometh after it is sowne.	ibid.e	C. Crispinus Hilarium his traine of children and iussu li- neall descent lining.	162.m
Corne how it beareth head and caries seed.	558.g	Cricobulus healed king Philip his eie. 174. m. his re- ward.	ibid.
Corne spiked what leafe it beareth.	ibid.m	Crocotile of the river. 337. a. moneth the upper saw-bird.	302.b
Corne spiked bloneth at once.	559.a	Crocotiles male and female fit by turnes.	346.l
Corne differing in ripening.	ibid.a.b	Crocotiles wile and industrious.	346.l
Corne differing in flake and care.	ibid.	Crocotiles their description. 208. m. they haue both land and water.	209.a
Corne how it is threshed and cleafed.	ibid.b.c	Crocote, what kinde of beasts and their nature.	206.g
Corn: how it differeth in weight.	ibid.c.d	Cromes, a kinde of fish.	245.a
bread-Corne that degenerate into Oats.	574.g	Crotalia, what pearls.	256.g
Corne in the field how to be preferred and kept from field- mice.	576.g	Crown, a fabled bird. 276. b. foer feedeth her young being fledge.	ibid.i
Corne how to be sowne respestiue to the soile.	ibid.k	a Crown taught to speake.	294.k
Corne growing upon trees.	577.b	C T	
Corne how to be laid up for store. 603. a. b. what corne will kepe best. ibid. d. e. how corne may be kept sweet and good long. ibid. e. cutting of corne after diuers sorts.	603.b	Ctesias of Goidas.	47.b
Cornus: a Murall. 456. i. Vallare. ibid. Nuaile. ibid.	ibid.	Ctesiphon framm Diannas temple at Ephesus.	175.b
Refrate.	ibid.k	C	
Cornets how they come first.	456.l	Cuckoo reckend a Hawke 275. b. his time of appearance.	ibid.
Cornemanda, a fawce sort of people. 156. g. without speech.	ibid.	Cuckooes: lay in other birds nests, and why.	275.a
ibid. toothed like dogs.	ibid.	they deuore the young birds of their source.	275.a
Cornus wind.	221.d	young Cuckooes fat and delicate meat.	ibid.
Coot Island.	323.a	Cuckoo checketh the idle husband that is behind hand with his worke.	593.b
Cosci, wormes bred in oles. 539. c. they be deintie meat.	ibid.	Cuculus, a tree.	300.k
Costus a spice. 384. b. the kinde and price thereof.	ibid.	Cuis wine, Melampithium, Fishium.	416. f
Cottine, what tree.	448.b	Cutes of sundry sorts.	416. a 417. a
Cotton trees. See Gosampine.		Culeus, the biggest measure of liquors that was among the Romans.	606.g
Cotton trees in Aethyopia.	395.a	Countries, the variouse and diuers disposition thereof.	366.m
C R		Curtis towne.	402.m
Crab-fishes their nature.	252.k.l	Curvus, a noble knight of Rome.	443.f
Crab-apples.	428.m	Cusculum, what it is.	461.a
Crab-trees bearing twice a yeare.	474.m	Cutting of corne after diuers sorts.	602.b
Crabs onely footed among fishes.	351.l	Cute fish, 256. g. their nature.	250.g
Crassus his sonnes vnimely speech. 353. e. it was prodig- ous.	ibid.	C Y	
Crane how they flic.	281.c	Cybia, quarters of Pefaurides.	242.d
Crane tamed, very playfull.	ibid.f	Cyce, certaine Dates.	388.g
Crane a diuine dish.	282.g	Cylopes, monsters of men.	154.g
Crapiula what it is.	464.k	Cydrum, what bird.	283.a
Crapiula, what mixture it is, and what effects it worketh.	424.b	Cyneas his merrie scoffe at a Vine that bare hard wines.	405. b his memorie.
Crassus Agellinus was neuer knowne to laugh all his life time.	166.b	Cyn trees.	383.f
Crassinum, a kinde of Maple.	463.m	Cymbatou.	401.a
Crater, a furnace, a bullion burning furnace, and vnfur- nate to the Apollonites.	47.d	Cynofura, what kinde of adde egge.	301.e
Craterus Monoceros, a most excellent Hunter, or Hawker.	291.k	Cynoides, water-serpens.	243.b
Creatures that lie hidden in the earth, at times haue no blond at all.	346.b	Cynocphali, a kinde of Apes or Monkeys.	332.g
Creatures are not all haire that bring forth quick young.	ibid.m	Cypresse tree will not be dunged nor watered.	544.e
Creatines none of them haue an adde foot.	351.e	it is worke for good Physicke.	ibid.
Creatines which onely be round.	351.e	Cypresse trees beare ordinarily thrice a yeare.	478.a
Creatines whole bodied, their legs grow not in length, but what creatures will not live nor breed within some coun- tries.	ibid.	Cypresse tree described as large, and why.	ibid.
		479. e. consecrated to Plutus, and why.	479.b
		Cypresse trees good to make wines and borders.	ibid.e
		Cypresse woods a good salt in the Lord.	ibid.
		Cypresse trees lone the fife Candy fish.	491.d
		Cypresse wood faire and shining.	424.e
		Cypresse tree Rofin.	Cypre

of Plinies Naturall History:

Diseases *frange incident to men and women*, 182.1, as
strangely cured, 183.2. *wine lived long without disease*,
ibid. 8.
 Diseases of *fandry forts*, *ibid.* c.
 Diseases *illust hunt trees*, 558.m
 Distances in *plaining bow to be offered*, 514.d
 D O
 Dogs *shining beames in the skin*, 17.6.
 Dogs *laurel and faithful to their masters*, 218.1.
 Dogs *rejoice a king to be a crowne againe*, 218.m. *their af-*
fection to their master, 219.a.
 Dogs *employe in warre*, 218.m. *their avarities*, 219.c.
 one Dog *overcometh a Lion and an Elephant*, 220.6.
 Dogs *mad*, 220.1, *how they be preferred from madneſſe*, *ibid.*
 a Dog *ſpeaketh*, 220.6.
 Dogs *come into Hercules temple in the beaſt-market*
at Rome, 285.d.
 Dogs *will not live in the Iſle of Sygarot*, 141.e.
 Dogs *ſtarke his power*, 19.f.
 Dogs *ſtarke power fall on the ſea*, 245.e.
 Dogs *ſtarke of great effect and precious*, 597.d. *highly ho-*
noured, *ibid.*
 Dolphins *their nature*, 238.8.
 Dolphins *juſtice of all ſhies and creatures*, 238.m. *juſtier*
than an arrow out of a bow, *ibid.* *ſort themſelves like*
man and wiſe, 238.1.
 Dolphins *being by aſſe men and muſicke*, *ibid.* *l. they love*
marking, *dures* *e* *examples thereof*, 238.m.
 Dolphins *know the name Sino*, *ibid.* *they help ſelves to catch*
fiſh, 240.1, *they have a certaine commonwealth*, *ibid.*
 Dolphins *have no eyes*, 333.e.
 Dolphins *enemies to Crocodiles*, 209.e.
 Dogs *ice kept tame*, 233.b. *they ſleepe all winter*, *ibid.*
kinde to their ſires, *ibid.*
 Dorrick *tune*, 14.d.
 Doves *Domestick*, 290.g. *ben-Doves mecke*, *ibid.* b. *the*
cocke jealous, *ibid.* *kinde to their miſters*, *ibid.* *how they*
drinke, *ibid.*
 Ducks *Doves live long*, 200.f. *their tune*, *ibid.*
 Doves *winke with both their eyes*, *ibid.*
 ben-Doves *glorious*, 290. m. *taken in their pride by the*
ſawle, 291.1, *they love the Keſtrel and Starrel*, and
wherefore, *ibid.* *dues employe as poſts and couriers*
betweene, *ibid.* *how they be kept to their owne deu-*
otie, *ibid.* *dues and pigeons of great price*, 291.d.
 Doves *how they flye*, and *they in a yeare*, 295.1, *ben-*
dues hatch a cocke and a hen, 300.f. *ben-dues*
reade out another for viant of a cocke,
ibid.
 Dracox *a kinde of freer*, 485.e. c.
 Dragg *how it is made*, 560
 D R
 ſee Dragon, 249.d.
 Dragons *in wines what they be*, 536.b.
 Dragons *fight with elephants*, and *their ſubtiltie*, 198.f.
where they breed, 199.c. Dragons *procure appetite to*
meat with the mee of wild beaſtes, 207.e.
 ſome *nearer Dracox*, 209.e.
 drungon *by* *Dracox* *how ſerpt* *pratiſed*, 189.d.
 Dracox *common to all creatures that bring forth their*
young *kinde*, *ibid.*
 Drapins *the faſt*, *ſlow* *ſe* *ſe* *ſe* *ſe*, 351.d.
 Drinke *may be worne* *at together*, 166.g.
 Drup, what *olues*, 379.b. 308
 Dryete *what olues*, 439.g.
 Dryes *hlypter*, 489.f.
 Dryde *in France*, 497.b. *why ſo called*, *ibid.*
ceremonies in gathering of cocke miſſelo, *ibid.*
againſt drunkenneſſe and Drunkards, 426.3.
Ma Antonius a Drunkard, and maintainer of Drunken-
neſſe, 428.g.
the behaviour of Drunkards, 417.a.
Parthian great Drunkers of wine, *ibid.*
Drumſie Iſland, 46.f.
 D V
 Dung *of blackebirds for what it is good*, 507.e.
 Darning *of land, when and in what order*, 582.f.
 Darning *cockes beſt adorned on the head*, 331.b.
 Darning *how it is to be ſet*, 582.f.
 Darning *of granule inſected by King Angell*, 507.f.
 Duracine, *ceraines grapes*, 405.e.
 Duracine *praches*, 43.6. *why ſo called*, *ibid.*
 D W
 Dwarfs *in both ſexes*, 165.e.
 Dwarfs *there be in all kinde of creatures*, 353.g.
 D Y
 Dying *what they deſiſe*, 188.f.
 Dyals *by whom deſiſe*, 191.a.
water Dyals or Clepiars *theſe invention*, 191.a.
 E A
 Eate *what kinde of beaſt it is*, 206.f.
 Eates *tokens of courage*, 333.d.
 Earth *what portion thereof is habitable*, 33.c. *how is ap-*
peared that the earth is in the middle of the world, 34.b.
 Earth *in the middell thereof an wholeſome mixture from*
both ſides, 37.f.
 Earthquakes *the reaſon thereof*, 37.c. *when they commonly*
happen, 38.b. *ſignes of earthquakes coming*, *ibid.* *reme-*
dies againſt it, *ibid.* *ſtrange and monſtrous earthquakes*,
39.a. *wonders of earthquakes*, *ibid.*
 Earth *hath deſcended her ſelfe, and what lands have ſin-*
dowed up theſeſſe, 40.m. *parts of the earth that are*
treivable and ſhake, 41.e.
 the *meaſure of the earth in length and breadth*, 42.b.
 Earth *element*, 43.f.
 Earth *longeſt and in the middell* *earth hangeth by the*
meaſure of the brazenes, 43.f.
 Earth *perſeth all other elements*, 52. a. *earth uncommenſu-*
able, *ibid.*
 Earth *teſteth the Sun*, 8.i.
 Earth *no place thereof inhabited which lieth under the Ze-*
diacke, 11.b.
 Earth *defended by an apologie of the author*, 548.f.
 Earth *ſermeth and repineſh to be ſtilled by lawes*, 552.b.
 Earth *engrauen in Achilles his armour*, 564.f.
 Earth *how it is ſubſtit to old age*, 504.f.
 Earth *the name thereof requiſite to be knowne*, 515.b.
 Earth *deſerth the alſt of generation*, 523.a.
 Enſie *is the deliniance of a man child*, 159.a.
 E B
 Ebene *tree of India*, 560.g. *the wood paid as tribute*, *ibid.*
 Ebene *of two kinde*, 360.b.
 Ebene *a tree ſet in a triumph*, *ibid.*
 E H
 Ebene *h*, *ibid.*

The Table to the first Tome

Elebe wood maketh a sweet perfume.	ibid.	order their teeth. <i>ibid.</i> what use they make of them. <i>ibid.</i>	
Erbru river.	503.d	they know wherefore they are hunted. 193.e. their element to man. 193.f. their fear of man. <i>ibid.</i>	
Echeta, a kinde of grasshopper.	315.e	Elephant how he uttereth his voice. 353.a. their manner of march. 194.a. their passage over rivers.	
Echnomeria, a fish.	253.b	Elephants battell and flamefull.	
Echinus, a fish. 248.m. it stateth the flux of women.	253.a	Elephants two of K. Antiochus.	
Echo, and the reason thereof.	21.d	Elephants their time of generation. 194.l. their affliction in love. 194.l.m. 195.a. both to their own and also to mankind. <i>ibid.</i> their memory. 195.a. their infirmitie. <i>ibid.</i> when they were first scene in Italy. 196.b. hunted in the cirque of Rome.	
Eclipse of the Sun and Moone. 7.d. why they are not eclipsed. <i>ibid.</i>	ibid.	Elephants fight in the cirque of Rome.	
Eclipse who were the first finder out thereof.	8.d	an Elephant of wonderfull courage. 196.g. their industrie. <i>ibid.</i> moue people to puttie. <i>ibid.</i> Elephants fight. <i>ibid.</i>	
Eclipse much feared, and of whom.	9.a	Elephants gentle to weaker beaſts.	
Eclipse of the Moone thought to be by enchantment, and to be helpd by dissipation ringing of bells.	ibid.	Elephants harmlesse, unprovoked. <i>ibid.</i> their manner of fight. <i>ibid.</i> how they be tamed.	
Eclipses, in what time they have their returne to the former points.	9.g	Elephants how they be taken.	
Eclipse of the Sun when it happeneth.	9.g	Elephants made in time of rnt. 197.e. how they serve in warre.	
Eclipse of the Moone alwaies in the full.	ibid.	Elephants affrighted at the grunting of swine.	
Eclipses how often, in what space, and the first finder out thereof.	9.d	Elephants how long they geue with young.	
Eclipse longer than ordinary when Caesar Dillatour was murdered.	17.e	Elephants in India bigger than African.	
Eggs diverse in colour.	298.g	they lose water. 191.i. can abide no cold. <i>ibid.</i> their food. 198.g. they trank and the use thereof. <i>ibid.</i> they cannot abide a mouse. <i>ibid.</i> they take harme by swallowing a horse-leech. <i>ibid.</i> their skin. <i>ibid.</i> it serveth to kill ſting.	
Eggs of birds, serpents, and fishes, how they differ.	ibid.	Elephants teeth of great price. <i>ibid.</i> and the use of them. <i>ibid.</i>	
Eggs best for an hen to sit upon.	299.a	Elephants trunk used for man. 198.a. where they breed. <i>ibid.</i> their policie, and the reason thereof in nature.	
Eggs hatched without abrid. 299.e. one by a kind heat. <i>ibid.</i>	ibid.	Elder tree good for pipes. 483.e. the berries for what use.	
Eggs how they be married under an hen.	299.b	Elegia.	
Eggs called Hypemecia. 300.l. how they be engendered. 301.e. wind. Eggs Zephyria.	ibid.	Elme seed when to be gathered. 512.g. how to be sown. <i>ibid.</i>	
Eggs drawne through a ring.	ibid.	Elmet of diverser kindes.	
Eggs how they be best kept.	ibid.	Elme Astenia not good for vines.	
Egnat. Metecennius killed his wife for drinking wine. 418.k. of Eggs plucking out, vomit forthcometh.	334.d	Elmet husband to vines.	
Elaterium what it is.	369.a	Elops, a fish.	
Elate.	379.e	Elpis taketh a bone from between a Lions teeth.	
Elatrum a kinde of metall.	260.d	Elkberine. 398.i. the leaner medicinable.	
Elements three, Water, Aire, and Fire, have neither Janour nor taste.	449.b	Em.	
Elenchit, what pearles.	255.f	Emperour Nero drawne by monster from beaſts.	
Elcomet, what it is.	435.a	Embrodered worker, whose dwisse.	
Elephants cure themselves by the wild olive.	211.e	Emeria, a place in Portugall.	
Elephants bring forth but one at once.	303.d	Emplastrum, what manner of grasing.	
Elephants tooth. See Turoie.		Endimion, when that sable first strag up of being in love with the Moone.	
Elephants have broad tongues.	339.a	what beaſts engender backward.	
Elephants most industrie and witte.	343.b	Engines of battery whose invention.	
how they bend their hams.	346.f	Engliſh offers best of all others.	
Elephants capacite, verurie, religion, desire of glory.	350.g	Enhamon, a foveraigne salve.	
The biggest of land beaſts. <i>ibid.</i> they adorne the new Moone. 192.k. subject to sickness. 197. fater decline.	192.i	Eniomi persons are venomous.	
Elephants are subject to sickness. 197. fater decline.	192.i	EO	
Elephants they plough the ground. <i>ibid.</i> they draw in a chariot. <i>ibid.</i> their manner of dancing. <i>ibid.</i> their feats of altitutie and nimblenſſe. 193.a. an Elephant geeth up and downe roget. 193.b. writing Greeke characters. <i>ibid.</i> embarked and their manner of landing.	ibid.	Eone a tree.	
193.c. their armes called hornes or teeth. <i>ibid.</i> they hide their teeth.	ibid.	Ephemerides, who first devised.	
Elephants young how they be knowne. 193.d. how they	ibid.	Epirus deſcription.	
		Epidemides has sleepe.	
		Ephesus a famous cite of Asia.	

Epilepsie

of Plinies Naturall History.

Epilepsie, whence it is.	333.a	E Y	
Epiſtoſis, a little tongue at the root of the other.	339.b	Eyebrowes of man like the eaves of a house.	333.d
it is in no creature that layeth eggs. <i>ibid.</i> use of it. <i>ibid.</i>	ibid.	Eyebrowes the seats of pride.	333.e
it is two fold.	ibid.	eyes living creatures have no Eies.	333.f
Epiſtoſis, what it is.	385.d	one Eye in some Herons.	334.g
Epiſtoſis, 358. the leaner medicinable.	ibid.	eyes of sundry colours.	334.h
Epiſtoſis, sometime it was so neere theſea that it did beat upon the temple of Diana.	339.e	ballor apple of the Eye different from the other parts. <i>ibid.</i>	334.i
Eperor hill.	406.b	Eyes ſhow the affection and diſpoſition of the mind. 334.k.	334.k
Eraturnus Island.	408.k	monſtrous of the Eye.	335.a
ER		quicke nature of the Eyes whether they reach to the braine or ſtomacke.	335.b
Eraturnus measured the globe of the earth, by what light and direction.	44.g	Eyes why they be clisped ceremoniously in the dead.	335.c
Eraturnus a most cunning cleare.	49.b. 36.b	Eyes yield forth teares.	334.k
Eraturnus a winner but great praise.	49.b	Eyes sometime why they see not and be well.	335.a
Eriſpace, Sander. 308. a Trachin. seed of bees.	313.b	Eyes fight how it is placed.	335.b
Eriſpace effected of spring dew.	ibid.	Eyes, their use. 336.g. why they shed their hair.	335.c
Eriſpace. See Robin-redbreſt.	ibid.	Eyes of a Wolfe on the right ſide worketh wonder.	337.f
Eriſpace, a kinde of wild honey.	317.d	Eyes fight quicke, wonderfull examples.	337.g
Ernite not chargeable in ſwimming.	572.i	FA	
Ernite medicinable by the testimony of Augustus Caesar.	ibid.	F Aharis.	569.a
Ernite when to be sowne.	ibid.	Fabaria certaine Islands.	569.b
Ertrou in numbering of years.	181.a	Face proper only to mankind.	333.d
Eryſimum, what kinde of corne.	244.m	Facitum what it is.	333.d
Erythini, fishes altogether female.	369.d	Fall of leafe a good rule for husbandmen to direct them to seed. <i>ibid.</i>	338.e
Erythraea, myrtil.	369.d	Falcon helpeth the owle in fight.	277.f
Eryſtrepom. See Aſſiatibus.	398.g	Following each other years.	481.f
ES		Fagmatia, Insipier at Rome.	561.b
Eſculum, a grove neere Rome.	462.g	Farrago.	572.a
Eſculus the mast thereof.	458.m	Farrage corne or dredge.	564.g
Eſculus runneth as deep into the ground as it riſeth above the ground.	477.c	Farina, whereof it is deriued.	564.g
Eſſid, people throughout the world most wonderfull. 101.d. carnall last they know not. <i>ibid.</i> keepe company only with date trees. <i>ibid.</i> continued many thousand years without generation.	ibid.	Fabius a Senator of Rome strangled with a haire. 159.d. Fanonius the Westerne wind, why so called. 471.d. why called Chelidonium. 23.e. why named Oritum. <i>ibid.</i> highly commended.	569.a
ET		Fairies ſeen oftentimes in the deſerts of Affricke. they vaniſh away like illuſions.	157.c
Eſſia, the name of winds.	23.d	ibid.	ibid.
Eſſia winds.	97.f. 473.b	FE	
EV		Fraſt Fornacalis instituted by Numa.	549.e
Euemeſis.	376.l	Facatum what it is.	417.f
Eunomus, a tree.	399.b	L. Sylla called Felix. get vanſhippy.	177.e
Eurus river flowing over Peneus river like oile on mingled therewith.	76.l	Felicite diuerſly underſtood.	276.b
Europe the measure thereof.	80.d	Feeling a ſenſe common to all creatures.	306.l
Euſtathius he is the wonderfull. <i>ibid.</i> thereof.	92.i	Femals may certainly turne to be males.	158.b
Euſtathius a famous river, the diſcription thereof.	103.d	Femals have ſmaller voices than males, except king. 353.e.	353.e
Euſtathius.	453.a	Female ſire taller than the male.	563.b
Europe not the third part of the earth, 51.a. but the one half.	ibid.	Femalke to be sowne negligently.	552.b
Euſtathius.	276.l	Ferres naturally hunt conies.	332.b
Eutycha, a woman of Trallitis delvered in her life time of thirte birch. 157.e. carried to her ſueral by thirte of her children.	ibid.	Ferula, two kindes. 399.d. root of Ferula dangerous.	399.f
Euſtathius he is famous enough.	165.e	Ferula maketh excellent ſpo matches.	400.b
Euſtathius a meſſenger honored as a god.	180.k	Ferme ſhew how to be purchaſed and choſen.	552.b
EX		Ferme or bracke how to be killed.	556.m
Exacerum what it is.	247.b. 458.i	Ferſan baſtards.	288.e
Exacerum, a poſſe.	500.k	Ferſans of Calchis dauntie birds.	296.g
Exacerum, a poſſe.	500.k	Ferſant will die of ſyce.	32.e
Exacerum, a poſſe.	500.k	Fener, a choppell dedicated to her.	32.e
Exacerum, a poſſe.	500.k	FI	
Exacerum, a poſſe.	500.k	Figtree beare fruit contrary to other trees, and why. 474.k.	474.k
Exacerum, a poſſe.	500.k	Figtree beare twice a year: wild figtree beare three.	500.k
Exacerum, a poſſe.	500.k	ibid.	ibid.
Exacerum, a poſſe.	500.k	Figtree	Figtree

The Table to the first Tome

Figtree milke or sap fruitful for cures. 486.g
Fig. Lybanon. 442.e. Pompeian. ibid. Fig. maritima. 486.g
figged figs. figs. Chalcidian. 442.i. Alitermaria. 486.g
Aratican. ibid. Porphyrea. 442.k. Popular. ibid. Chalcid. ibid.
Figs both early and lateward. 442.k. Figs. Duracina. ibid.
Chalcidian figs bear three times in one year. ibid. T.
venime figs called Oincs or Ornades. ibid.
Figs at six yeares. 442.g
Figs of Ida defcribed. 442.g
Figs tree. Alexandria. ib. Figtree of Lycyrcia. 442.b
Fig. Chalcidian. 442.b. Cilian. ib. Lydian. ib. Mammetia
or great figs. ib. Calliphrasian. ib. African. 442.i. Alex.
andrine or delicate. ib. Abodian. ib. Tybaurine. ib.
Fig dates when to be planted. 442.l
Fig. African. Saguntine. Teltian. ibid.
winter figs. 442.l
Figs from the tree; if it thunder at the feast Vulcanica.
442.m. 546.k
Figs of Masia ripen when other blossome, by what densi-
ty. 442.m.
a Figtree occasion of Carthage overthrow. 443.b.e
Figtree Nania in Rome. 443.d
Figtree Rumnalis. ibid.
Figtree in the Forum at Rome. ibid.
Figtree before the temple of Saturne in Rome. 443.l
Figs ripen altogether on the tree. 444.b
Figtree. 444.b
Figs ripen the sooner by the means of wild figtree. ib. 444.b
Figs of the Isle Ebusus the best. 444.l
Figs how they be put up and kept. ibid.
Figs good wilds. ibid. m.
Figs: Coilane, Carica, Cannia. ibid.
Figtree made fruitful by the sea onion Squilla. 514.g. it is
drier in the midian than at the head. 517.c
Figtree how it is made to beare olives. 520.g
Figtree of all other ageb the finest. 526.m
Figtree groweth best by the water side. 544.i
Figs how they are ripened by capriciation. 545.e
Figs how they are made smooth and pleasant. 547.b
A Figure of India. 360.k. the description thereof. ibid. it
fereth in selfe. ibid.
A Egyptian figtree. See Scyamore.
Syrian Figtree. 380.e.f
Fields in Aethiopia about the hill Heffera fine and glitter-
like starres. 47.d
Fildred called Abellene, whereupon. 446.h
Fildred: Calua, Prentine, Thafian, Abershan, Tarentine,
Mollucina. ibid. i.
Fines passed vnder the name of sheep & exat at Rome. 550.i
Firr taller than any rosin tree. 465
Firrs: topped & topped lene. 476.i
Firrtrees how employed and how to be chosen. 488.l.m
Firre mastis for shipping. 489.f
Firre is good for planks. 492.i
Firre how it will not purifie in water. 492.i
Firre wood highly commended in carpentry and ioyner
worke. 493.a.b
Fire bird. Locke Incendurius.
Fire in the Chimeri flamed with water and quenched
with earth. 47.c
Fire the maruities thereof. 46.m
Fire glasse opposite to the sun-beames sooner inflame than
fire. 47.f
Fire the highest element. 47.d
Fires about the body of men. 48.b
Fireman often to chinke and open. 17.g
Fishes feed on land. 235.e. diuined according to their
shape. 247.g
Fishes all fort breath after a manner. 237.e
Fishes both hard and sleepe. ib. & 306.b. 309.b
Fishes changing colour. 249.e
Fishes of the bloudisse. 249.e
Fishes oftentimes diuersely in sundry places. 242.m
Fishes not all like colored. 246.b
Fishes like mistle in cold waters in heat. 245.b
A Fish leapt out of the water at Cafars feet. 244.f
A Fish how and where they like and line best. 245.a
Fishes of what kinde they are all panners & no milers. ib.
Fishes haue sense. 261.d
Fishes of all creatures haue the biggeft heads. 332.g
Fishes their eyes how by night. 335.c
Fishing time which is best. 241.m
Fishes that be fast haue no bones. 345.a
Fishes female commonly bigger than male. 344.l
Fishes doe smell. 306.b
Fishes preface things to come. 244.l
Fishtime, and their nature. 368.l
F L
The Flap Epiglottis. 339.e
Flies engendered with reuaine kept in ashes. 330.l
Flies engendered of dust. 339.d
Flies enter not into Hercules temple in the beast-market at
Rome. 285.a
Flies breed in the fire at Cypru. 330.i
Floors for tyeing how to be tempered. 602.d
Florida a festiual holiday. 600.g
Flacci why so called. 333.b
Flockeworke. 277.f
F O
Forehead sheweth the nature of man or woman. 333.e
Fores of sondry creatures. 307.d
Foules distinguished generally by their feet. 276.g
Foules why they pecke at the eies of a man. 331.e
Fortune a goddess for vniuersall power. 4.b her multitude.
117.a. variable fortunes of diuers persons. 177.b
to bad-Fortune a temple. 3.e
Fowls that haue crooked talons be long legged. 255.d
Foliatum ornament. 382.k
Fountaines of wonderfull and strange natures. 45.b. 46.
Fountainne from vnder the sea yeagling fresh water. 410.l
Fountein in Germany. 455.e
Fexerity quick of hearing. 222.g. how they engender. 262.g
302.m. sea-Fores. 410.g
Strange Fouldes in the Island Area. 220.f
F R
France not subiect to earthquakes, and why. 38.b
Frant of Trarans a merchant France-fell. 163.g
Frogg-froge inhabitants to abandon a citie. 212.b
Frogg Rubra. 213.a
Frogg how they make their noise. 338.l
Frankenfein male what it is. 367.d
Frankenfein best how it is knowne. 368.i
Frumment what it is, and of how many kinde. 557.d. 6

of Plinies Naturall History.

Frankincense only in Arabia. 366.g
Frankincense tree defribed. *ibid.*
Frankincense gathered. 367. *a the manner thereof.* *ibid.*
Frankincense's pearch much telk. 368.b. *high price of Rome.* *ibid.*
Fricke mantle. 227.f
Fronditus puffed over the river Vulturinus in sight of
Auribale. 499.e
Froth how it is engendred. 29.b
Fry how to be preferred. 440.m. 441.a.b
Fruit grow after disperse fruit. 450.g.b. *in what regard*
they be set by. *ibid.*
Fruent or fling-corse. 582.b
Fruent or corse. 559.d
Fummece coffard. 508.i

F V

Fulcers of fire who found out. 188.i
C. Farius Crefinus a notable good husbandman, accused
and acquit. 556.g.b
Farling how many paces. 142.f
Farmaceus pany whas it was. 566.m
Fartours dirals. 579.e
Fartours herismars. *ibid.*
Fayns Salinus his strength. 166.l.m
Faystern in trees what it is. 488.f

F Y

Fyre striking out of a flint, who devised. 188.m

G A

G *Abalium.*
Gabara.
Gader.
Gagates. See Actites.
Gall in serpents is their venom. 337.e
Gall hangs at the liver 341. c. it is not in all creatures. *ib.*
Gall of a Dore where it taketh. 341.d
Gall infecteth the body with the yellow jaundise. *ibid.*
Gall of seals good for many purpors. 342.g
Gallbanus a gum, y^e i^e. the best how it is knowne.
the variet and price. 288.i
Galguts what bird, and how they build. 288.l
Gallia the description thereof. 470.g
Gall-worms of the oak Hemera best for carriages. 86.a
Gall-worms appropiate to ma^r trees. *ibid.*
Gall-worms which be best. *ibid.*
Gall-worms breake forth as ma^r nights. *ibid.*
Gimale, attorney in Phlogia. 40.m
Ginaces publique who first ordained. 159.f
Ginaces salueme. *Olympus, Ilystria, Pythia, Nemea.*
487.a
Gunders and geese how they do engender. 301.b
Gunders the description thereof. 126.b
Ginger a riner. 483.e
Ganza what geefe. 251.a

G E

Geefe halfsilff and madder. 279.a
Geefe in what maner they flye. 282.k
Geefe watchfull. 280.i. *seced the Capitull.* *ibid.* *promised*
for with the first state of Rome. *ibid.*
Geefe given to laue mankynde. 280.e
Geefe seeme to have understanding. *ibid.*
Geefe liner is excellent meat as is it ordeved. 280.i. *who de-*
vysed the same dyb. *ibid.*
Geefe translated afoor from Terwin and Twyny in France
to Rome. 280.m. *their feathers and downe.* *ibid.*
Geefe how they fit and hatch. 301.b
Geirs exceede in smelling. 305.f
Geirs where they build, and how they breed. 274.g
Geometritian who was excellent. 175.a
Generation of mankynde, the reason thereof. 162.i.k
Ge-clithron a famous cave. 154.k

G H

Choof of Arcteus in forme of a rauen. 184.i
Choat abandoning the bodie at times. *ibid.*

G I

Giants in times past. 165.a.b
Giddiffe in the brayne ten daies after the women hath
had company with the man, bereyth conception. 159.a
Githbead a fish. 245.b
Gimney or Turkie hens. 296.g

G L

Glandules or kernels in swine. 339.b
Glanis a fish, her nature. 262.g
Glanse lioned of a goose. 280.e
Glanicus a sea-fish. 245.b
Gledet. See Kites.
Glew made of an axe hide fadden. 337.c. *what woods will*
not be glewed. 493.c. *the best glew is made of bulles*
bider. 347.c.
Glo-birds or Glo-wormes, what they betoken. 593.c
Glottis what bird. 283.a
Glo-wormes, why they be called Lawprides. 326.f. *when*
they first appeare. *ibid.*
Clynon a kinde of Maple. 466.d

G N

Gnat. 310.f
Gnat hath all the five senses. *ibid.* *is thirfrie of mans blood.*
ibid.
Gnat-flappers what kinde of bird. 286.m. *when they be*
called Feculeas. 287.a. *when they be called Malconcy-*
phi. *ibid.*
Gneflos the royall Eggle. 272.g
Gnomon, what. 35.e

G O

God, what he is. 3.d
Gods theghe to be many, and how this foolish opinion first
sprang. 3.d. *To asigne any forme to God is manys weake-*
nesse. 3.i. *Plagues accounted at Gods.* *ibid.*
Gods more in heauen, than men in earth, if they should be
so many as men do feigne. 3.e
men have accounted beaulty, and other filthy things to be
Gods. 3.e
Gods that they be married, vaine it were to beleue. 3.f
God feigned young and old, winged and lame. 3.g
Gods, in them are feigned adulteries, huried and wars. *ib.*
Gods worse upon fingers irings. 4.b
Gods cannot do all things, as to die. 3.d
Gods not innumerable. 3.d
Gods. *Democritus maketh two onely.* *ibid.*
a God cannot send here upon earth. 180.i
God, what people hath it. 138.b
Gold miner who discevered. 188.e
Gold melting, rying and fusing, who's devise. *ibid.*

H b 3

Gates

When thou hast found out in this manner the North-east wind Aquilo, be sure that the wind which bloweth full against it from the point where the Sun setteth in midwinter when daies be shortest, is the South-west, called in Latin, *Africus*; and in Greek, *Lybs*. Observe this wind well, for if a beast after he be covered, turn about directly into this wind, she will for certaine conceive a female. And thus much of the Line in the Quadrant next to the North point on the East side.

The third line from the North point (which we drew first through the latitude of the shadow before said, and which we called *Decumana*) pointeth out the Equinoctial Sun-rising in March and September, directeth thee also to the East wind under it, called in Latine *Subolanus*, and in Greek *Apeliotes*. Where the climat is healthful and temperat, let vineyards be planted and arranged into this wind: let ferme-houses also in the country be so built, as the doores and windows open into it. This wind louth well to be dropping, and to distill gentle shoures of rain; howbeit drier it is than the West wind *Favonius*, which bloweth over-against him from the Equinoctial Sun-setting full West, called in * *Zephyrus*. Upon this Western wind *Oliue* rows should stand, according to *Cato's* mind. This wind is he that beginneth the Spring: this winde openeth the veins and pores of the earth, and with his milde coldnesse is healthfull and wholesome for all plants, for man also and beast. This wind gouerneth this whole season, and prescribeth the time for pruning Vines, for farcling and dressing corne, for planting trees, for grafting fruit, for trimming and ordering Oliues; and to say all in one word, so kind he doth breath, that he cherisheth and fostereth the earth and all things thereupon.

The fourth line in your quadrant or compasse (reckoning from the North point, which also reacheth next to the South point on the East side) noeth the Sun-rising in mid-winter when the day is shortest, and withall the Southeast wind called in Latine *Vulturnus*, and in Greeke *Eurus*; which as it is a drier wind than the two last named, so is it also warmer. In regard whereof it is good to set Bee-hives and plant vines tending into this course, I mean in other parts of Italy remote from the sea, and also in Gaule. Then shall you haue to blow full opposit vnto it the wind *Corus*, directly from the sun-setting in mid-summer when the day is longest; by-west from the North; and this North-west wind the Greeks call *Argestes*: one of the coldest he is, like as all they be wich blow from any point of the North. No maruell therefore if he be as much dread and feared as the North winde *Septentrio*, for commonly he bringeth with him haile stormes good store.

As touching the Southeast wind *Vulturnus*, if the coast be cleare where and when he beginneth to rise, it will not be long ere he lie, and commonly hee is down before night, but the East wind indeed continueth most part of the night. But be the wind what he will be, if he blow sensibly hot, you shall haue him hold many daies together. And to conclude, would you know when to haue a North-west wind? marke when the earth drieth suddenly at one instant, it will not be long but he will be with you: contrariwise, when you see the ground moist and wet with a kind secret dew vnseen and vnknown, reckon vpon it that shortly you shall haue a South wind to blow. And thus much for winds.

CHAP. XXXV.

¶ Signes to prognosticate what weather is toward.

HAuing thus set down sufficiently a discourse of the winds, because I would not re-iterate one thing often, what remaineth now, but in good order to passe & proceed to the prognostication and fore-knowledge of the weather? and the rather, for that I see that *Vergil* took great pleasure herein, and stood much vpon this point: for thus he relateth vnto the rude and ignorant men of the country, That oftentimes in the very mids of harvest hee hath scene while puffs and contrarie winds encounter and charge one another as it were in battell, doing much harme to corne. Moreover it is reported, that *Democritus* at what time as his brother *Damachus* was entred well into harvest worke, taking the opportunity (as he thought) of a moist hot season, besought him earnestly to let the rest of his corne stand till a while longer, and to make hast to get that into the Barne vnder roufe, which was cut and reaped downe; and this he did without any reason by him made, why and wherefore. And what ensued hereupon? Surely within few houres after, there poured downe a mighty shewre of raine, and proued *Democritus*

A *tem* to be a wife man and a true prophet. Moreover, it is a rule commonly giuen and obserued, That neither Reeds would be set & planted but toward rain, nor corn sowed but against a good shewre. And therefore since this skill is of such importance, I am content briefly to touch those signes that foretewh what weather will be, and make choise of such which by search and experience are knowne principall and make most for this purpose.

And first begin I will at the Sun, the best prognosticator of all others: When he rises cleare and not fiery red, it is a signe that the day will be faire, but if he shew pale and wan, it presages a cold winter-like haile-storme that very day; but in case he went downe over-night cleare and bright, and to rose the next morning, so much surer may you be of faire weather. If the Sunne in rising seeme hollow, he foretelleth rain; and when before his rising, the clouds be red, the winds will be aloft that day: but in case there be some blacke clouds intermingled among, you shall haue rain withall. If the raies and beames of the Sun be red, both when he riseth and when hee setteth, there will fall good store of raine. Are the clouds red about the Sun as he goes downe? you shall haue a fair day the morrow after. If when the Sun doth rise you see flying clouds dispersed, some into the South, and others Northward (say all be cleare and faire otherwise about him) make reckoning that day of wind and raine both. Marke at his rising or going downe, if his beames be short and as it were drawne in, be sure of a good shewre. If at the Sun setting it raine, or that his raies either looke darke and blew, or gather a banke of clouds, surely these be great tokens of tempestuous weather & stormes the morrow after: when in his rising the beames shine not bright and cleare, although they be not over-cast with a cloud, yet they portend rain. C If before he rise, the clouds gather round together like globes, they threaten sharpe, cold, and winter weather: but in case hee driue them before him out of the East so that they retire into the West, we haue a promise thereby of a faire time. If there appeare about the bodie of the Sun, a circle of clouds compassing it round, the nearer they come about him and the lesse light that they leaue him, the more troubled and tempestuous weather will follow: but in case he be enuironed with a double circle, so much more outrageous and terrible will the tempest be. If peradventure this happen at his rising, so as the said clouds be red againe which compass the Sun, look for a mighty tempest one time or other of that day. If haply these clouds enclose him not round, but confront and seeme as if they charged vpon him, look from whence they come, from that quarter they portend great wind: and if they encounter him from the South, there will be raine good store and wind both. If as the Sun riseth he be compassed with a circle marke on what side the same breaketh and openeth first, and from thence look for wind without faile: but if the said circle passe and vanish away all at once equally, as well of one part as another, you shall haue faire weather vpon it. If at his rising you see him to cast his beames afar off among the clouds, and the mids between be void thereof, it signifieth raine. If he spread his beames before hee vp and appear in our Horizon, look for wind and water both. If about him toward his going downe there be scene a white circle, there will be some little tempest and trouble some weather that night ensuing: but in stead thereof if he be over-cast with a thicke mist, the tempest will be the greater and more violent. If the Sunne couchant appeare fierie and ardent, there is like to be wind. Finally, if the circle afore said be blacke, marke on which side the same breaketh, from thence shall you haue blustering winds. And so an end of the Sunne and his prognostications.

Now by right, the Moone challengeth the next place for her prefaces of weather to come. First and foremost, the Egyptians obserue most her prime: or the fourth day after the changer: for if she appeare then, pure, faire, and shining bright, they are verily persuaded that it will be faire weather: if red, they make no other reckoning but of winds: if dim and blackish, they look for no better than a foule and raine moneth. Mark the tips of her hornes when she is five daies old, if they be blunt, they foreshew raine; if pricking vp right and sharp pointed withall: they alwayes tell of winds toward: but vpon the fourth day especially, this rule faileth not, for that day telleth truest. Now if that vpper home of hers only which bendeth Northward, appeare sharpe pointed and stiffe withall, it presageth wind from that coast: if the nether home alone seeme so, the wind will come from the South: if both stand straight and pricking at the point, the night following will be windie. If the fourth day after her change, she haue a red circle or Halo about her, the same giueth warning of wind and raine. As for *Varro* he (treating of the prefaces gathered from the Moone) writeth thus: If (quoth he) the new moon when she is just foure daies old,

put her horns dire& and freight forth, the preſages thereby ſome great tempeſt at ſea preſent-
ly to follow, unleſſe it be ſo that ſhe haue a giurand or circle about her, and the ſame cleare and
pure; for then there is good hope that there will be no ſoule nor rough weather before the full.
If ſhe the full, one halfe of her ſeeme pure and neat, a ſigne it is of a faire ſeaſon; if it be red, the
wind will be buſie, if enclined to blacke, what elſe but raine, raine. Doe you ſee at any time
a darke miſt or cloud round about the body of the moone? it betokeneth winds from that part
where it firſt breaketh; and in caſe there be two ſuch cloudie and miſtie circles enuironing her,
the tempeſt will be the greater: but how if there be three of them for failing, and thoſe either
black, or interrupted, diſtracted and not vnitid? ſurely then there will be more ſtorms & more.
The new moone whiles ſhe is croiſſant, if the riſe with the vpper tip or horne blackiſh, telleth
beforehand that there will be ſtore of raine after the full, and when ſhe is in the wane, but if the
nether tip be ſo affected, the rain will fall before ſhe be at the full. But what if that blackneſſe
appeare in the middle of her body betwene; then (ſaith *Varrs*) it will poure of rain in the very
full. A full moone hauing about her a round circle, ſheweth that there will be wind from that
part, where the ſaid circle is moſt ſplendant. If her hornes appeare when the riſeth, more groſſe
and thicke than ordinarie, look ſoon after for a terrible tempeſt and ſtormie weather. If ſhe
ſhew not in our Horizon before the prime or fourth day after the change, and the Weſt wind
blow withall, then that moone throughout threatneth cold and winter weather; and if the day
after the full ſhe ſeeme extraordinarily enflamed, the menaceth vnto vs ſharp ſhowes and bitter
tempeſts. Finally, in euery moon there be eight points and ſo many daies (according as the
lightneſſe vpon the angles of the Sunne) which moſt men obſerue onely, and take their preſages
of future weather by, to wit, the third, ſeuenth, eleuenth, fifteenth, nineteenth, one and twentieth,
ſeuen and twentieth, and the very day of her conjunction or change.

In the third place, a man may know the diſpoſition of the ſeaſons by the fixed ſtars, and
therefore it behooueth to obſerue and marke them. They ſeeme otherwhiles in the ſky to ſit
and run too and fro, and then we ſhall not be long without great winds, riſing from that quarter
where ſuch appeared and gaue token.

The ſtarrie ſkie, if it ſhew cleare and bright al ouer, and in euery part alike, during that par-
ticular ſeaſon [namely, between the occultation of the Harp-ſtar, and the *Æquinoctiall* point]
which I propoſed and ſet downe heretofore, it is a fore-token of a faire and drie Autumne; but
yet cold.

If the Spring add Summer both, paſſed not cleare without ſome raine and wet weather, it
will be an occaſion that the Autumne following ſhall be drie, and leſſe diſpoſed to wind; how-
beit, thicke, muddy, and enclined to miſts. A faire and drie Autumne, bringeth in alwaies a win-
die winter.

When all on a ſudden the ſtars loſe their brightneſſe and looke dim, and that neither vpon a
cloud nor a miſt in the aire, it ſignifieth either raine or grievous tempeſts.

If the ſtarrs make ſemblance as if they flew vp and down many together, and in their flying
ſeem whitith, they denounce winds from that coaſt where they thus do ſhoot. Now if it ſeeme
to the eye, as if they ran and kept one certaine place, thoſe winds will hold and ſit long in one
corner; but in caſe they do ſo in man y quarters of the heauen, they betoken variable and incon-
ſtant winds, going and coming, and neuer at reſt. [Vvhen you ſee a circle about any of the o-
ther ſine planets or wandering ſtars, you ſhall haue pouring ſhowes ſoone after.] Within the
ſigne Cancer, there be two prettie ſtars which the Mathematicians call *Aſelli*, [i. little *Aſſes*]
between which there ſeemeth to be a ſmall cloud taking vp ſome little roome, and this they
name in Latine *Præſepia*, [i. a Crib, Cratch, Bowzey, or Manger:] now if it chauce that this
Racke or Crib appeare not, and yet the aire bee faire and cleare otherwiſe, a ſigne it is of cold,
ſoule, and winter weather. Alſo if one of theſe two little ſtars, to wit, that which ſtandeth Nor-
therly, be hidden with a miſt; then ſhall you haue the South wind to rage, but in caſe the other
which is more Southerly, be out of light, then the Northeaſt wind will play his part.

As touching the Rainbow, if it appeare double as if there were two of them at once, it telleth
of raine toward. A Rainbow preſently after raine, is a ſigne of faire weather; but this is not ſo
certaine, neither will it hold long. Alſo, when a man ſeeth new circles ſtill about any planets,
there will be much raine ſoone after.

In Summer time, if there chauce to be more thunder than lightning, it threatneth winds
from

from that coaſt where it thundreth: contrariwiſe, if it lighten much & thunder little, looke for
rain plentie: when you ſee it lighten, and the ſkie otherwiſe cleare & faire, it is a token that rain
and thunder will follow thereupon, yea and rigorous cold weather beſides: but the cruellſt
and moſt bitter impreſſions of the aire, enſue vpon ſuch lightnings as come from all the four
quarters of heauen at once: if it lighten, from the Northeaſt only it betokeneth rain the day fol-
lowing; if from North, it is a ſigne of wind from thence; if from the South, Northeaſt, or full
Weſt, it happen to lighten in the night & the ſame be faire, it ſheweth wind and rain from out
of thoſe coaſts: more thunders foreſhew winds, but if they be heard at noon, they preſage rain.

As touching clouds, if you ſee the racke ride apace in the aire, the weather being faire & drie,
looke for wind from that quarter whence thoſe clouds doe come; and if they ſeeme to gather
thick in that place, diſperſed they will be and ſcattered when the Sun approacheth: but more
particularly, if this happen from the Northeaſt, they portend rain; if from the South, ſtorm and
tempeſt: if at the Sun ſetting the rack ſeeme to ride from both ſides of him into the open aire,
they ſhew of tempeſts toward: if the clouds be very blacke, flying out of the Eaſt, they threaten
rain againſt night; but if they come out of the Weſt, it will ſurely raine the morrow after, if the
clouds be diſparkled many together out of the Eaſt, and ſlike fleeces or flocks of wool, they
ſhew rain for 3 daies after: when clouds ſit low, and ſeeme to ſettle vpon the tops of the hills;
looke ſhortly for cold weather, contrariwiſe, if you perceiue thoſe tops of mountains cleare
without moiſt or cloud, the weather will ſoone take vp and turne to be faire: when the clouds
ſeeme to be heauily charged and full, and yet looke white withall (which a continuation of the
aire is called commonly the white weather) there is an haile-ſtorm at hand: moreover, be the
ſkie neuer ſo cleare, the leaſt cloud appearing therein, is enough to engender and foreſhew wind
and ſtorm: miſts if they come downe and fall from the mountains, or otherwiſe deſcend from
heauen and ſettle vpon the vallies, promiſe a faire and drie ſeaſon.

Leaving the ſtars and clouds above, let vs come to our fires that we make and keepe in our
houſes here beneath, for they are to be raunged in the next place of our prognostication. If the
fire then burne in the chimney pale, and keep there with a huzzing noiſe, we find by experience
it foreſhewes tempeſt and ſtormie weathers alſo wee may be ſure of rain, in caſe we ſee a fun-
gus ſubſtance or foot gathered about lampes and candle ſnuſſes: if you ſee the flame either of
fire or candle mount winding and waing as it were, long you ſhall not be without wind. The
like is to be ſaid of fire and candle light, if either they ſeem to go out of themſelves, or to kin-
dle and take fire with much ado. Alſo, when we diſcern in the fire a number of ſparkles gathe-
red together and hanging one to another: or if when the pot is taken off from the fire, the coles
ſticke to the bottome and ſides: or when the fire being raked in embres, keepeth a ſpitting and
ſparkling from it alſo, if the aſhes lying vpon the hearth grow together and laſt of all, when the
lue-cole ſhineth brighter or ſcorcheth more than ordinarie, all theſe be ſignes of rain.

Goe we a little lower to the water, for that element alſo giues ſignes of the weather: and firſt
of all, if you ſee the ſea within the haven, after the flood is gone, in a low and ebb water to bee
calme, and yet heare it keep a rumbling noiſe within, it foreſhewes wind if it doe thus by times
and fits one after another, reſting ſtill and quiet between whiles, it preſages cold weather & rain.
Item, if in calme and faire weather the ſea ſtrond or water banks reſound and make a noiſe, it is a
token of a bitter tempeſt: ſo it fares alſo with the very ſea it ſelfe; for if it be calme, & yet make a
roaring, or if the ſome thereof be ſcen to ſcatter to & fro, or the very water to boile & bubble, you
may be bold to foretell of tempeſts: the Puffins alſo of the ſea, [i. fiſhes named in Latin *Pulmo-
nes*] if they appeare ſwimming about water, foreſignifie cold weather for many daies together:
oftentimes the ſea being otherwiſe calme, ſwells, & by heaving higher than ordinarie, ſheweth
ſhe had wind good ſore encloſed within her, which ſoon after will breake out into a tempeſt.

Let vs come aland againe, and marke the diſpoſition of woods and hills: you ſhall heare the
mountains and foreſts both, keep a ſounding and rumbling noiſe, and then they foretell ſome
change of weather, nay you ſhall mark the leaues of trees to moue, flicker, and play themſelves,
& yet no wind at all ſtirring, but be ſure then you ſhall not be long without. The like predi-
ction is to be gathered by the light downe of either poplars or thiftles flying too and fro in the
aire; alſo of plumes and feathers floating vpon the water. Goe downe lower to the uales & plains:
if a man chauce to heare a buſſing there, he may make account that a tempeſt will follow. As
for the rumbling in the aire, it is an vndoubted ſigne and token thereof.

Moreover, the verie bruit and dumb creatures pefage and giue warning what weather there will be. To begin with the fishes of the fea: the dolphins playing & difporting themfelves in a calme water; doe certainly fore-few wind coming from that coaft whence they fetch thefe frifkes and gambols: contrariwife, if they fling and dafh water this way and that way, the fea at that time being rough and troubled, it is an infallible figne of a calme and of faire weather toward. The Cuttle or little Calamarie Loligo, launching it felfe and flying about the water; the Cockles & winkles cleaving and ficking hard to the grauell, the Sea-vrchins thrufting themfelves into the owfe and mud, or otherwife balaifed & couered with fand, beall fignes of tempefts neare. The like may be faid of Frogs, when they crie more than their cutfome is, and of Seamewes alfo, when they gaggle in a morning betimes extraordinarily, femblably, the Cormorants, Gulls, Mallards, and Ducks, when they keep a praining of their feathers with their bills, forefnew wind: and generally, when you fee other water-foule to gather and affemble together and then combat one with another, or Cranes make haft to flie into the midland parts of the maine. The Cormorants and Gulls flying from the fea and ftanding lakes, and Cranes foaring aloft in the aire ftill, without any noife, doe put in comfort of a faire and drie feafon: fo doth the Howlat alfo, when fhe cries chuit in raime weather: but if it be then faire and drie, we fhall be fure to haue foule tempefts for it afterwards: Iteuens crying one to another as if they lobbed or yexed therewith, and befides clapping themfelves with their wings, if they continue this note, doe portend winds; but if they giue ouer between-whiles, & cut their crie fhort as if they fwallow it backe againe, they pefage rain and wind both. Lacke-dawes, if it be late ere they retume from their reliefe abroad, foretolden cold and hard weather; fo do the white-birds when they affemble and flock together, as alfo when land-foule (and the crow efpecially) keep a crying againft the water, clapping their wings, wafhing alfo & bathing themfelves. If the Swallow flie low and fo nere the water, that the flap the fame oftentimes with her wings, it is a figne of rain and foule weather. Semblably, all other birds that neftle in trees, if they feem to make many flights out, but retaine againe quickly to their nefts. Moreover, if Geefe hold on a continuall gagling out of all order vtinably, a man may gueffe no better by them, no more than he can of the Heron which he feeth heavy and fad vpon the fands.

And no maruell that thefe ruer-foules, or generally any other birds of the aire whatfoeuer, fhould haue a fecret pefage and foreknowledge of the difpofition of the aire; for the very four-footed beafts of the earth doe make fhew thereof by their behauiour. The fheep and fuch fmall cattraile, leaping and playing wthoutly, dancing alfo as vtowardly without meafure, doe teftifie fome change of weather: nay the dull and heauie oxen holding vp their nofe and muzzles, fuffice and fmell into the aire, yea and keep a licking againft the haire toward rain.] Alfo when you fee the foule and filthie hogs, rend, teare, and fling about their bottles of hay, and yet they care not for it when they haue done, becaufe it is no meat for them: likewise if you percieue the pifmires or ants either lying clofe and idle, full againft their nature (whole propertie is to be induftrious and euer bufie) or encountering one another in battailewife, or elfe carying their eggs abroad out of their holes. Finally, when the mads or earthwormes come forth and appeare, a man may be bold to foretell of a change in the weather.

What fhould I fay more? It is knowne for certaine, that Clauer-graffe or hearbe-Trefoile will looke rough againft a tempeft, yea and the leaves thereof will ftand ftingy as if it were afraid thereof. And to conclude and make an end of this difcours, whenfoeuer you fee at any feaft the difhes and platters wherein your meat is ferued vp to the board, fweat or ftand of a dew, and leauing that fweat which is refolued from them either vpon drefler, cupbord, or table, be affured that it is a token of terrible tempefts approaching.

An

An Index pointing to the principall matters contained in the firft Tome of Plinies NATURAL HISTORIE.

A B		A E	
A	<i>Adact, a roe-bucke in Affricke.</i>	331.d	<i>Amylus Paulus sacked in one day 702 cities in Macedonia.</i>
	<i>Adonum, what it is.</i>	344.d	<i>nie.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
H	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
A C	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
A D	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>
	<i>Adricors, 436. l. of two sorts. ibid. good for ficke</i>	344.d	<i>Ammon how he is faide to gouerne the winds.</i>

The Table to the first Tome

<i>Alicea Exceptaria</i> , Secundaria, Crebraria. ib. k. where and how it is made. 446.b	<i>Apparition of fixed stars at set times.</i> 587.d
<i>Almonds</i> described. 446.b	<i>Appula</i> what it is. 556.f
<i>Almond trees</i> having no green leaves. 473.f. when to be planted. 522.k. how sweet Almonds are made bitter. 543.f	<i>Apples</i> bear names of countries. 438.k. <i>Camerina</i> , <i>Graculaidia</i> , <i>Gemena</i> , <i>Job</i> , <i>Servia</i> , why so called. 438.k. <i>Maffia</i> , <i>Meimela</i> , <i>Orbitulata</i> , <i>Epitactica</i> , <i>Orbitomaffica</i> , <i>Spadonia</i> , <i>Melofolia</i> , <i>Pannacia</i> , <i>Pulmonata</i> . 438.k.
<i>Amphisbena</i> , a serpent. 208.g	<i>all Apples</i> red on the Sun side. 438.m
<i>Amalechium</i> , what it is. 85.c	<i>Apples</i> Dacian. 439.a. winter apples. 438.m
<i>Ambre</i> , where engendered. 86.l	<i>Apples</i> de guard. 440.k. how to be kept. 438.g
<i>Ambrosia</i> the fishes, left dry land. 39.e	<i>what Apples</i> will kill, and what will not. 438.g
<i>Amia</i> a kind of fish. 243.d	<i>Apples</i> trees bearing fruit twice a year. 474.m
<i>Ammoniacum</i> a gum, why so called. 375.e. the kinds thereof. 375.d. the best and the price. 438.k. how it is fopsift. 438.k.	<i>quince Apples</i> . 438.i. <i>Apples</i> Aprian, Matian, Scythian, Mantian, Claudian, Scythian, Scythian, <i>Quarian</i> , <i>Petitian</i> . 438.i. <i>Apples</i> what fruit properly. 437.f
<i>Amomum</i> . 365.d	<i>Apples</i> have eternized the name of their first inventors & grafters. 438.i. <i>Apple</i> trees dearly rented at Rome. 499.d. tenders of all other trees. 540.k. <i>Apples</i> which how they be made fruitful. 545. <i>Apples</i> how kept from rotting. 574.d. <i>Apple</i> trees when to be grafted. 518.i.
<i>Amomum</i> , why it will not line in Arabia. 478.l	<i>Approna</i> , a kind of Pomegranate. 398.b
<i>Amorcan</i> , what it is. 430.l	
<i>Anyiam</i> how it is made. 562.g. why so called. 438.k. sundry sorts thereof. 438.k	
	A Q
<i>Anatavia</i> . See <i>Merphos</i> . 399.e	<i>Aquicet</i> , pine nuts confected. 436.g
<i>Anachne</i> an herb. 458.l	<i>Aquifolia</i> . 87.d
<i>Andocides</i> his face counsel to Alexander the Great. 154.m	
<i>Androgini</i> , who they be. 1102.	A R
<i>where</i> <i>Andromeda</i> was exposed to a monster. 154.m	<i>Arabia</i> , why called <i>Happy</i> . 365.f. 371.d
<i>Andromeda</i> , a goddess. 59.c	<i>Araneus</i> , an imperfection in vines and olives. 540.a
<i>Andropogon</i> , a bird weighing like an horse. 293.a	<i>Aratrar</i> , what point in husbandry. 580.b
<i>Androgenes</i> , a famous minstrell. 484.g	<i>Araxi</i> , or <i>Oraxi</i> , springs medicinal. 568.i
<i>Andropogon</i> . 129.b	<i>Arbutus</i> tree described, and the fruit. 447.d
<i>Andropogon</i> his fallhood. 195.e	<i>Archers & arrows</i> have conquered half the world. 482.e
<i>Andri</i> , transformed into wolves. 207.c	<i>Candius</i> excellent archers. 49.c
<i>Andria</i> fishes how they be caught. 268.m. 269.c	<i>Arturus</i> the star cause of tempests. 19.d
<i>C. Antonium</i> nicknamed <i>Hybrida</i> . 231.e	<i>Arcturus</i> a strange lake. 137.b
<i>Antz</i> , their common weale. 338.k. their forecall. 438.k. how they line. 438.k. their passage wearseth pibble stones. 328.l. they only burie their dead. 328.a. they live not in Sicilia. 438.k. they cast up gold in India. 329.a. where, as big as wolves. 438.k. they devour men. 329.b. some gold will. 438.k. they will not touch some kind of liver. 342.g. how full to trees. 547.d. gather about fishes. 438.k.	<i>Argatula</i> a bird. 137.b
<i>Antrophag</i> , what they are. 154.b	<i>Argo</i> a ship, of what wood it was made. 399.b
<i>Antipater</i> , whether there be any such. 31.b	<i>Architectura</i> , who excelled therein. 175.b
	<i>Armenia</i> , with one eye in their fore-head. 154.b
	<i>Armenia</i> , a graine all one with Olyra. 568.k. makes sweet bread. 438.k. should be cleaved. 438.k. what kind of corn. 559.c
	<i>Artemis</i> mingled boy with wine. 412.b
	<i>Artemis</i> mounted upon a dolphins back. 239.f
	<i>Artemesia</i> the Miffonian had a hairy hart. 340.k. flew three hundred Lacedemonians alone. 438.k.
	<i>Arctus</i> employed by K. Alexander the Great about the living creatures. 200.m
	<i>Artes</i> of men not all of a inst measure. 549.d
	<i>Armenia</i> , people their life and strange manners. 121.a
	<i>Armenia</i> , See <i>Armenia</i> .
	<i>Armenia</i> heard rustling in beane. 28.g
	<i>Artemia</i> , how wandering like four-footed beasts. 147.e
	<i>Artemia</i> , a man like to Antiochus K. of Syria. 161.d
	<i>Artes</i> from the heart minister vital blood to all parts. 340.b. how to be offered in their pulse or beating. 545.b
	<i>Articulation</i> , a disease proper to vines. 340.b
	<i>Artisan</i> excellent. 175.b
	<i>Artolagani</i> . 566.l
	<i>Artolagani</i> , what it is. 567.b
	<i>Artopitum</i> panis. 566.m
	<i>Artemia</i> , what it is. 219.e
	<i>Artem</i>

of Plinies Naturall History.

<i>Afarum</i> or <i>Afara-bacca</i> described. 369.b	<i>Antioch</i> burnt quick. 184. b. he revivied in the funeral fire. 483.b.e
<i>Africa</i> , places where no shadows be yielded. 36.b	<i>Antioch</i> Calamus, a kind of reed. 483.b.e
<i>Africa</i> , Arabians why so called. 144.m	<i>Antioch</i> , an Indian beast. 206.k
<i>Afropides</i> reconverted one that was carried forth at dead. 175.a	
<i>Afrum</i> , where it is always green. 48.g. <i>Afrum</i> tree described. 465.e. commended by Homer. 438.k. the wood of the afr in Ida like to Citron. 438.k. afr of two kinds. 465.f. the leaves burst full to what beasts. 466.g. the juice of the leaves medicinal. 438.k. the shadow scares serpents. 466.b	
<i>Afrum</i> the leaves drive away serpents. 466.b	
<i>Afrum</i> a kind of Ric. 572.l	
<i>Afrum</i> , the description thereof. 56.g. a great part thereof unhabitable by reason of cold. 120.m	
<i>Afrum</i> . See <i>Ory</i> . 572.l	
<i>Afrum</i> , a shrub. 376.g. the price. 438.k	
<i>Afrum</i> , lake of Sodome. 101.e. no living creature therein. 438.k	
<i>Afrum</i> trees turne to be <i>Peplur</i> . 543.c	
<i>Afrum</i> the serpent hath her affection, and is a swift reuenger. 399.a. <i>Afrum</i> gets her poison by the teeth. 337.e. the nature of <i>Afrum</i> . 208.b	
<i>Afrum</i> , the god of Cinamon plants. 372.l	
<i>Afrum</i> of fuel burnt, much set by beyond the Po. 507. a. serve to cinnam. 438.k. of the same nature that salt. 546.l	
<i>Afrum</i> of cinnam. 438.k. encroafe olive trees. 507.e	
<i>Afrum</i> cannot away with cold. 223.b. when they shed their leaves. 338.b. their rancidness and leachery. 223.l. of great price. 223. a. their manner and time of generation. 438.k. the game that they bring by breeding. 438.k. their foles good meat. 438.k. their other properties. 438.k	
<i>Afrum</i> of India with one horn. 351.b	
<i>Afrum</i> wild. 20.g	
<i>Afrum</i> tree. See <i>Citron</i> tree. 438.k	
<i>Afrum</i> , people without a mouth. 156.i	
<i>Afrum</i> trees their commendation. 5.m. 9.a. who most excellent. 174.l. their three sets. 586.b	
<i>Afrum</i> necessary for agriculture. 438.k	
<i>Afrum</i> who first devised. 189.d	
<i>Afrum</i> opinion touching the length of mans life. 181.f	
<i>Afrum</i> , what herof. 222.m	
<i>Afrum</i> Celer, a prodigious spender. 246.k	
	A T
<i>Arabulus</i> , an unlucky wind in Apulia. 150.m	
<i>Artemum</i> . 575.b	
<i>Atlas</i> hill. 92.g. the strange trees thereon growing. 92.b	
<i>Atlantes</i> people, their strange manners. 95.i. they dream not in sleep. 438.k	
<i>Atlantic</i> sea sometime the continent. 40.l	
<i>Atomum</i> , what it is. 367.e	
	A V
<i>Auriga</i> and <i>Aurigas</i> by birds, who first invented. 189.e. honored in Rome. 211.f	
<i>Auriga</i> Caster, whether he were happy. 179.c. his former consort. 438.k. he desired <i>Procinus</i> to kill him. 179.e. <i>Auriga</i> drove a deer and four night birds. 179.f. his lineal descent out of the fourth degree. 162.l. the conduct discovered many facts. 32.k. superstitious in preferring his left foot first was put on before the right. 41.f	
<i>Auriga</i> , people, worshipping only the diuels beneath. 96.i	
	B A
<i>Babylon</i> territory exceeding fruitful. 576.i	
<i>Babylon</i> the city described. 136.b	
<i>Babylon</i> a vestier, what they are. 288.i	
<i>Baccharis</i> . 364.d	
<i>Bacchi</i> , a kind of codfish. 245.e	
<i>Bacchus</i> , when borne from. 128.l	
<i>Bacchus</i> first wore a coronet or garland. 456.m	
<i>Bacchus</i> bitters have venomous tongues. 548.m	
<i>Baltrian</i> , a plentiful country for corn. 581.a	
<i>Baltrian</i> corn exceeding big. 461.	
<i>Baltrian</i> what he is. 387.b	
<i>Baltrian</i> of husbandry. 555.a	
<i>Bakers</i> when they began in Rome. 557.b	
<i>Balaustia</i> . See <i>Pomegranate</i> flower. 438.k	
<i>Baldraunt</i> . See <i>Plungeons</i> . 235.f. 236.f	
<i>Balena</i> what fish. 235.f. 236.f	
<i>Balena</i> and <i>Prifit</i> , greatest fishes in Indian ocean. 235.f	
<i>Balls</i> of the cheeks forbidden by law to be scratched. 336.i	
<i>Balls</i> the sea of Balshunisse and modesty. 438.k	
<i>Balme</i> tree of three sorts. 376.l	
<i>Balme</i> trees groweth in where but in Iurie. 478.k	
<i>Balme</i> trees brought to Rome. 376.i. how they are prepared and ordered. 438.k. their description. 438.k	
<i>Balme</i> trees caused by the Romans at the destruction of Jerusalem. 376.k	
<i>Balme</i> fruit or grain. 377.e	
<i>Balme</i> graine how sophisticated. 377.e	
<i>Balme</i> bark. 377.e	
<i>Balme</i> liquor most pretious. 376.i. <i>Balme</i> liquor how sophisticated, and how discerned. 377.e. <i>Balme</i> liquor how it is drawn. 376.m. <i>Balme</i> liquor which is best. 377.e	
<i>Balsamides</i> Cassia. 377.e	
<i>Bands</i> or bindings in husbandry, of what trees and what they are to be made. 445.b	
<i>Barbata</i> , a kind of hawk or eagle. 272.k	
<i>Barbers</i> first entertained in Rome. 150.m	
<i>Barble</i> fishes. 246.b. their description and nature. 438.k	
<i>Barble</i> called in Latine, <i>Mullu</i> . 246.b	
<i>Barke</i> of trees in their hide. 488.b	
<i>the bark</i> moisture of trees in their blood. 488.b	
<i>Barke</i> of trees how to be used. 541.e	
<i>Barking</i> of trees. 487.d	
<i>Barks</i> of sundry trees, how employed. 461.d	
<i>Barks</i> of trees different. 477.a	
<i>Barley</i> a tender corn. 562.b. how to be cut down, and at what time. 562.k	
<i>Barley</i> how it is cared and jointed. 503.e	
<i>Barley</i> where it grows twice a year. 574.g	
<i>Barley</i> doth degenerate into oats. 562.k	
<i>Barley</i> a most ancient grain. 561.e. condemned. 562.k	
<i>Barley</i> used in Physick, as to feed cattell. 562.i	
<i>Barley</i> different in care and otherwise. 603.b	
<i>Barnes</i> , how and where to be built. 603.b	

The Table to the first Tome

of Plinius Natural History

Barraine beasts soone fat. 344.k
 Barraine of earth how it is found. 504.i
 the Bafilisk. 196.l. his properties. ibid. his venom. 207.a
 killed by the weazill. ibid.
 Battails first fought. 189. a. battaille at Sibaris. 197.d. in
 two battails in one day. both on sea and land. Num-
 num deficiat the Perians. 140.b
 Bat or winged monie only among the foules. batbreeth.
 337.b. bats bring forth young alive. 301.f. the only bird
 that smelt killeth. 302.g
 Bay tree. sic Lawrell. Bay leaves purge the gorge of birds.
 211.c.

B D

Bellium. 362.m. sophisticated. 363.a. See Brochos. the
 trull. 363.b. the price. ibid.

B E

Beane principall of all pulse. 568.l. beane meals. ibid. beane
 stalkes in a figge full of prickes. 569.d. beanes how to
 be prepared before they are set or sowne. 575.a. beanes and
 vetches sowne under furrow. 580. g. beanes yielding
 great increase. 565.b. beanes forbidden by Pythagoras
 to be eaten. 569. a. the arch Flamin abstineth from
 beanes. wherefore. 569.b. beanes used in porrales. 569.b
 when they are to be set or sowne. ibid. b. kidney beanes.
 570. beanes sowing durt enrich a ground. 569.c. beanes
 growing of their own accord. ibid.
 Beares: they have no marrow at all. 344. m. how they en-
 gender. 302.l. beares have the tenderest sculls. 332.l.
 beares cure themselves with pismires. 211.c. beares their
 manner of generation. 215. f. their young imperfect.
 216.g. they grow exceeding fat. ibid. b. their fat medi-
 cinable. ibid. they seeke to the herbe Wake-robin. ibid. i
 they are subiect to dimisse of sight. ibid. i. weakie in the
 head. ibid. k. their braine venomous. ibid. l. bunted in the
 shew-place at Rome. ibid. l

Beasts accounted for gods. 3. c. beasts of India very bigge.
 155.b. beasts engendered in the uninhabitable places of the
 earth, and the reason. 11. b. beasts that drinke lassy,
 bleed most at their death. 346.b. beasts bring forth young
 according as they are whole hoisted or clowen. 303. a.
 beasts, which bring their young perfect, which imper-
 fect. ibid. beasts will not touch where beares have be-
 creeth. 356. a. beasts foule fouled commonly rest on their
 right side. 350. k. beasts by whom first killed. 190.k.
 Beech most highly esteemed. 486.m. a beech groue finely
 kept and consecrated to Drinae. 496.g
 Bees: their order and nature. 312.1. when they goe abroad.
 ibid. i. their first work. ibid. their care of their kinde.
 ibid. their regard of their worke. 313.a. their mu-
 sition. ibid. b. their greatest pleasure among olive trees.
 ibid. d. they hurt vines. ibid. they wander not from
 their hives about fittie paces. ibid. they send out spies.
 ibid. e. how they watch. ibid. they forsight. 314.g.
 how they take themselves. ibid. h. their severall offices.
 ibid. d. of two sorts in one hive. ibid. k. they goe with
 the wind. ibid. l. their pollicie against the wind. ibid.
 they punish slothfulness. ibid. their cleanliness. ibid.
 their silence about night. their hatred to the drone.
 315.b. their buildings for their Apartment. ibid. c. how
 they are driven away. 316. k. bees, when they are
 troubled with sleep only. 317. e. they abhor a theefe.
 ibid. their fidelity to their king. 319. a. bees settled on

Plato his month. ibid. d. bees in the campe of Generall
 Draus. ibid. why sometimes they fight. 320.g. bees
 after they have stung be no better than drones. ibid. k.
 drone bees are bigger. 315. a. they take up least lod-
 ging. ibid. Of bees worke. three foundations. 313.b.
 whom they will sting. 320. k. bees are often sick.
 320. m. bees sorrow for their dead king. 321.a. bees
 performe a solennitie of exercise. ibid. e. they live not
 above seven years. ibid. how they are repaired. 322.g.
 bees will not touch a dead carkeffe. ibid. i. bees only
 make their owne meat. 328.i
 Beesles how no sting. 326.k. they are remedies for children.
 ibid. they are delighted in roses. 355.e
 Belaphon his letters in tables. 394.l
 of the Belly. 342.k
 Bellies that be fatter. cause grossenesse of capacitee. ibid. l
 Belus inventor of Astronomie. 316.b
 Benon or Behen. 574.f. a nut only for sweet ointments. ib.
 Benacus a lake in Italy. 248.g
 Bontia river. 51.f
 Boreas drive a flarre. 34.d
 Bories different. 447.f
 Barbicus Island sometimes joined to Bithinia. 40.i

B I

Bills given to birds in stead of monethes, and their use.
 336.d.m.
 Bienen a kinde of wine medicinable. 414.i
 Bioners quide themselves. 212.m. where they breed, their
 nature. 213.a
 Birch tree described, and how it is employed. 413.d
 Birds: a. a. 181.b
 Birds: how it was made. 497.a
 Birds: jingling when they ordinarily doe breed. 287.c. birds
 very few have gamles in the livers. 341.f. birds hatched
 with their talles forward. 272.e. birds having neither
 wings nor feet. 345. c. birds with hooked talens
 prey on. 278.k. birds how they translate their egges
 from place to place having no book: a. talons. 289. a.
 birds differ: from another in sight and gate. 291.f.
 birds how they drinke. 295.c. birds of divers fanges.
 ibid. birds jingling, after their notes. 285.c. new birds.
 293.k. birds there be none without feet. 351.d. birds
 lay eggs how to be understood. 296.l. birds of prey
 least misfull. 297.f. birds that lay most. ibid. birds
 how they engender. 298. g. birds how they differ
 in laying and covring. ibid. i. 300. k. birds small be
 fruite. 4301.d. blackbirds counterfeiting mans speech.
 293.d. blackbirds are gone for a time. 284.g. black-
 birds change both hew and tune. ibid.
 Births: strange for number, for defects and superfluitie.
 164.b.

Birds of children: uncertaine. 188.k
 Birth at seven months true. also at the eleventh. ib. A. child
 legitimate borne within thirteene months, after the sup-
 posed father deceased. 159.a
 Bithonia or Bithynia of Germanie. 199.f
 Bistulle years. 385.b
 Bitches differ in their litters. 303.c. bitches engender with
 Tires. 219. e. with wolves. ib. how long they live. ibid. i.
 young. 320.b. their whelpes blind. ibid. j.
 Bithyn. Women mitcher, who have a double sight in their
 eye. 155.a
 Biting

Biting if a mad dog cured by Eglantine. 220.k
 Bismen comparable to the water of Syx. 47.d
 Bismen a strange slime. 163.e

B L

Bladder where it is placed. 343.f. bladder nut tree. 467.c.
 bladder only three found, where is lungs and blond.
 343.f. of the bladder in man and beast. 343.f. bladder
 being wounded cannot be cured. 344.g
 Blasted corne. 574.i
 Blasts when they be occasioned. 574.1.m. blasts suddaine
 their names and nature. 24.k
 Blatte flies are nourished in darkness. 326.m
 Blazing flares. See comets. Volusius Saturnus how bee
 used to bleed. 346.b
 Blossoming time of trees how long it lasteth. 473.b
 Blood apples. 438.l. blood aimed. See Raine. blood fat and
 grosse breedeth anger and cholter. 345.f. of blood a dis-
 course. ibid. blood of males blacker than of females. ib.
 blood containeth a great portion and treasure of life.
 346.g. it is without fence and feeling. ibid. blood that is
 thinnest, cansteth strenght in creatures. ibid. blood that is
 thickest maketh men wise. ibid. where it is but little
 maketh men fowlesfull. ib. blood of bulls fowles con-
 galeth. ib. it is posson to be drunke. ibid. blood of Ases mis-
 fittie and grosse. ib. blood of man thinnest and best. ibid.
 blood is but little in those that be fat. ib. blood cast up
 by many at the mouth. ib. blood quietest encrease of
 all parts of the body. ib. blood changeth with anger
 and furie. ibid.
 in Blooming time raine hurtfull to corne. 574.k

B O

Boe, mightie great serpent. 199.e. why so called. ib.
 Bodies of men and women different beside the distinct parts
 of sex. 165.e
 Bones of one entire piece of wood. 490.g
 Botica, so called of Botis. 51.b
 Bousis of India. 224. k. bred by king Pyrrhus. ibid.
 their manner of engendering and breeding. ibid. of fecu-
 ding. 224.a. when they are to be drunke and yoked.
 ibid. b. sufficient for sacrifice. ibid. c. knowne to speake.
 ibid.
 Bolides flaming lances in the ike. 177.b
 Bombyces, reed or canes. 484.g
 Bombycia garments of silke. 322.m
 Bombythie the greater kinde of Bombyces. 222.l
 Bombyx, a fine breeding in Assyria. ibid. their hard nature.
 ibid. how they engender. ibid.
 of Bones. 345.a
 Bonasus, what manner of beast, and his properties. 200.b
 Bonasus brought forth a serpent. 157.f
 Bones of Ases legs found. 345. a. bones in some men
 without marrow. 165.f. bones sometimes found in the
 hearts of beasts. 340.e
 Bore his owne Physitian. 210.m. bore served whole unto
 the bound. 230.l
 Boreas wind. 23.a
 Borysthenes river. 154.i
 Bospori the freights (Tibracius and Cimmericus.) 117.f
 why so called. 115. a. Bospori, sometime land. 40.l
 Botany, what it is. 577.a
 Bonters and K. ringer. 567.c
 Box tree wood commanded in the root most. 467.c. box tree

strength for arbores. ibid. of box tree three kinde. ibid. e.
 where it delighteth to grow. ibid. d. the waste of the
 flower and wood. ibid. box tree beareth variete of
 finits. 476.g

B R

Brake, sic Ferne. 286.m
 Braine of a Date tree. 286.m
 Bramble of three fort. 48.g. with a blacke berry, with
 a rose, and a red berry. ibid. f. the bramble Idea, which
 is Ruffus. ibid.
 Brance, what corne. 559.d
 people Branded with hot yrons. 116.b
 Brasse, where first found. 80.m. brasse-founders the first.
 188.k. brasse forges and furnaces, who densified. ibid. k.
 Bravne of wilde bores in great request. 230.l
 Braines the coldest part of mans body. 332.m. they are
 without blood or veins. ibid. by feeling they maxe
 hard. 333.a. without flesh, blood, filth or ordure. ibid.
 braines, the fort and castle of the fences. ibid. braines
 and cures. 330.g. of braines and the braine pan.
 332.d.m.

Bread of sundry forts, according to the meat eaten there-
 with. 566.l. bread. Parthake or water-bread. 567.a
 Breadth of the carth. 48.f
 Breath of Lions straken. 255. a. breath of beares pestifer
 and deadly. ibid. breath of men by what manner it is un-
 settled. ibid. k. breath of man shall returne into the atre.
 ibid. it is corrupted by much drinking of wine. ib. breath
 of Elephants, what vertue it hath. 355.e
 Breeding time in plants. 471.e
 of the Brest in man and beast. 343.e. f
 Brest apples. 438.l
 Bricks and tiles who densified. 188.k
 Brim of the ear: the being wounded, cannot be drunke toge-
 ther. 386.k
 Brittain, an Island renowned. 86.k
 Brocci, who they were. 336.l
 Brochos what it is. 365.a
 Broad-ben flarre, Virginia. 588.b
 setting of broad-ben. 589.f
 Broome, where and when to be set. 423.c
 Brumic in maple. 507.a
 Brum, what tree. 371.a
 Brum, a pramontory. 51.b
 Bryon (Aromaticum) what it is. 375.d
 Bryon a weed in the sea. 401.e

B V

Bubety, what places they are. 580.k
 Bubulcus, surname to the house of Juny, whereupon. ib. b
 Bucephalia the citie. 221.a
 Bucephalus King Alexanders horse. 220.l. his description
 and are qualities. ib. m
 Bucklers of what wood they be made. 590.k
 Bussler borne of eight gallons. 331.f. bussler horse how it is
 used. 332.g
 Building upon land in the country. 584.g
 Bull baiting. 225.a
 Buying and selling who densified. 187.e
 Bulls wild untamable. 206.b
 Bullus. 437.a
 Bums, si.

The Table to the first Tome

Bumastis grapes.	405.a	Camelopardalis, what kinde of beast.	205.d
Bumelian kinde of Ash-tree.	465.f	Campaine in Italy a most fruitful country.	567.e.f
Bunches in wood.	487.d	Cannell. See Cafia.	
Bura citio.	41.a	Canes. See Reeds.	
Burning and burying of dead-bodies after diuerse forts.	186.l.m.	Canes of India serue betwene joints, for boats	482.m
Butter hath the vertue and properties of oyle.	340.k	Canes of diuerse forts.	493.b
Butterfly how it is bred.	329.e	Canes and reeds how they grow.	ibid.a
Butterflies no good signe of the Spring.	586.g	Cantarium what sacrifice.	551.b
Buteo. See Triorchet.		Caucamum.	374.b
Buteo gave the name to the house of Fabij in Rome.	274.k	Cantius, the workmen that made the stature of Diana at Ephesus.	491.c
Buzcardi good meat.	296.k	Cantius the name of a starre, where and in what manner it appeareth, and where not.	34.l
Buzcardi. See Buteo.		Cantius, a goodly starre seen in Taprobane about the pole Antarcticke.	130.i
B Y			
Byzantium territory of Affricks.	505.e. most fruitful ground.	Cantius in a vineyard, what it is.	528.l.k
Byzia a castle of Thracian kings, hated of Swallowes, and why.	278.l	Cantharethos in Thrace. 377.a. why so called.	ibid.
C A			
Acorys in an Oke, what it is. 400.l. the use and manner thereof.	ibid.	Cantharethos, a kinde of red marle.	506.b
Cadytas, what it is.	406.i	Capparis, the plant of the fruit capres.	400.i
Cadmus, where borne. 108.g. first found out for to write prose.	ibid.	Cappricornus to be praisid after rainne.	546.b
Cafes wind.	23.a	Cappricornus what it is.	444.k
Cafes his practise by Swallowes.	283.a	Cappricornus how they took their names.	116.b
Cafes and Cafones, why so called. 160.a. such commonly fortuare.	ibid.	Captimulg, what birds.	392.i
Cafes his breast-plate made of Englysh pearle.	256.k	Carambis promontory.	49.a
Cafes Dillator his liberative in wines.	420.b	Carbunculus, burning earth.	503.b
Cafes ripe out of his mothers belly.	160.i	Carbunculus in corne, what it is.	598.i
Cafes his quicknesse of spirit.	168.k	Cardamomum, foure kinde.	365.e
Cafes his fidelitie concerning writing.	168.m	Cardiaca, a disease of the heart.	341.a
Cafes Thronos, a starre.	34.d	Cardia, what it is.	598.i
Cafes, a crite in Mauritania.	53.d	Carpinus, what manner of trees.	466.m
Caim Hircus inuented stewes for Lampries in Africa.	267.c	Cargino, what it is.	476.g
Caim Marius first advanced the Eagle in the Romane ensigne.	273.c	Carphesium.	367.d
Caim Catigula the Emperour his saying of Surrentine wines.	414.b	Caryota dates, why so called, and the wine thereof.	387.d
Caim Cecilia. Look Tanaquill.		Caryopon, what drug. 397.e. the worth.	ibid.
Calpe, a Promontory.	51.b	Carob-tree.	390.g
Calpe, a mountaine.	ibid.e	Carobis or caralts, what kinde of fruits.	447.b
Calculofo, a kinde of Purples.	259.b	Caroptry and the tooles, whose inuention.	188.l
Cadyda Island.	316.b	Carophilion.	452.m
Calceum Aromaticum.	375.a	Carolyte territory.	537.f
Calculation of the yeare by Cesar the Author followeth.	586.l.	Carthegon, what it is.	470.g
Calamarie, fishes.	244.b	Cafia.	372.i
Calamint first used by Lizards.	210.l	Ciffa, the sweet spice where it groweth, 373.e. the plant described. ibid. Cafia the best.	ibid.
Calfe-Casse his qualities.	213.b	Cafus a mount of admirable height.	102.g
Calus chosen for sacrifice.	235.e	Caffia, gates so called.	122.g
Calitrichet, a kinde of Apes.	225.b	Calfipare not the strenght of Caucasus: they be described.	485.a.b
Camelodunum, a towne in Britaine.	36.k	Caffer and Pollux star what it is to be thought of them. 18.k	ibid.
Camell hath no fore-teeth in the upper iaw.	337.b	wherefore men inuocate them at sea.	ibid.
Camells how they engender.	302.l	Caracum what it is.	212.m
Camells their diuerse kinde.	205.b	Cat of gold worshipped as a god.	546.b
		Cats how theyinger. 302.l. Cats how subtil in hunting.	308.g
		Caracennae, a region. 415.f. why so called.	416.g
		Catigula his chiefest in his head.	334.k
		Cataracta. See Diomedean birds.	
		Cato Censorius commended. 410.d. his precepts touching Vines.	411.a
		Cato persuaded the Senate of Rome to destroy Carthage, by occasion of a figne.	416.g
		Cato his praise and commendation.	169.f
		Catarchites	

of Plinies Naturall History.

Catarchites, what kinde of Dates.	421.a	Cheefe of the best fort made in Dalmatia.	ibid.i
Catoblephus, what kinde of beasts.	208.l	Cheefe excellent at Vainisum.	ibid.m
Cati and Corculi, why so called.	173.b	Cheefe of diuerse forts.	349.a
Caus of vomit.	342.l	Cheefe a discourse.	348.l
Cannius naturally subiect to the feeling of the spleene.	331.k	Cheer tree bearing armes of a mighty biggnesse.	475.m
Caucasus presaged it fortune to M. Crassus.	445.e	Cheer trees when to be grafted.	523.b
Caucas, a people without trees, their habitation and country described.	455.a.b	Cheerries of a middle kind between cherries & grains. 448.g	ibid.
Caucasus, a kinde of Snakes.	218.i	Cheerries brought into Italy. ibid. they will not grow in Egypt.	ibid.
C E			
Cea Island.	41.a	Cheerries, Apronian, Allian, Cecilian, Julian, Diuacian, Plinian, of Portingall, Laureau, Macedonian.	448.b
Cedar gum.	424.g	Cheerries how they be kept.	ibid.i
Cedars, which be best.	489.a	Cheestnuts rather no be called Mast than nuts.	446.d
Cedar oyle.	ibid.	Cheestnuts described. ibid. their kernils ground into meale for bread. ibid. how to be eaten.	ibid.
Cedar for Masts.	490.g	Cheestnuts called Sardinian nuts, and why. ibid. named after Sardinia.	ibid.m
Cedar of dwarf kinde.	388.l.m	Cheestnuts, Tarentine, Balanitis.	ibid.
Cedrelate, 389. a. the timber thereof everlasting.	ibid.	Cheestnuts, Salarian, Corellian, Metecan, Coctian.	447.a
Cedreleon.	434.b	Cheestnuts which be best.	ibid.
Cedrium, what it is.	46.b	Cheestnuts which many.	285.c
Celendine vncuted by Swallowes.	210.l	Chine-bone. 339.a. the use of it.	ibid.
Celtum, a kinde of Tortoise.	241.e	Chine, man onely hath.	337.a
Celue. See Late-tree.		Chine how they be hatched.	298.l
Centigramum vntent.	565.b	Children begotten and borne, at what age of the parents.	165.a.b
Cephus a beast.	205.g	Children not alwaies answearable to their parents in euery respect.	160.l
Cepheus or Sereus, young drone Bees, and how they be fed.	318.i	Children twelue distinct cast away at one slip from a woman.	160.k
Ceratias, a kinde of Comet.	152	Children of the Dokes carry the marke of their parents to the fourth generation. 161. a child's changing. 158.b	ibid.
Cervus a Mast-tree. 458.m. the most thereof.	ibid.	Children breed their teeth in the seventh moneth of their age.	164.b
Cervus what worme. 492.g. wormes in figge-trees. 539.e	ibid.	Children about three at a birth, is monstrous.	157.d
Cerastes serpents. 208.g. Cerastes serpents haue horns of flesh.	331	A Child returned into the mothers wombe.	158.g
C H			
Chapeneffe of all vntuals in Rome. 551. d. the cause thereof.	ibid.f	Chimara, a hill in Phocis, burning both night and day.	47.b
Chalcedon, why called the cite of the blind.	134.g	Chinck Choller cause of fury. 341. e. cast up by vomit deadly.	ibid.
Chamedaphne.	452.m	Choromande, what people.	166.h
Chamercraft.	448.b	Chis his saying counted Oracles. 173.e. how he died and was honored.	ibid.d
Chameleons lightes are very big.	341.a	Chironides who first demised.	189.f
Chameleons walk their whole eyes.	331.f	Chrysmela, a kinde of Quince.	426.b
Chamelan.	398.k	Chydai, certain Dates.	388.g
Chamerope, what they be.	387.a	C I	
Chamamyne.	454.b	Cich-pease and the nature thereof, how to be sowne.	569.f
Chani fishes without males.	244.m	570.g. sundry kinds of cicches.	370.g
Characias, a kinde of reed or cane.	483.e	Cich-pease how coddied.	ibid.
Charobepharon. a shrub within the sea.	402.k	M.T. Cicero the elder his praise.	172.m
Charcoalde of Oke-wood.	459.c	M. Cicero the younger challenged for a drunkard.	428.g
Charcoalde of young tree best.	ibid.	Ciceruta.	370.g
Charcoalde how it is made.	459.d	Cicero his commendation.	372.m
Charcoalde worst, made of the Oke Hatiphloe.	457.f	Cici. Look Ricinus.	370.g
Charme to drinck away bile.	168.g	Cichorie, medicinale to diuerse birds.	211.d
Charmidas his memory.	17.b	Cilicia, the description thereof.	104.m
Chasma what it is.	173.f	Cinnamologus a bird.	372.f.g
Chastitie rare examples.	459.d	Cinnamon groweth in Ethiopia. 372. i. exchanged for what commoditie.	372.k
Chats or Catkins upon diuerse trees.	205.e	Cinnamon plant described.	ibid.
Chau a beast.	334.i	Chia-	
Chelonephagi haue all but head.	138.l		
Chelonia, Islands in Asia.	364.i		
Chelidony, bones in mawes of young birds.	343.b		
Chenopides. See Birganders.	281.b		
Cheefe caligonne to barbarous nations.	348.k		

of Plinies Naturall History.

Corn given as a reward to worthy warriors. *ibid.*
Corn-chops at Rome. 551.
Corns divided into two severall heads, Fourment and Puffe. 557.
Corne of all sorts when it cometh after it is sowne. *ibid.*
Corne how it beareth head and beareth seed. 558.
Corne spiked which leafe it beareth. 559.
Corne spiked bloweth at once. *ibid.*
Corne differing in ripening. *ibid.*
Corne differing in taste and odour. *ibid.*
Corne how to be threshed and cleafed. *ibid.*
Corn how it differeth in weight. *ibid.*
bread-Corne doth degenerate into Oats. 579.
Corne in the field how to be preferred and kept from fild-mice. 576.
Corne how to be sowne respectively to the soile. *ibid.*
Corne growing upon trees. 577.
Corne how to be laid up for store. 603. a. b. what corne will keepe best. *ibid.* c. e. how corne may be kept sweeter and good longer. *ibid.* c. cutting of corne after diverse sort. 602.
Cornei: (Marvall. 456. d. Vallare. *ibid.* Naudale. *ibid.* Raffrate. *ibid.*)
Cornei how they canest first. 456.
Coromandans a kinde of people. 156. g. without speech. *ibid.*
Cott. toothed like dogs. *ibid.*
Corns wind. 221.
Coos Island. 323. a.
Coffi-wormes bred in oke. 539. c. they be deintie meat. *ibid.*
Colima a spice. 384. b. she kinds and price thereof. *ibid.*
Costinus what tree. 468. b
Cotton trees. See Gossampine.
Cotton trees in Aethyopia. 395. a

C R

Crab-fishes their nature. 252. a. k l
Crab-apples. 438. m
Crab-trees bearing twice a yeare. 474. m
Crabs only foure-footed among fishes. 351. l
Crassus his name vntimely speech. 353. a. it was propheticall. *ibid.*
Crane how they flye. 281. c
Cranes tamed, very plaishfull. *ibid.*
Cranes a diuerse daye. 282. g
Crapsin what it is. 464. k
Crapsin what mixture it is, and what effects it worketh. 424. b.
Crassius Agellinus was neuer knowne to laugh all his life time. 166. b
Crassinemum a kinde of Maple. 466. m
Crater Nymphes, a hollow burning furnace, and vnfortunate to the Apollonians. 47. d
Craterus Monoceros, a most excellent Hunter, or Hawker. 29. k
Creatures that lie hidden in the earth, at times have no blood at all. 346. b
Creatures are not all haire that bring forth quick young. *ibid.* m
Creatures none of them haue an adde foot. 351. c
Creatures which onely be round. *ibid.*
Creatures whose hofed, their legs grow not in length. *ibid.* f
what creatures will not live nor breed within some countrey. *ibid.*

tries. 234. j
Creatures hurtfull to strangers and none else. *ibid.*
Creatures without blood haue no liues. 341. i
Crypsimus Hilarius his strain of children and issue in Isidore. 162. m
Crescent lining. 346. f
Crisolinus healed King Philip his cie. 174. m. his remedy. *ibid.*
Crocodile of the river. 334. a. moneth the upper saw. *ibid.*
Crocodiles male and female fit by turmes. 302. b
Crocodiles wile and insatiable. 346. f
Crocodiles their descriptions. 308. m. they haue both land and water. 209. a
Cromas, what kinde of beast: and their nature. 206. g
Crowes, a kinde of fish. 245. a
Crotalus, his periculis. 256. g
Crown a subtil bird. 276. b. shew feedeth her young being fledged. *ibid.*
a Crow taught to speake. 294. k

C T

Ctesias of Gnidos. 47. b
Ctesiphon named Dianars temple at Euphesus. 175. b

C V

Cuckoo reckoned a Hawk 275. b. his time of appearance. *ibid.*
Cuckoo killd by his own cuckee. *ibid.*
Cuckoos lay in other birds nests, and why. 275. c
they denounce the young birds of their nauce. 275. a
young Cuckoos fat and delicate meat. *ibid.*
Cuckoo checketh the idle husband that is behind hand with his worke. 593. b
Cucunya tree. 390. c
Cuit wine, Malampushium, Psidium. 416. f
Cure of sundary sorts. 416. a. m
Culeus, the biggest measure of liquor that was among the Romans. 606. g
Curries, the varietie and diuers disposition thereof. 366. g
Curnies come. 402. m
Cursus, a noble knight of Rome. 443. g
Custard, what it is. 461. e
Cutting of corne after diuerse sort. *ibid.*
Cuttle fish. 256. g. their nature. *ibid.*

C Y

Cybica quarters of Pelagides. 243. d
Cyca, certayne Dates. 388. e
Cyclops, monsters of men. 154. g
Cychramus, what bird. 283. a
Cynae his merrie scotte at a Vine that bare hard winter. 405. b. his memorie. 168. g
Cyna trees. 353. j
Cynobates. 401. a
Cynofura, what kinde of adder egge. 301. e
Cynophis, water-serpens. 243. b
Cynopoda, a kinde of Aspes or Monkies. 332. g
Cypresse tree will not be dunged nor materi'd. 544. e
it is worse for good Physicke. *ibid.*
Cypresse trees beare ordinarily three a yeare. 479. d
Cypresse tree described as large, with the properties thereof. 479. c. consecrated to Pluto, and why. *ibid.*
Cypresse tree good to make waters and berders. 479. d
Cypresse woods painefull to the Lord. *ibid.*
Cypresse trees loue the Isle Candy best. *ibid.*
Cypresse wood faire and shining. 491. d
Cypresse tree Roins. 424. g

The Table to the first Tombe.

Cypripedium oyle. 376 g. 380 b.
Cypress an Aegiptian tree. 375 f
Cyprus Island. 48 k. joined sometimes to Syria.
the compass and length thereof. 110 m
Cyrus the description thereof. 94 k. famous, and why. ibid.
Cysts highly commended for feeding sheep and other cat-
till. 400 l. m. it encreaseth milkes milk. 401 a. b. c.
how it is to be planted and ordered. ibid. c.

D A

DAbulana what they be. 386 e
Dailyly, certaine grapes. 405 f. why so called. ibid.
Daffadilly flowers thrice; and flowers three seasons of blow-
ing. 592 b
Daphnoides Ispocinnamon. 374 g
Daphne. 453 a
Daphnitis. 452 m
Dates trees: their sundrie kinds. 384 m. 385 b.
Of what they be imployed. ibid.
Of a date tree and other plants: prospering under it, a wonder
incredible. 581 d
Date trees described. 585 c. d
Distilling used by seltz evidently. ibid. d
Jacke Dates. See Chongba.
Dates how they are to be set. 385 e
Damanatus turned into a Wolfe. 207 d
Dates in Egypt. 374 l
Dates concurre by the preference of the male. 386 g. h
Date trees come of slips and branches, as well as of kern-
wils. ibid. i
Date trees spring of their owne leaves. 508 m
Dates gilded. 386 l
Date tree growing in the Capitoll of Rome. 143 e
Dates of 49 sorts. 387 b
Date Royall. 161 d
Dates of Isie best. 387 e
Dates of sundry forts. 388 b
Dates serve to franks Swine. ibid. i
Dates ferne prunes. ibid. l
Date trees leaves serve for cordage. 470 l. how to be pulled
and ordered. 470 l
Date trees like not in a strange country. 478 k
Date tree of great antiquitie. 495 e
Datibathum what it is. 367 d
Dates how they come to be unequally, and not of certain
length. 13 f
Daylight in the night. 18 g
Daylight upon earth, the reason thereof. 35 c
Day where it is longest and where shortest. 36 i
continual day for six months. ibid. how dates are ob-
served. 36 l
Day for six months together, where.
the kindnesse of a Daughter to her mother. 174 b
Daughters of Acrippa delivered of two tyrants. 160 g
Daphnia a bondslave how highly praised. 175 e
Dando a Sclanonian, fined five hundred years. 181 a
Dailyly fishes. 209 f
Daughters of Marcus Curiatius, why they were called
Seditigae. 349 c
Danncing wholsome invention. 189 e

Death suddaine. D E
Dead supped recover. 185 c. d. e.
Deale. See Firre. 184 b
Deare when it appeareth.
signes of Death in sicknesse. 29 b
Dead bodies more warm than quicke. 185 e
Deafe naturally be dumbe. 306 g
Decemmann times, what it is. 609 b
Deere, where they have four kidneys apiece. 343 d
Decapolis, why so called. 701
Defunctus, what it is. 416 l
Delos Island. 40 g
Delos Island famous, and why so called. 81 b. the diuine
names thereof. 161 d
Demetrius spared to burn Rhodes for the love of a picture.
175 d
Demetrius forcing by the flars a death of oile, brought
up all aforehand. 598 g. hee fainted two gods, Puni-
ment and Benefit. 3 d
Demetrius in hot weather fore-saw a shower of raine and
foretold it. 610 m
Denteria what winter. 417 e

D I

Diaks, where first invented. 191 b. not serving for all
places. 35 d
Dialeta, a kinde of Purple. 29 b
Diantis Marthe. 369 b
Dianets temple at Ephesus, foure hundred yeares in build-
ing. 45 lb. of what timber it was built. 161 d
her image of wood. 491 c. why what meane it endured so
long. ibid.
Diancs temple at Saguntum. ibid. d
Diabaph, what Purple dies. 460 e
Diancs temple in Antioch. 201 e
Dia Palmata, what they be. 383 c
Dicarcarchus his commission. 31 d
Digestion of meat worse in Summer than in Winter. 355 f
Digestion in sleepe of what effect. 316 g
Didame first invented. 187 e
Disimulation by beasts who desist. 189 d
Dinocharis, a renowned Architect. 99 b
Dioemedian birds described, and why so called. 294 m.
295 a. b.
Dioempha, what dies. 260 i
Dioscurias, a famous citie of the Colchians. 117 c. d.
by whom founded. ibid.
Dioctores, or men of a propheticall spirit. 173 d
Dionysius being deposed from his kingdom, the sea-water
grew to be fresh. 44 i
Dionysodorus a Geometrician. 49 c. and his Epistle found
in his sepulcher, and the contents thereof. ibid.
Diomedes his lake. 94 g
Diomedes his horses. 78 b
Diribitorium. 489 d
Discord betweene beasts. 308 b
Dimisit of childrens resemblance of their parents. ibid. b
Dinsony of fishes. 247 d
Difference betweene braine and marrow of the bones. 333 a
Difference of eie-sight in men. 334
Diuersitie of moouies in creatures. 336 l
Diuersitie of teeth in creatures. 337 a

Difca-

of Plinies Naturall History.

Diseases <i>breng</i> incident to <i>men and women</i> . 182.1. as strangely <i>caused</i> . 183.1. <i>who lived long without disease</i> . ibid. b.		Draught what <i>alms</i> . 379.6 308	
Diseases of <i>fundry forts</i> . ibid. c.		Drypea what <i>alms</i> . 439.2	
Diseases <i>slow</i> <i>hunts trees</i> . 538.m		Dryes <i>hybler</i> . 458.6	
Distances in <i>planning</i> how to be observed. 514.4	D O	Dryde in France. 457. b. why is called. ibid. Dryde then ceremonies in gathering of <i>oke</i> <i>miffelo</i> . ibid. c.	
Docs <i>shining</i> <i>beames</i> in the <i>skie</i> . 17. b		against <i>drunkenesse</i> and <i>Drunkards</i> . 426.1	
Dogs <i>laune</i> and <i>faithfull</i> to their <i>masters</i> . 218.1		M. Antonius a <i>Drunkard</i> , and <i>maintainer</i> of <i>Drunken-</i> <i>ness</i> . 428.2	
Dogs <i>refuse</i> a <i>king</i> to be <i>crowned</i> againe. 218.m their af- fection to their <i>master</i> . 219.a		the <i>behaviour</i> of <i>Drunkards</i> . 427. a	
Dogs <i>employes</i> in <i>war</i> . 218.m. their are <i>properties</i> . 219. c		Partisan <i>great Drinkers</i> of <i>wine</i> . ibid. a	
one Dog <i>overcome</i> a <i>Lion</i> and an <i>Elephant</i> . 220. b		Drumfoll <i>Island</i> . 40. c	D V
Dogs <i>mad</i> . 220.1. how they be <i>preferred</i> from <i>madness</i> . ibid. c		Dung of <i>blackebirds</i> for what it is <i>good</i> . 507. c	
A Dog <i>breaketh</i> . 120. c		Dunging of <i>land</i> when and in what <i>order</i> . 582.1	
Dogs <i>come</i> into <i>Hercules</i> <i>temple</i> in the <i>best-market</i> at <i>Rome</i> . 285. d		Dungbill <i>cockes</i> <i>best adorned</i> on the <i>head</i> . 331. b	
Dogs <i>will</i> not <i>live</i> in the <i>Isle</i> of <i>Sygara</i> . 141. e		Dunging <i>how</i> it is to be <i>used</i> . 582.1	
Dogs <i>starve</i> <i>power</i> . 19. f		Dunging of <i>grounds</i> <i>invented</i> by <i>King Augus</i> . 507. b	
Dogs <i>starve</i> <i>powerfull</i> on the <i>sea</i> . 243. e		Parasites, <i>certaine</i> <i>grapes</i> 405. e	
Dogs <i>starve</i> of <i>great</i> <i>affliction</i> and <i>precious</i> . 597. d. highly <i>be-</i> <i>nourished</i> . ibid.		Duraene <i>crashes</i> . 43.6. k. why so <i>called</i> . ibid.	
Dolphins <i>their</i> <i>nature</i> . 238. b.		Dwarfs in <i>both</i> <i>sexes</i> . 165. c	D W
Dolphin <i>swiftest</i> of <i>all</i> <i>fishes</i> and <i>creatures</i> . 238. m. <i>swifter</i> <i>than</i> an <i>arrow</i> out of a <i>bow</i> . ibid. fort <i>themselves</i> like <i>man</i> and <i>wife</i> . 238.1		Dwarfs <i>there</i> be in <i>all</i> <i>kinds</i> of <i>creatures</i> . 358. g	D Y
Dolphins <i>losing</i> <i>if</i> <i>affect</i> <i>men</i> and <i>muficks</i> . ibid. l. they <i>love</i> <i>marking</i> <i>dures</i> <i>examples</i> <i>thereof</i> . 238. m		Dying <i>wooll</i> <i>how</i> <i>denied</i> . 188.1	
Dolphins <i>know</i> the <i>name</i> <i>Sino</i> . ibid. they <i>help</i> <i>fishers</i> to <i>catch</i> <i>fish</i> . 240. a. they <i>have</i> a <i>certaine</i> <i>commonwealth</i> . ibid.		Dyals by <i>whom</i> <i>denied</i> . 191. b	
Dolphins <i>have</i> <i>no</i> <i>eares</i> . 333. c		water Dyals or <i>Cleptares</i> <i>whose</i> <i>invention</i> . 191. d	
Dolphins <i>enemies</i> to <i>Crocodiles</i> . 209. c			E A
Dor <i>mice</i> <i>keep</i> <i>tame</i> . 233. b. they <i>sleep</i> <i>all</i> <i>winter</i> . ibid. c		Eale what <i>kinds</i> of <i>beast</i> it is. 206. b	
Dor <i>to</i> their <i>fires</i> . ibid. c		Eares <i>tokens</i> of <i>courage</i> . 333. d	
Dorick <i>inn</i> . 14. d		Earth <i>what</i> <i>portion</i> <i>thereof</i> is <i>habitable</i> . 33. c. how is ap- pearth that the <i>earth</i> is in the <i>middle</i> of the <i>world</i> . 34. b	
Dorick <i>Doues</i> <i>chaff</i> . 290. g. ben-Doues <i>meeke</i> . ibid. b. the <i>cocks</i> <i>realous</i> <i>will</i> <i>kind</i> to their <i>perjurons</i> . ibid. i. how they <i>drinke</i> . ibid. l.		Earth in the <i>middle</i> <i>thereof</i> an <i>indefinite</i> <i>mixture</i> from <i>both</i> <i>sides</i> . 37. b	
Dorick-Douer <i>like</i> <i>long</i> . 290. k. their <i>time</i> . ibid.		Earthquakes the <i>reason</i> <i>thereof</i> . 37. c. when they <i>commonly</i> <i>happen</i> . 38. b. figures of <i>earthquakes</i> <i>comming</i> . ibid. c. m.	
Doues <i>wink</i> with <i>both</i> <i>their</i> <i>eye</i> - <i>ends</i> . 336.1		des <i>against</i> it. ib. strange and <i>monstrous</i> <i>earthquakes</i> . 39. a. wonders of <i>earthquakes</i> . ibid.	
Doues <i>win</i> <i>glories</i> . 290. m. taken in their <i>pride</i> by the faucon. 261. b. they <i>love</i> the <i>Kestrell</i> and <i>Carriers</i> , and <i>wherefore</i> . ibid. doues <i>employed</i> as <i>posts</i> and <i>scouters</i> , <i>wherefore</i> . ibid. how they be kept to their <i>owne</i> <i>dwelling</i> . ibid. doues and <i>pigeons</i> of <i>different</i> <i>price</i> . 291. d		Earth <i>both</i> <i>denoured</i> <i>her</i> <i>self</i> , and <i>what</i> <i>lands</i> <i>have</i> <i>been</i> <i>swallowed</i> <i>up</i> <i>themselves</i> . 40. m. parts of the <i>earth</i> that <i>are</i> <i>not</i> <i>trouble</i> and <i>like</i> . 41. e	
Doues <i>how</i> of <i>an</i> <i>eye</i> <i>live</i> and <i>live</i> in <i>agone</i> . 295.1. boue- dous <i>hatch</i> a <i>cocke</i> and a <i>hen</i> <i>pigeon</i> . 300. c. ben-doues <i>tread</i> one another for <i>want</i> of a <i>cocke</i> . ibid. i.		the <i>measure</i> of the <i>earth</i> in <i>length</i> and <i>breadth</i> . 23. f	
Douas a <i>kind</i> of <i>treed</i> . 485. c. k.		Earth <i>element</i> . 42. b	
Dough how it is <i>made</i> . 560	D R	Earth <i>lowest</i> and in the <i>middle</i> : <i>earth</i> <i>hangeth</i> by the <i>poles</i> of the <i>heavens</i> . 1. m	
sea- <i>Dragon</i> . 249. d		Earth <i>perish</i> all other <i>element</i> . 52. a. earth <i>unmoveable</i> . 8.1	
Dragons in <i>wines</i> what they be. 536. b		Earth <i>less</i> than the <i>Sun</i> . 11. b	
Dragons <i>fight</i> with <i>elephants</i> , and their <i>subtiltie</i> . 198. k		Earth <i>no</i> <i>place</i> <i>thereof</i> <i>uninhabited</i> <i>which</i> <i>lieth</i> <i>under</i> the <i>Ze-</i> <i>diacke</i> . 22. b	
where they <i>breed</i> . 199. c. Dragons <i>procure</i> <i>appetite</i> to <i>meat</i> with the <i>image</i> of <i>divine</i> <i>devours</i> . 271. a		Earth <i>defended</i> by an <i>apologie</i> of the <i>anbor</i> . 548.1. k	
some <i>near</i> <i>near</i> <i>Dragon</i> . 297. c		Earth <i>correct</i> and <i>repenteth</i> to be <i>titled</i> by <i>slaves</i> . 552. b	
dragum = by <i>Dicemores</i> <i>who</i> <i>first</i> <i>praised</i> . 189.		Earth <i>engraven</i> in <i>Achilles</i> <i>his</i> <i>armour</i> . 504.1	
		Earth <i>how</i> it is <i>subtil</i> to <i>old</i> <i>age</i> . 504.1	
		Earth the <i>nature</i> <i>thereof</i> <i>requisite</i> to be <i>knowne</i> . 515. b	
		Earth <i>defreth</i> the <i>ail</i> of <i>generation</i> . 523. a	
		Eaie is the <i>deliverance</i> of a <i>man</i> <i>child</i> . 159. a	
			E B
		Ebene a <i>tree</i> of <i>India</i> . 60. g. the <i>wood</i> <i>paid</i> as a <i>tribute</i> . ibid.	
		Ebene of <i>two</i> <i>kinds</i> . 360. b	
		Ebene a <i>tree</i> <i>flouered</i> in a <i>triumph</i> . ibid.	
		H b b	Ebene

The Table to the first Tome

Ebene wood maketh a sweet perfume.	ibid.	order their teeth. ibid. what else they make of them. ibid.	ibid.
Ebrua river.	503.d	they know wherefore they are hunted. 193.e. their elements to man. 193.f. their state of mans footing. 194.g.	ibid.
Echeta, a kinde of grasshoppers.	325.e	Elephant how he uttereth his voice. 353.e. their manner of march. 194.i. their passage over rivers.	ibid.
Echinometra, fishes.	253.b	Elephants best full and stoutest.	ibid. k
Echinus, archins of the sea.	253.a	Elephants two of K. Antiochus.	ibid. k
Echo, and the reason thereof.	21.d	Elephants, their time of generation. 194.l. their affection in love. 194.m. 195.a. both to their bene and ill to mankind. ibid. their memorie. 195.a. their justice. ibid. when they were first scene in Italy. 196.b. hunted in the cirque of Rome.	195.c
Eclipse, who were the first finders out thereof.	8.d	Elephants fight in the cirque of Rome.	ibid. c
Eclipse of the Sun when it happeneth.	9.e	an Elephant of wonderfull courage. 196.g. their induritie.	ibid.
Eclipse of the Moone thought to be by enchantment, and to be helped by dissolute ringing of bassons.	ibid.	ibid. moone people to pittie. ibid. h. Elephants fight. ibid. k.	ibid. k
Eclipse, in what time they have their returne to the former points.	9.f	Elephants gentle to weaker beasts.	ibid. k
Eclipse of the Sun when it happeneth.	9.g	Elephants harmelesse, unprouoked. ib. their manner of fight.	ibid. k
Eclipse of the Moone alwaies in the full.	ibid.	ibid. how they be tamed.	ibid. 197.d
Eclipse, how often, in what space, and the first finder out thereof.	9.d	Elephants how they be taken.	196.l. 197.a.b
Eclipse longer than ordinary when Caesar Dictator was murdered.	17.e	Elephants made in time of warre. 197.c. how they serve in warre.	ibid. d
Eg	B G	Elephants affrighted at the grunting of swine.	ibid.
Egs differ in colour.	298.g	Elephants how long they goe with young.	197.e
Egs of bird of two colours within the shell.	ibid.	Elephants in India bigger than African.	197.f. 198.k
Egs of fishes of one colour.	ibid.	they love waters. 191.i. can abide no cold. ibid. their food. 198.g. their trunks and the use thereof. ibid. they cannot abide a mouse. ibid. they take harme by swallowing a horse-leech. ib. h. their skin. ib. i. serveth to kill flies.	ibid.
Egs of birds, serpents, and fishes, how they differ.	ibid.	Elephants teeth of great price. ib. and the use of them. ibid.	ibid.
Egs best for an hen to sit upon.	299.a	Elephants trucked for meat. 198.m. where they breed. ib. k. their policie, and the reason thereof in nature.	199.a
Egs hatched without a kinde. 299.c. only by a kind heat. ib.	299.a	Elder tree good for piper. 485.e. the berries for what use.	526.g
Egs how they be married under an hen.	299.b	486.g. their stakes best to prop vines.	526.g
Wind-Egs called Hypemania. 300.l. how they be engendered. 301.e. wind-Egs Zephyria.	ibid.	Elme, seed what to be gathered. 512.g. how to be sown. ib.	483.g
Egs drawne through a ring.	ibid.	Elme c. stinua not good for vines.	535.a
Egs how they be best kept.	ibid.	Elmes husband to vines.	512.b
Egnat. Maccanus killed his wife for drinking wine. 418.k. of Eye plucking out, vomit followeth.	418.k	Elopi, a fish.	245.e
EL	334.d	Elpis taketh a house from betwene a Lions teeth.	203.d
Elaterium what it is.	369.a	Ekborine. 398.i. the leaner medicinable.	ibid.
Elate.	379.e	EM	
Electrum a kinde of metall.	260.l	Emperour Nero drawne by man from beasts.	352.d
Elements three, Water, Air, and Fire, have neither colour nor taste.	449.b	Embroidered worker, whose device.	228.b
Eleachi, what pearles.	255.f	Emertia, a place in Portugall.	261.b
Elecomeli, what it is.	435.a	Emplastration, what manner of grasing.	519.a
Elephants cure themselves by the wild olive.	211.e	EN	
Elephants bring forth but one at once.	303.d	Endimion, when that sable first sprang up of being in love with the Moone.	7.a
Elephant tooth. See Thoric.		what beasts engender backward.	302.k
Elephants have broad tongues.	339.a	Engines of battrey whose invention.	189.b
Elephants most induritiu and witty.	343.b	English oysters best of all others.	267.a
how they bend their hams.	346.l	Enhamon, a fowerage saline.	370.d
Elephants capacite, vertue, religion, desire of glory.	350.g	Ennion persons are venomous.	548.m
The biggest of land beasts. ibid. they adone the new Moone. 192.k. subject to sickness. 197.f. their docilitie.	192.i	EO	
192.l. 193.b. they plough the ground. ibid. they draw in a chariot. ibid. their manner of dancing. ibid. their feats of altitutie and nimbleness. 193.a. an Elephant gett up and downe rogers. 193.g. writing Greeke characters. ibid. embarked and their manner of landing.	193.d	Eone a tree.	399.b
193.c. their armes called hornes or teeth. ibid. they hide their teeth.	ibid.	EP	
Elephants young how they be knowne. 193.d. how they		Ephemerides, who first denied.	188.g
		Epirus description.	72.k
		Ephemerides his sleepe.	184.i
		Ephesus a famous cite of Asia.	109.b
		Epilepsie,	

of Plinies Natural History.

Epilepsie, whence it is.	335.a	E Y	
Epilepsie, a little tongue at the root of the othe.	339.b	Eyebrowes of man like the eares of a horse.	333.d
as in no creature that layeth eggs. ibid. use of it. ibid.	ibid.	Eyebrowes the seats of pride.	ibid. e
it is two fold.	385.d	one living creatures have no Eies.	333.f
one Eye in some Herons.	334.g	Eyes of sundry colours.	334.g. h. e
Epipatus, 358.i. the leaner medicinable.	339.e	ball or apple of the Eye different from the other parts. ibid. k.	334.g. h. e
Ephebus, sometime it was so neere the sea that it did beat upon the temple of Diana.	40.b	Eyes show the affection and disposition of the mind. 334.k. l.	334.k. l.
Eppor hill.	40.b	membranes of the Eye.	335.a
Episauris Island.	40.k	optique nerves of the Eyes whether they reach to the braine or stomacke.	ibid. d
ER		Eyes why they be closed ceremoniously in the dead.	ibid.
Eratothenes measured the globe of the earth, by what light and direction.	44.g	Eyes yield forth teares.	334.k
Eratothenes a most cunning cleark.	49.b. 36.b	Eyes, sometime why they see not and be well.	335.a
Eratothenes a writer his great praise.	49.b	Eye fight how it is placed.	ibid. b
Erinace, Sandarachia (Crinthus) seed of bees.	313.b	Eyedi, their use. 336.g. why they shed their haire.	ibid. b
Erinace effelled of spring dew.	ibid.	Eythoth of a Wolfe on the right side worketh wonders. 337.f.	337.f
Erinace. See Robin-redbreast.		of Eye-fight quick, wonderfull examples.	107.b
Ericum, a kinde of wild hony.	317.d	FA	
Erinite not charged with in sowing.	572.i	F Abaria.	569.a
Erinite medicinable by the testimony of Augustus Celsus.	572.k	Fabaria certain Islands.	596.d
572.k. when to be sown.	ibid.	Faces proper only to mankind.	333.d
Errone in numbering of years.	181.e	Falio what it is.	433.d
Erythra, what kinde of corne.	565.b	Fall of leafe a good rule for husbanden to direct them to seed.	588.i
Erythini, fishes along other female.	244.m	Falcon helpeth the owle in fight.	277.f
Erythra, myrrix.	369.d	Following each other years.	581.b
Erythrepton. See Asiatibus.		Faguatili, Jupiter at Rome.	461.f
Erythrocra, Pamegatus.	398.g. b	Farrago.	572.b
ES		Farrago corne or dredge.	573.a
Eseletrum, a granicure Rome.	462.g	Farina, whereof it is derived.	564.g
Eseulus the mast thereof.	458.m	Fabius a Senator of Rome strangled with a haire.	159.b
Eseulus runneth as deep into the ground as it riseth above the ground.	477.c	Fanonius the Westerne wind, why so called. 471.d. why called Chelidonius. 23.c. why named Orinthus. ibid. highly commended.	569.a
Essini, people throughout the world most wonderfull. 101.d. carnall last they know not. ibid. keepe company only with date trees. ibid. continued many thousand years without generation.	101.d	Fairies seen oftentimes in the deserts of Affricke.	157.c
ET		they vanish away like illusions.	ibid.
Estes, the name of winds.	23.d	FE	
Estia winds.	97.f. 473.b	Fest Fornacalia instituted by Numa.	549.e
EV		Fecatum what it is.	417.f
Euemeus.	376.l	L. Sylla called Felix, yet unhappy.	177.e
Eunomius, a tree.	399.b	Felicite diversely understood.	276.b
Eurus a river flowing over Pentus since the oil, not mingled therewith.	76.l	Feeling a sense common to all creatures.	306.e
Europe the measure thereof.	89.d	Femals may certainly turne to be males.	158.b
Euphorbia, how be the wonderfull. 101.d. thereof.	92.i	Femals have smaller voices than males, except him. 353.e.	353.e
Euphrates a famous river, the description thereof.	103.d	Femals fiers taller than the male.	563.b
Euphetion.	435.a	Femalke to be sowne negligently.	552.b
Europe not the third part of the earth. 51.a. but the one half.	ibid.	Ferres naturally hunt cozier.	331.b
Euthersies.	76.l	Ferula two kinde. 399.d. root of Ferula dangerous.	399.f
Eutrybe, a woman of Tralles delivered in her life time of thirte births. 157.c. carried to her funeral by twelve of her children.	ibid.	Ferula maketh excellent fine matches.	400.b
Embouches his finnes groweth.	165.c	a Ferme house how to be purchased and cheste.	553.b. c. d
Emmatus a vessel honored as a god.	180.k	Ferne or brache how to be killed.	556.m
EN		Festant bassard.	288.f
Enacetum what it is.	247.b. 458.i	Festants of Colchis daimie birds.	196.g
Enephorus best paste.	507.e	Festant will die of iye.	529.d
Enestratus a tree, a best best drug for ground.	255.f	Fener, a chappell dedicated to her.	5.e
Enestratus a pearle of common use.		FF	

Figtree bears fruit contrary to other trees, and why. 474.k.
Figtree bears twice a year: wild figtree bears three times a year. ibid. k.
Figtree

The Table to the first Tome

Figtree milke or sap seetheth for venereal.	486.g	Fire glasses opposeth to the sun-beames sooner inflame than fire.	477.f
Fig Limian. 442.2. Pompanian. ibid.	Fig. marisca. ibid.	Fire the highest element.	477.f
Speckled fig. ibid. Herculanian. 442.1.	Albicerate. ibid.	Fires about the body of men.	480.b
Aratian. ibid. Porphyrite. 442.2.	Popular. ibid. Obelidonian. ibid.	Furment (seen to chinke and open.	17.g
Fig. both early and lateward. 442.2.	Fig. Duracina. ibid.	Fishes feed on land. 235.c. divided according to their sundry floges.	247.d
Obelidian fig. beare three times in one year. ibid. Tarentine fig. called Oine or Oenades.	ibid.	Fishes of all sorts breathe after a manner.	437.e
Fig. as big as peaves.	442.g	Fishes both beare and sleepe.	ib. & 306.b
Fig. of Ida described.	ibid.	Fishes changing colour.	249.d
Figtree Alexandrian. ib. Figtrees of Ilyrcania.	442.b	Fishes which be blondeste.	249.d
Fig. Chalcidian. 442.b. Chian. ib. Lydian. ib. Mamillane or wat fig. ib. Callistrian. ib. African. 442.i. Alexandrine or delicat. ib. Rhodian. ib. Tybantine. ibid.	ibid.	Fishes which seemed diversely in sundry places.	249.e
Figdates when to be planted.	442.l	Fishes are not all alike covered.	242.b
Fig. African. Saguntine. Tullian. winter fig.	ibid.	Fishes some mislike in cold, others in heat.	245.b
Fig. fall from the tree, if it thunder at the feast Vlticanalia.	546.k	A fish leapeh out of the water at Casars fest.	244.l
Fig. of Masia ripen when ocher blossom, by what denife.	442.m.	Fishes how and where they like and live best.	245.a
A fig the occasion of Carthage overthrow.	443.b.c	Fishes have sense.	261.d
Figtree Nania in Rome.	443.d	Fishes, of all creatures haue the big gest heads.	332.e
Figtree Romandis.	ibid.	Fishes their eyes shine by night.	335.c
Figtree in the Forum at Rome.	ibid.	Fishing time which is best.	244.m
Figtree before the temple of Saturne in Rome.	443.l	Fishes that best live have no bones.	345.a
Fig. ripen altogether on the tree.	444.b	Fishes female commonly bigger than male.	244.l
Figtree.	ibid.	Fishes doo smelt.	306.b
Fig. ripen the sooner by the means of wild figtrees. ib. b. k.	444.l	Fishes preface things to come.	244.l
Fig. of the Isle Eubus the best.	ibid.	Fishlike mnt, and their nature.	388.l
Fig. how they be put up and kept.	ibid.		
Fig. good wild.	ibid. m.		
Fig. Coliane. Carice. Cawnia.	ibid.		
Figtree made fruitfull by the sea onig Squilla. 514.g. it is drier in the midis than at the head.	517.c		
Figtree how it is made to beare olives.	524.g		
Figtree of all other ageh the soonest.	526.m		
Figtree growth best by the water side.	544.i		
Fig. how they are ripened by caprifcation.	545.e		
Fig. how they are made smooth and pleasant.	547.b		
A figtree of India. 300.k. the description thereof.	ibid. i.		
Figtree is selfe.	ibid.		
Figtree figure. See Sycamore.			
Syrin figtree.	389.e.f		
Fields in Aethiopia about the hill Hesperia fine and glitter like barres.	47.d		
Filberd called Abelline, whereupon.	446.b		
Filberds: Calice, Praxestine, Thasian, Albenian, Tarentine, Molosse.	ibid. i.		
Fines passed under the name of sheep & oxen at Rome. 550.k			
Firs taller than any othr tree.	465		
Firs topped, topped fine.	476.i		
Firreeds how employed and how to be chosen.	488.l.m		
Firre maffis for shipping.	489.f		
Firre is good for planks.	547.a		
Firre how it will not purifie in water.	492.i		
Firre wood highly commended in carpentry and ioyners worke.	493.a.b		
Fire bird. Loque Incendiaris.			
Fire in the hill Chimera flamed with water and quenched with carib.	47.c		
Fire the marauiles thereof.	46.m		

of Plinies Natural History.

Frankincense only in Arabia.	366.g	Grese liner is excellent meat as it is ordered. 280.i. who de-vised the same dish.	ibid.
Frankincense tree described.	ibid. k.	Grese transaited after Terminus and Turney in France to Rome. 280.m. their feathers and downe.	ibid. a
Frankincense gathered. 367. a. the manner thereof.	ibid. b	Grese how they sit and hatch.	301.b
Frankincense paieeth much toll. 368.b. high price of Rome.	ibid. l.	Grese exceed in smelling.	305.f
		Grese where they build, and how they breed.	274.g
		Geometrian was excellent.	175.a
		Generation of mankind, the reason thereof.	162.i. k
		Ge. cistron a famous case.	154.k
			G H
		Ghost of Arctas in forme of a rauen.	184.i
		Ghost abandoning the bodie at times.	ibid. b
			G I
		Giants in times past.	165. a. b
		Giddiness in the brayne ten daies after the women hath had company with the man, floweth conception.	159.a
		Gilthead a fish.	245.b
		Ginney or Turkie hens.	286.g
			G L
		Glandules or kernels in swine.	339.b
		Glans a fish, her nature.	262.g
		Glance loued of gose.	280.k
		Glans a sea fish.	245.b
		Gledet. See Kites.	
		Glew made of an ox hide sidden. 347.c. what wood will not be glewed. 493.c. the best glew is made of bulle hide.	347.e
		Glo-birds or Glo-wormes, what they broken.	523.e
		Glossin what bird.	282.a
		Glo-wormes, why they be called Lawpridit.	326.l
		when they first appeare.	ibid.
		Clynon a kinde of Maple.	466.d
			G N
		Gnat.	310.l
		Gnat hath all the five senses. ibid. is shirftie of mans blood.	ibid.
		Gnat-swappers what kinde of birds. 286.m. when they be called Ecednia. 287.a. when they be called Melancoryphi.	ibid.
		Gnefos the royall Eagle.	272.g
		Gnomon what.	35.e
			G O
		God, what he is.	3.d
		Gods thought to be many, and how this foolish opinion first sprang. 3.d. To asigne any forme to God is mans weakness. 3.i. Plagues accounted as Gods.	ibid.
		Gods more in heauen, than men in earth, if they should be so many as men do feigne.	3.e
		men haue accounted beasts, and other filthy things to be Gods.	3.f
		Gods that they be married, vaine it were to beleue.	3.g
		Gods signed yong and old, winged and lame.	3.h
		Gods, in them are feigned aduities, haired, and wart. ib.	3.i
		Gods worne upon fingers in ringe.	4.b
		Gods cannot do all things, as teid.	5.e
		Gods not innumerable.	2.d
		Gods. Democritus maketh two only.	ibid.
		a god canonized here upon earth.	180.i
		Gold, what people hath it.	138.b
		Gold mines who discovered.	188.k
		Gold melting, crying and fusing, who discovered.	ibid.
			H b b 3

The Table to the first Tome

Goats, their manner of breeding. 229. a. both male and female. ibid. how they help their eye-sight. 229. b. their wit. ibid. male goats which be best. ibid. female goats how to be chosen. ibid.	
Goatsweaver in an age. 229. d. their hair in stead of wool used in cloth. ibid. they bark and kill trees. ibid. e. the goats beard. ibid. how they breath. 229. d. they see by night. ibid. they kill olive trees by licking them only. ibid.	
Goats wild of sundry kinds. 231. c	
Goats not sacrificed to Minerva. 229. e	
Goslings, slung with a nettle die upon it. 301. b. greedie feeding the bone of goslings. ibid.	
Gossampin: trees bearing cotton. 363. c. f	
Goggle eyes dim-sighted. 334. b	
G R	
Gray eyes in the dark see better than others. 334. b	
Graves how they escape the hunter. 218. g	
Graves in fruit different. 447. d	
Graves. See corn	
Grairie of three sorts of seemed by the Greeks: Dracontias, Strangus, Selinusium. 360. g	
Grafting how it is. 517. a	
Grafts ought to be taken from the top of the tree. ibid. g	
Grafts ought to be taken from loughes that beare well. ibid. h	
how they are to be set in. how they are to be brought. ibid. i	
ibid. not to be thrustened in the wind. 518. b. they are to be set before the moon is in the full. ibid.	
Grafting in fench-bee. 519. e. f. 520. g. h. Rules to be observed in grafting. 521. c	
Grafts of chevier trees how to be used. 518. d	
Grafts of vines how to be used. 519. b	
Grafts of wild trees will not grow in the tame. 519. e	
Grafting more plentiful than sowing of seeds. 520. k	
Grafts of olives when they are to be set in dry places. 522. g	
Grafts of olives how they are to be used in Barbary. ibid. h	
Grammarian, who excellent. 174. l	
Grapes how they are preferred from pullain. 420. k	
Grapes that loose the belly. 425. a. grapes that bind the belly. ibid.	
Grapes Echoleds, why so called. ibid.	
Grapes de-guard. 440. i	
Grape bunches how to be gathered for guard. ibid. m	
Grapes of diverse sorts. 435. e	
Grapes how preferred. 406. g	
Grapes dried in furnaces. ib. grapes sodden in wine must. ib.	
Grapes hanging all winter on the vine till new come. 406. b	
Greek grapes of Corinth. 407. c	
Grapes Cariane, and why so called. 408. g	
Grapes Inertica might be called the sober grapes. ibid. i	
Grapes of the free towne Pompey. 409. d	
Grapes Tiburtine. ibid.	
olive Grapes. ibid.	
Grapes Pinacole. ibid.	
Grapes Capotaie. 409. k	
Grapes Buccinatis. ibid.	
Grapes Tarrapie. ibid.	
Grapes Pharia. ibid.	
Grapes Prunifine. ibid.	
Grapes streptos. ibid.	
Grapes Thasia. ibid.	
Grapes Marioides. ibid. grapes Logee. ibid.	
Grapes Bimamme. 410. g	
Grapes of Spaine. ibid. b	
Grapes Eficaria. ibid.	
Grapes Bumafit. ib. Onnce grapes. 410. b	
Grapes Aegyptian. ibid.	
Grapes Rhodian. ibid.	
Market grapes. ibid.	
Grapes Cincree. ibid.	
Grapes Scirpule. 416. m	
Grapes Aegyptian, Thasia, Aethalos, Pence. 415. f	
Grasshoppers how they live. 325. d. their sundry kinds. ibid. d. e. they be dim-sighted. 326. g. they may be reduced into three kinds. ibid. they be most to some seasons. ibid. when they fly. ibid. they be not every where. ibid. they have wings only without mouth. ib. f. where they be mute. ibid.	
of Greece. 344. k	
Greeks full of lies and vanities. 207. d	
Greeks find golden mines. 154. b. what birds. 296. k	
Grind: stones and what stones for shiles. 595. c	
Gristles broken will not close together. 345. b. more of gristles. ibid.	
Grounds overgrown with bushes how to be cleared. 505. b	
Ground how to be trenched. 559. a. b	
to cleave ground, rules infallible. 505. b	
Grounds which are principall. 505. k	
Ground must be battered by sowing some graine in it. 508. b	
Ground burned by chick-pease. ibid.	
The Growth of man or woman. 345. b	
G V	
Guarlands given to visitors in the sunne great games. 457. a	
a Guild influenced by Romulus over corn fields. 549. c	
Guarlands of corn-eares first knowne at Rome. ibid.	
Guelded apples. 438. b	
Guelding: cast not their teeth. 338. b	
Sea-gulls where they breed. 287. f	
Gums of diverse sorts. 391. c. d	
Gum Arabicke. 424. g	
Gum of Lurie. ibid.	
Gum Colophonian. ibid.	
Gum Spagane. ibid.	
Gum Cyprian. ibid.	
Gum Longana how it maketh creatures infatigable. 342. k. l. m. 343. a. b	
G Y	
Gymnosophytes, certain Philosophers of India. 155. a	
they can looke against the Sun. ibid.	
Gymnetes, people living about a hundred yeares. 147. a	
Gynacorummeni, people why so called. 118. b	
H A	
H Adropheron. 364. k	
H Adropholon what it is. 361. a	
Haddoe, a kinde of eed-fish. 243. c	
Haile how it is engendered. 209. b	
Halcyones the name of birds: their hatching. 287. e	
Halictes. 81	
Halictes, what kinde of eagle. 272. g. see trainethber young one to looke against the Sun. ibid.	
Half our time spent in sleepe. 183. a	
Halcyon	

of Plinies Natrall History.

Halcion daier. 287. d	
Halciones of diverse kinds. ibid.	
Halciones when they breed. ibid.	
Haliboles, a kinde of Oke. 450. d. unfortunate. ibid.	
Hammoniacum. See Ammoniacum. 203. b	
Hanno banished for taming a Lion. 91. b	
Hanno his booke and commission to survey the compass of Africa. 91. b	
Hanno his navigations. 33. a	
Harvesting of exceeding great price. 228. k	
Harvest is so man in this life. 176. b	
what has been mad by Apollo by the Oracle. 180. b	
Harvest admit superstition. 303. d	
Harpe ferre fiducial. 588. g	
Harrowing how it is performed. 570. f	
Hares sleep open eies. 335. a	
Hares and Riffe hatted falkes are accounted brutish. 340. a	
Hares if they go over a cart-track straight die. 244. g	
Hares in some places have two livers. 341. e	
being then transported they lose one of them. ibid.	
Hare will never be fat. 344. k	
Hares admit superstitation or double conception. 333. k	
Have the hares self creature. 347. a	
Hares how their age is knowne. 232. i. both male and female. ibid.	
the sea-bow euenusium fish. 191. b. 264. i	
Hares very fruitful. 232. k	
Hares haire very good to make cloth. ibid.	
Harmonie of Plants. 14. k	
Harts shewd the use of the hearbe Dittannum. 210. c	
care themselves with craistrife. ibid.	
Harts and Hinds are cured by the Artichoke. 211. c	
Harts. See Stags. 214. g. b	
Hastie apples. See Apples Musilea. 459. b	
Hastings. See Fildards. 292. m	
Hawms. See Straws. 292. m	
Hawkes, 272. f. their kinds. 274. k. where they breed on the ground. ibid. l	
Hawkes and men catch birds together. 274. m	
and part the prey equally. ibid.	
of Haire. 332. k	
Haires and stones engender in mens bladders. 344. g	
Haires out of a thick skin are grasse and hard. 347. e	
they grow long upon Horses and Lions. ibid.	
swallowing downe of an Haire the death of Fabius a Roman Scatour. 159. e	
Haires of Conies long on their cheekes. ibid.	
Haires are more lescherous than others. ibid.	
Haires come not sometime without the helpe of art. 347. b	
Haire of the head in men groweth most. ib. it groweth not at the ear end but from the root. ibid.	
Haire groweth upon dead bodies. 347. b	
Haire beards, except the Asse and the sheepe, are troubled with lice. 329. b	
Haires white. 232. b	
H E	
Heads adorned with crests, tufts and combs. 331. a	
Heads cut from the bodie licked up their owne blood. 212. f	
Heare in man and beaft how it is scituate and made: also to what use it serueth. 340. g. h	
Hearts of fishes pointed up to the mouth. ibid.	
Heart first formed in the mothers wombe. 340. a. it dwelt last. ibid. b. it paneth like a living creature by it self. ibid. b. the treasure of life. ibid. the seat of the mind and soule. 340. b	
Heart cannot abide paine. ibid. paine of it bringeth present death. ibid.	
Hearts, they that have little, are valiant. ibid.	
Hearts of a man how much it groweth yearly. 340. f. how long it groweth. ibid. when and how much it decreaseth. ibid.	
Hearts of some men all haire. 340. d	
Hearts haires flow strange and valorous men. ibid.	
Heaven full of pointures. 1. b	
Heaven and World all one. 2. b	
Heaven in the motion thereof on harmonie. 1. b	
Heaven called Calum, and why. ibid.	
Heaven divided into sixteen parts by the Tufcanes. 7. d	
See more in World. 53. b	
Hebe river. 59. b	
Hebe her home and name thereof. 302. l	
Hedgehogs how they engender. 381. d	
Helixmata. 381. a	
Helix of three sorts. 480. k	
Helix, a kinde of Tule. 76. b	
Hellenes, whence they took their name. 18. l	
the three names Homer gave vnto them. 18. l	
Helena, a Meteor so called. 20. b	
Heliotropium turning alwaies with the Sunne. 40. l	
Hellepontia, the name of a wind. 23. b. the time of it. ibid.	
Hellepont, sometime a land. 40. l	
Helix, a kinde of Willow or Osier. 455. g	
Heliotropium the hearbe, a direction vnto the Husbandman. 593. f	
Hemeris, a kinde of Oke. 459. b	
Hemets, from whence the Venetians. 175. b	
house-Hemets sceme religious. 292. m	
Hens or Pullets great layers. 298. i	
Hens bring up Ducklings. 299. e	
Hens which be kindly. 299. e	
gig-Hens. 297. a	
Hens and Pullets first crammad. 297. a	
Hens fat how they are knowne. 297. a	
Hebeitis, mountains in Lycia. 47. e	
Herpesma, what it is. 416. d	
Hercules pillars. 48. l	
Hercules his situation. 50. l	
Hermastinus Clazomenius his ghost. 184. a	
Hercules his sphere, the planet Mars so called. 6. g	
Hercules Rhyllus, who so called. 166. d	
Hercynia Forrest. 455. e. the wonderfull trees that are there growing. 455. f	
Marcus Herennius a Counsellor struck with lightning in a cleare day. 25. f	
Hermaphrodites. See Androgini. 273. f	
Hermes, See Menuever. 345. b	
Herophilus, a renowned interpreter of Physicke. 345. b	
Herons of three sorts. 301. f. they engender with great paine. ibid. and lay with as much. ibid.	
Herpetus, a mountain in Aethyopia. 47. e	
Hexametre verse, who first denied. 189. e	
Hiera	

I

H I

Hiera an Island of *Ætolia*, *where Italy.* And the burning thereof. 47.4
Hiera Island. 49.8
Hierapolis citie. 104.4
Hierapapus, what kind of birds 295.4
Himilco his navigation. 53.4
Hinds, their nature and manner of breeding. 215.4
Hinds and flags how they engender. 302.4
Hints, what they be. 224.4
Hinu, what it is. 114.4
Hinnus, a river in *Pontus*, it bringeth downe bladders, 330.4. wherein is enclosed the fish *Hemerobius*.
Hipparchus his *Epithemides* what they contained. 8.1
his invention concerning the *Eclipse* of the *Sunne* and *Moon*. 9.4
Hipparchus his opinion of the stars, his praises, and opinion of the soule. 16.6. he judeth out a new *Starre* rising in his time. 16.6
Hipparchus. 49.4
Hippas, a kinde of crabfish. 252.4
Hippasus, a kinde of *Comet*. 15.4
Hippocrates honoured like *Hercules*. 17.4. he foretold of a pestilence. 114.4
Hippocratus borne in *Theffalie*. 157.4
Hippomazer, what it is. 222.4
Hippopheitar, good to purge the body for the falling sickness. 496.4
Hippoglotition. 452.4
Hippury, a sort of *Lobsters*. 245.4
Hippi, certain families, wherein they be all witches. 155.4
Hispalis a *Colovie*. 52.4
Hines of *Lanterne* hornes. 218.4
drinking of Hines. 317.4. what must be left for the *Bees*. 114.4

H O

Holmer, three at *Tiber* very old. 458.4
a *Holme* tree of a wonderfull age. 495.4
a *Holme* tree of a monstrous bignesse. 496.4
a *Holme* tree of two sorts. 158.4
Holothuria, fishes of the nature of plants. 264.4
Holydaides unto *Ulican*. 48.4
Homer *Iliaz* counted within a yere. 167.4
thicke *Hony* nothing commendable. 317.4
thin *Hony* will not thicken. 114.4
Hony engendereth in the aire. 317.4. when it is engendered. 114.4
what of what mater. 114.4. how it is corrupted. 114.4
it is diuersely, according to the tokens of good *hony*. 114.4
regions. 316.4
a *Honey*combe eight foot long. 316.4
Hony combs best about *Summe* season in *Summer*. 316.4
Hony when it is most gathered. 317.4
Hony in some fort hurtfull for *Bees* 321.4
Hondacria, a kinde of *Plims*. 436.4
Hony apples. See apples *Melimela*. 188.4
Hony may make flesh. 331.4
Hornes of great bignesse. 331.4
How they stand, and to what use they are put. 331.4
what beasts have hornes. 332.4
Hornes of sundry kinds. 332.4
Hornets, whether they be *stings* or no. 332.4

Horologies how denised. 191.4
Horses wild. 200.4
Horse, his description and properties. 209.4
knowned *Phibotomie* or blind-letting. 210.4
Horse of *Cæsar* *Dilator*. 221.4
Horse named after *Augustus* *Cæsar*. 221.4
a *Horse* loosed by *Semir* *am*. 114.4
a *Horse* reuengeth his masters death. 222.4
Horse furriers and harness who first invented. 180.4
Horse loath to cover their dames. 180.4
Horse fight, who first devised. 889.4
Horse service used to dance to *Musicks*. 221.4
their kind affections to their masters. 114.4
their docility. 114.4
their age. 222.4
their breeding. 114.4
Horse where they may find a talent of gold. 148.4
Horse subject to many diseases. 222.4
Horse age how it is knowne after their shedding of teeth. 338.4
Horse and men alone have teeth of one kinde. 337.4
Horse teeth was white by age. 338.4
their age knowne by their teeth. 114.4
a *Horse* where he is worth a talent of gold. 148.4
Horse, where they are thought to have no gall. 341.4
Horseday, where they be. 501.4
Horsium, a kinde of grain. 506.4
Horsium wept for the death of a *Lamprey*. 161.4
Hornets are not uniforme. 322.4. they die when *Winter* is come. 114.4
Hornes of a *Hart* kept as monuments in *India*. 324.4
Hornes of *Affion* and *Cippas* fabulous things. 331.4
Hound. See dog.
Hound fight their nature. 263.4
a *Hound* in the country how to be found. 574
Hongsick medicine able for all maladies incident to cornes. 465.4
Honset of what beasts will heale being cure. 351.4
of *Honset* a discourse. 114.4

H V

Hoblets or *Hemps* grow so fast as they have hatched. 284.4
a *hoblet* bird. 284.4
ill *Husbandry* censured by the *Censors*. 550.4
to be a good *Husbandman*, a credit. 550.4
Husbandrie in old time, by whom it was performed. 551.4
by whom in later daies. 550.4
Husbandrie, a Prince-like profession and studie. 550.4
Husbandrie studied by what kings. 550.4
Husbandrie professed of what warriors. 550.4
bookes of *Husbandrie* written by *Maago*, saved by the *Senate* of *Rome*, and translated into *Latine* by *D. Syllo*. 552.4
Husbandmen outworkers after the fall of the leaf. 580.4
the *Husbandrie* in *Ægypt* about sowing and reaping of corn. 577.4
Husbandmen work in *Winter* Internall, what they be. 590.4
their workes in the Internall of the year. 590.4
they be. 590.4
their workes in the Spring according to *Cato*. 593.4
M. Varro, a writer of *Husbandrie*. 553.4
Husbandry workes presently upon the Spring. 593.4
Æginox. 503.4

3

Handwary works in the Summer Solstice. 594
Milking of Cows. 565.
Handwary after the Summer Solstice. 594.
Handwary at the entring of Autumn. 605.
H Y
Hydres what it is, and why so called. 562.
Hyane change their fells. 112.
Hydras, fit to eat called otherwise Sacula. 19.
Hybandia Island. 40.
Hydras what they be. 32.
Egils, a great river of Augurie by the nature of birds. 277.
Egyphe, what it is. 496.
Egyphe, 496. c. the properties it hath. 476.
Egyphe, people so called, blessed, living long. 84.
For strange reports of them. ibid.
I A
I Ache D. m. See Chough. 210.
Ibis invented the clyster. 210.
Ibis destroy serpents. 284. m. where they be blacke, where white. 287.
I C
Ichnemones, a kinde of Waspe. 322.
Ichnemones, the nature of it. 208. k. his combat with Apis. 209.
ibid. he kills the Crocodile. 209.
Ichthyophagi, people that feed of fische, and swim naturally in the sea. 145.
I D
Ides of March fatal to Caesar. 591.
Idoll of the Meremaid where honoured. 103. b. the names thereof. ibid.
I L
Illex. See more in Holme.
the Massi of Ilas. 458. m. 1000.
Ilium and all the viall thereabout sometime main fea. 39. a. 208.
Imaus, a mountain. 153.
Imagines famous. 175.
Imperficious incident to corne sowne. 574.
I N
Incediaria, a bird unlooke. 277. b. the reason of the name. ibid.
Incessis. See Frankincense.
Indu full of straffe and miraculous things. 155.
India, by whome discovered. 152. b. the force of it: nation. 155.
ibid. the long continuance of their kingdome. ibid.
ixtic rivers therein. 155.
Indian trees unnumbered. 361.
A hundred & 50. reuerations of India lacking twain. 135. e.
the nation of Indians descended beyond Nilus. 126.
India bringeth forth all things bigger than other. 155.
thereof thereof. ibid.
Indians subiect to no diseases. 155. e. engender with beasts. 157.
Indus fische bigger than other. 255.
India the river. 106. l. receiuing into it fixte other rivers. 137.
ibid. more of it: river. 137.
Infants borne before the seventh moneth, neuer live. 158.
knowne oftentimes to want the passages of nostrils and 336.
care. 336.
Infants toothlesse, not to be burned in a funerall fire. 164.
Infants how they lie in the mothers wombe. 304. t. 304.
they sleepe much and dreame, how they be formed there. 164.
they come forward afterward. 164.
I O
Inoculation. See Graffing in Scutcheon.
Timing of corne after Iunij forts. 602.
Insects how they grow. 326. i. how they be offensive. 327.
Insects do breath and sleepe. 331. c. none haue teeth. 327. a. 327.
having leggs not directed. ibid. how engendered. 329. d. 329.
what they be & why so called. 310. i. they haue no bones. 310.
345. a. they haue no talfe save onely scorpions. 327.
Insectors of Iunij things. 187. c. & deinceps.
I O
Ionian characturs first vied generally. 190.
Iordan river, the prais thereof. 100. m. 68.
Iouis Barbe, a plant good for arborgs in gardens. 478.
I R
Ireland the description thereof. 86.
Iris, what kinde of graine. 565.
I S
Isidorus a writer. 48.
Isidis Phocania. 402.
Isis the Planet Venus. 6.
Ispemamm. 374.
Islands that newly appeare out of the sea, and the reason thereof. 39.
where Islands haue spring vp. 40.
what Islands haue ioined to the maine. 40.
Islands in the Gantles Ocean. 86.
Islands in the Ocean. 88.
I T
Italy lightninges be common, and why. 25.
I T
Iuba, a king memorable for learning. 92.
Iugurtha. See Acre.
Radicall count of Capital matters, who first intenced. 189. a. 189.
for index, what frum. 437.
Iucius Orogastu. See Squinauth.
Imper. 489.
Iuno the Planet Venus. 6.
Iuno Lacinus. 48.
Iupiter Planet his colour. 13. c. to him lightninges are attributed. 14.
Iupiter Lycanus, and his chappell. 75.
Iupiter Olympius, and his chappell. 74. i. Iupiter for the games there vied. 79.
Iupiter Caelestius, his temple. 168.
Idium Cae. Debaton by singular parts. 168.
Iron veremented for Date tree. 384. m. the description thereof. 100. f. how diuided into ten governments. ibid. 100.
Iron unwillig to grow in Asia. 180. b. employed in soliments to Eaccibus. ibid. an eximie to other plants. 480. i. 480.
Male and female. ibid. k. both male and female of three sorts. 480.
Iue, Nyssa, Bacchic. a. ibid.
Iue Erythraea. 480.
Iue Chryseopae. ibid.
Iue wood of a wonderfull property to trie true and false wood. 451. c. Iue e. p. rind the frist. 456.

The Table to the first Tome

K E

K Erails in fruit different. 447.^c
of the Kell in man and beast. 343.^c
K I
of Kidneys. 343.^{d.c}
Kedones are in all four-footed beasts that bring their young quick. *ibid.*
Kindness natural examples thereof. 174.^g
Kingfishers. See Halcinies.
King and Bulls how they engender. 302.^m
King of Taprobane how he is chosen. 130.^m he may be deposed, condemned, and put to death, the manner of his execution. 131.^{a.b}
King of bees described. 318.^m exempt from labour. *ibid.*
Kinning in an egg, what it is. 298.^b
in Banister, King have bigger voices than Bulls. 353.^c
Kites reckoned among Hawks. 275.^e their nature. *ibid.*
they taught the use of the Helme in the ship. 275.^f
are troubled with the gout. *ibid.*
Kissing of women by kings, &c. upon what occasion. 418.^k

K N

Knees being wounded in their hollows, bring present death. 350.ⁱ
of Knees a discourse. *ibid.*
Knots in timber. 489.^b

L A

L Aburnum, what manner of tree. 468.^k
Labones who they were. 336.^l
Laborie in Campanie, a most fruitful trail. 567.^f
Labrusca, a baitard wild Vine. 538.^g
Laba, the best Cassia or Cane. 373.^c
Lafes placed next to the bag of the stomacke. 342.^d
Lacryes accompanied with a Goose. 280.^k
Ladanum the best. 370.^k the price thereof. *ibid.*
Ladanum how it is gathered. 370.^g
Ladanum of two kinds. *ibid.*
Laftrigones, monsters of men. 154.^g
Laertes, a king muched ground with his own hands. 507.^b
Lagopus, a bird why so called. 296.^b
Lalipones, what they be. 224.ⁱ
Lama what tree. 369.^e
Lamber named Cordi. 226.^l
Lamber how to be chosen. *ibid.*
Lampades, flaming torches in the skye. 17.^b
Lampadiaz, a kind of Comet. 15.^f
Lampido, the only woman knowne to have been daughter to a king, a kings wife, and mother to a king. 176.^l
Lampries in France how they are marked. 248.ⁱ
Lamprey, a fish. 248.^b
Lampreys of fresh water. 246.^g
sea Lampreys their nature. 248.^b
Lampyrids what they are. 593.^e
Lanana, what it is. 438.^g why so called. *ibid.*
Lanatia, sort of Pike. 245.^e
Land in the country made distinction of States at Rome. 550.^m

Land worth fortie denary, the short cubit. 581.^d
Land Mediterranean fittest for fruits. 501.^e
Land how much assigned by king Romulus to his subjects. 549.^d
Land of whom to be bought. 555.^e
little Land well tilled. 554.^m
Lands may be overmuch tended. 555.^b
Lanists of Lacedamon his swiftnesse. 167.^a
Lanierne, a sea fish. 249.^d
Laudacea a cite, the description thereof. 107.^a
Larch tree. 462.^d the timber and the liquid resin thereof. *ibid.* how it is drawn. 465.^b
Larch tree female. 489.^b
Larch tree of great length. 489.^d
Lares, a temple to them: secret to which an altar erected in Orbona. See Orbona.
Large space between the stomacke and the pancreas, cause of more hunger. 342.^k
Laves who first invented. 187.^e
Lawrea, the shade of Lawrell. 454.^g
Lawrell tree not smitten with lightning. 27.^e
Lawrell grove, why called Triumphant. 454.^g
Lawrell a medicine for the Rancor. 211.^d
the mad Lawrell. 495.^d
Lawrell tree how it was employed at Rome. 454.ⁱ
Lawrell, Delphicke, Cyprian, Adulacea. *ibid.*
Delphicke Lawrell described. 454.^k
Cyprian Lawrell described. *ibid.*
Lawrell Tunus or wild Lawrell. 454.^k
Lawrell Augusta or Imperiall. *ibid.*
Lawrell Baccalia. 452.^l
Lawrell Triumphant. *ibid.*
Lawrell Taxa. 452.^l
Lawrell Spadonia. *ibid.*
Lawrell Alexandrina. 452.^m
Lawrell Idea. 452.^m
Lawrell token of peace. 452.^b
Lawrell much honoured at Rome, and why. *ibid.*
Lawrell saineit upon Parnassus. 453.^c
Lawrell not smitten with the lightning. 453.^c
a Lawrell Chaptel used by Tiberius Cesar against lightning. 453.^d
Lawrell why used in triumph. *ibid.*
Lawcola, 453.^e described. *ibid.*
Lawries, young Rabbits or Lawreus. 232.^b
Lawrus, the only tree in Latine that giveth name unto a man. 454.^g
who laughed the day that he was borne. 164.^m
Lux, a fish. 243.^a
L E
Lead, who first found out. 188.^l
League who first defined. 189.ⁱ
Leopcyare. 6.^b
Leoried was honoured. 171.^f
Leucos, a fish tree never hang still. 544.^l
Leucos that they shape & form upon the trees. 490.^b
Leaves of some trees turne about with the Sunne in the Tropicks of Cancer. 407.ⁱ
Leaves of the trees how they be named above and beneath. 470.^b
Leaves of trees distinguished by their bignesse, forme, and substance. 470.^m
Leuce,

of Plinies Naturall History.

Leaves distinguished by other qualities, and their order. 471.^a
Leaves of trees, good fodder. 471.^b
what Leaves are apt to bind, and which are not. 469.^d
a Philosophicall discourse touching the cause of feeding or holding Leaves. 469.^e
Leaves of what trees build their colour. 470.^g
Leior, a promontory in Thous. 471.^f
Ledon. 370.ⁱ
Lemnos Island. 378.^g their manner. *ibid.*
Length of the leg, and necke, enforcible for the proportion in all creatures. 339.^e
Lentill where and when to be sowne. 569.^e
Lentils of two kinds. *ibid.*
Lentils and Lenes in Latine whence derived. 569.^e
Lentiske berries preferred. 448.^k
Lentils, why so called. 550.^b
Leococrits, what kind of beast. 206.^b and what of nature. *ibid.* how engendered. 212
Leonicides rebecked Alexander the Great for burning too much Frankincense. 367.^f
Leontophontus, what beast. 217.^e and why so called. *ibid.*
Leopards how they lie in wait. 308.^g
Leopards, what species. 495.^m
Lepo or Lede, a kinde of fish. 249.^c
Leters or characters who invented. 187.^f
Lewacis, 666.^b the nature thereof. *ibid.*
Lewis, kinde of Herons with one eye. 334.^g
Lewocum, a kinde of Pomegranats. 398.^b
Lewocum, a place. 508.^b it yieldeth chalc to make white furniture, and great revenue yearly. *ibid.*
Lewocia Island sometimes joined to the promontory of Syrtis. 540.ⁱ
L I
Lihannu mount, the description thereof. 102.ⁱ
Licinius, why so called. 163.^a
Licinius Stolo condemned by vertue of his owne law. 551.^d
of mans Life, the future uncertaine. 180.^t
Life short, a beast. 183.^b
Licorne. See Alconcoris.
Lignum, a fault in Cyron wood. 396.^b
Lignum, attributed to Jupiter. 14.^g the reason thereof. *ibid.*
Lignum, a fault of future things. *ibid.*
Lightenings, seldom in Summer or Winter, and the reason. 25.^m in what lands they fall not. *ibid.* the iudry foris and venders thereof. 25.^e diverse observations touching them. 26.^g raised by conituration. *ibid.* generall rules of lightning. *ibid.* m. it is seene before the thunderclap is heard, and why. *ibid.* what things are not stricken with lightning. 27.^e
Liguri, the seat of the breath. 341.^a spongeons and full of pipes. *ibid.*
Lima, what fishes. 243.^e
Lime at the root of Oberric trees hastens their fruit. 546.^k
Limang. See Painting.
Linden trees differ in sex. 466.ⁱ their fruit no beast will touch. *ibid.*
the Linden tree yieldeth fine panicles for cordage. 466.ⁱ
Linden trees will not be worme-eaten. *ibid.*
Linden fine cloath whence. 80.^l
Linnets very docile. 293.^a
Likenes of children to parents, grandfathers, or others. 160.^m

161.^{a.b} the reason in Nature. 161.^c
Likeness of one man to another diverse examples. 161.^d
& deinceps.
Lions of the right kinde how they be knowne. 100.^{i.k}
Lions bones will strike fire. 344.^m
Lions how they will walke. 350.^k
Lionesse lecherous. 200.^k
Lionesses engender with Pardes. *ibid.*
Lion calum of the Lionesse. 200.^k
Lioness, how oft she beareth young. 200.^l and the manner thereof. 201.^b
of Lions two kinds. *ibid.* their nature and properties. *ibid.*
Lions long lined. 201.^c
Lions crucified. *ibid.* and why. *ibid.*
Lions gentle to those that submit themselves. 201.^d
Lions spare women and babes. *ibid.*
Lions entreated with faire language. 201.^e their disposition knowne by their tails. *ibid.* their generosie and magnanimitie. 202.^g wherat they be affrighted. 202.ⁱ their diseases and remedies. *ibid.*
Lions first shewed at Rome in the cirque. 202.^k how they be taken. *ibid.*
Lions yoked and put to draw at Rome. 202.^m
a Lion thankfulness. 203.^d
Lions die with fasting Leontophontus. *ibid.* or drunken with the wine. 217.^f
of Lips. 336.^l
Liquor falling from heauen. 316.^m how good. *ibid.*
Lisard their nature. 218.^k
Lismachus strangled a Lion. 203.^m
Liner herb on the right side. 341.^b
Liners found in sacrifice without the head or fibres. *ibid.*
scene with twaine. *ibid.* what they are sowed. *ibid.*
Liners in sacrifice found inward, to the number of six. 341.^b
Liner found out, prefigeth ill hap. *ibid.*
Liner receiveth blood from the heart. *ibid.*
Liner of Mice and Rats groweth at mid Winter. 342.^g
hath so many fibres as the Moone is daies old. *ibid.*
Liners continued in ale a hundred yeares. 342.^b
who lived a long time. 180.^l
Livia Augusta made trial by an egge whether she were with a boy or a girl. 259.^d
Livia Drusilla Augusta presented with a boy branch in a linen bill falling into her lap. 453.^e
Lizards tender skinned and four-footed. 336.^b
Lizards how they engender. 302.^m they deliver their eggs at their month. 305.^d
L O
Loba, the stalkes of Miller. 558.ⁱ
Lobstars wane blond. 252.ⁱ they cast their coats in Spring. *ibid.*
Lobstars die for woe. 270.^g
Lobstars their nature. 252.ⁱ
Locry, a free state: with the description of their country. 73.^e
Locupletes (i. Rich men) why so called. 550.ⁱ
Locusts how they utter their voice. 353.^d
Locusts and Grasshoppers have no eies. 334.^g
Locusts lay egges in Autumn. 327.^b their young creep on their wings. *ibid.* the number of them dead at the bringing forth of their young. *ibid.* c. they can kill serpents. *ibid.*
Locusts in India three foot long. *ibid.* they are carried away with wind. 327.^d they flye many daies without rest. *ibid.* serfise

The Table to the first Tome

sorsae a famine, ibid. a. darken the sunne with their flight
ibid. carnare carnem with their blasf.,
Lollia Paulina how shee was adorned with pearles. 266 f.
the price of them. ibid.
Lomentum. 568 m.
Loma, ubi tu es. 417 e.
Loretum, a place. 454 g.
Lora tree Capillata, and why so called. 493 s.
Lora trees of long continuance. 494 m, 495 a.
Loripha, people. 397 b.
Lori taceat for a godd. 4 c.
Loris tree in *Affrick* 397 a, the description thereof ibid.
the fruit, ibid. fit for meat and drinke. 397 c.
Lorus the bearbe. ibid.
Lorus tree made. ibid.
Lorum of *Egypt*. 397 c. d. the strange nature of the head
and flower, ibid. the root feedeth hog. ibid f.
Lorus tree why it is regarded much at Rome. 476 k.
description thereof, and the uses. ibid.
of the *Lorde* of *Susa*, Phereides died. 184 g.

Lastrigones, monsters of men.
Lycion, what composition it is.

M A

M acrobis, and other people living long.	156 l.m
Maccedonia the description thereof.	77 a
Macer, 362. the medicinale vertue of the rind.	ibid.
Macilus, what manner of beast.	200 g
Maciusus Island sometimes called to Enbæa.	4 f
Macrinus Vitulus how he is used to bleed.	346 g
Madennirer where it now runneth by goodly meadows, in times past was all sea. 39.e. the description thereof.	108 lb.
Manander how he loued his studie.	172 m
Magnesia, the description thereof.	36 m
Magnesia Island.	40 k
Magna, what it is.	383 c
Maid child in Rome became a boy.	158 lb.

154.g.
362.b

<i>Lucina</i> <i>allied on the stage</i> a hundred years.	181 <i>c</i>
<i>Lucunum</i> a towne of the Latines.	53 <i>d</i>
<i>Lucerna</i> , a shining fish.	249 <i>d</i>
<i>Lucer</i> , wry fo called.	6 <i>i</i>
<i>Lucina</i> , the name of <i>Diana</i> , and <i>Interpixon</i> .	494 <i>m</i>
<i>Lucini</i> ; men fo called; 335 <i>c</i> . wry fo called.	48 <i>b</i>
<i>Lucius Martius</i> .	148 <i>b</i>
<i>Lucius Costilius</i> turned from a woman to a man on the 158 <i>b</i>	
7 <i>m</i> marriage day.	
<i>Lucius Sylla</i> unworthily named <i>Felix</i> .	177 <i>d</i>
<i>Lucius Metellus</i> only suffered to ride in his coach w <i>th</i> the	
<i>Senat</i> . 138 <i>b</i> . b <i>th</i> ought w <i>th</i> happy.	164 <i>g</i>
<i>Lucius</i> <i>Agronius</i> his <i>lone</i> low fat he was.	334 <i>a</i>
<i>Lucius Optimus</i> and <i>Quintius Fabius</i> , w <i>hen</i> they were	
Conful an arch been about the <i>Sunne</i> .	17 <i>c</i>
<i>Lucius Porcius</i> and <i>Marcus Acilius</i> w <i>hen</i> they were <i>Con-</i>	
<i>fuls</i> , around circle about the <i>Sunne</i> .	1 <i>bid</i> .
<i>Lucubus</i> resfified by the middle flime <i>Malitia</i> at <i>Samo-</i>	
<i>ta</i> .	46 <i>m</i>
<i>Lungs</i> are but in few filfers.	335 <i>c</i>
<i>Lungs</i> that are little caufe the body to be swift.	341 <i>a</i>
<i>Lupa</i> , a fort of filders; 323 <i>a</i> . they fin not.	1 <i>bid</i> .
<i>Lupine</i> a direction to the husbandman.	594 <i>g</i>
<i>Lupine</i> meat medicinale.	272 <i>g</i>
<i>Lupine</i> not easily moved downe.	571 <i>c</i>
<i>sympatible</i> betwixt <i>Lupines</i> and the <i>Sunne</i> . <i>ibid</i> . <i>a</i> . w <i>ond-</i>	
<i>erfully</i> affectionate to the earth.	
<i>Lupines</i> fow themselves.	
<i>Lupines</i> fowing is as good as foile or compo <i>st</i> . 571 <i>f</i> .	572 <i>g</i>
<i>Lupinet</i> fleeped mens meat.	1 <i>bid</i> .
<i>Lupines</i> how to be kept.	1 <i>bid</i> .
<i>Lupines</i> profitable to be fet in ground.	508 <i>g</i>
<i>Luca</i> , bones w <i>h</i> at they be.	195 <i>b</i>
<i>Lufitania</i> whence it hath the name.	51 <i>f</i>
<i>Lufitania</i> , the description thereof.	88 <i>i</i>
<i>Lufarius</i> , a kinde of <i>Burle</i> .	246 <i>b</i>
<i>Luten</i> , a kinde of <i>Pelagic</i> purple.	350 <i>a</i>

Males in all birds stronger than females. 352.	ibid.
excepted.	ibid.
Males have more teeth than females.	338 g.
Maladies and death confuses blond.	346 f.
Maldacon. See Broches.	
Malacha. See Broches.	
Malcus a mountain.	36 g.
Maladies of trees what it is.	541 c.
Milk bones what it meaneth.	555 d.
Malobathron a plant. 378. i. the description thereof.	ibid.
and the kuder.	ibid.
Malobathrum the leaf.	379 a.
Malt made stronger drinke in old time.	428 b. i.
Maltha, a lime made fo called.	46 m.
Maltha, a kind of mud in a pond of the citie Samofata.	ibid.
ibid. the strange nature of it.	ibid.
Man how long he groweth.	345 b.
Man breest only broad and square.	343 e.
Man: only bleeder at the nose.	346 g.
Man: only two footed.	349 b.
Man only hath a cancell bone, and shoulders.	ibid.
Man only hath palmor on his hands.	350 f.
Man in Egypt hath faine eyes.	354 b.
Man for his proportion hath most braine. 352. b. hath more braines than woman.	ibid.
Man his braines only paneth and breatheth. 333. a. they are not felted before he speaketh.	ibid.
Man only wanteth power to shake his eares.	333 b.
Man only hath face and visage. 333. d. his forehead de- clareth his nature.	ibid.
Man only borne without teeth.	337 m.
Man that whom nothing more proud and wreathed, a king, the best gift he hath bestowed upon him, that he rid himself by death out of his miserie.	34 d.
Manis flesh sacrificed and eaten.	154 g.
Man to man a god.	48 e.
Man compared with other creatures.	154 e.
Man hath no certaine time to abide in the worlde. 258. b.	ibid.

some are
ibid.

<i>Lyncurium</i> what it is.	217.f
<i>Lycus</i> rarer.	268.b
<i>Lysare</i> what it is.	579.f

Mankind more mortal than other creatures in the ac-	
of generation.	302.m
the Mini-foot fish Ozona.	250.m
Maximus wrote of the Phoenix in Arabia, dedicated unto	

302.77
250.77

of Plinies Naturall History.

the Sunne. 272. b. the age of this bird and manner of
 dying. ibid. hence the young Phoenix is bred. 271. c
 Minding people women bring forth children at such years
 of age. 157
 Minutius Capitolinus, first that was rewarded with a man-
 nual reward. 170. k. his deeds and rewards. ib. his praise. ib.
 Minna, what it is. 376. b
 Minerva Iovis. 367. e
 Manticora, what kinde of beast. 206. k. resembleth mans
 Language. 222. l
 Maples of many kindes. 466. k. the wood commended for
 fine graine, and scruteh in curious workmanship. 466. l
 Magnesia. 213. e
 m. Mercurius first devised cut out arbors at Rome. 359. b
 Marcusus Iulianus brought plain trees into Italie. 358. b
 Marcellus Lybia naturer of heropaget. devised. 95. d
 Marcellus Lybia the barding of Hermopaget. 95. d. scene they
 were at Rome. ibid.
 Mare wasle was the prize in the Olympian race. 304. g
 Mares better than stallions in war service in Scythia. 222. l
 Mares conceive by the wind. ibid.
 Mares how they are brought to admit Affes to cover them.
 203. e.

beech Maft described. ibid.k
 Maft of sundry trees. ibid.l
 Maft differ sundrie waies. 459.a
 Maft which is best for feeding cattail. 459.c.f
 Maft of a bip of maine bigneff. 489.e
 Maft tree how it groweth. 523.f
 Maftlike tree sheweth three reasons of plowing ground. 599.b
 Maftlike the rosin of the Lentiske tree. 424.g
 Maftlike gum. 369.c. the best. ibid.f 459.b 459.c 459.d 459.e 459.f 459.g 459.h 459.i 459.j 459.k 459.l 459.m 459.n 459.o 459.p 459.q 459.r 459.s 459.t 459.u 459.v 459.w 459.x 459.y 459.z
 of the Matrice. 370.g
 Matricarians their presumptuousnesse. 344.h
 Matrine rising or sitting of fixed starres. 587.d
 Maues change their colour. 285.f
 Mauritania, the description thereof. 90.i

Mares with foale labour as well as before, 303.	filary steale	
their seling many times.		304-5
Margarides, a kind of		387-8
Margo, a Name of Limstone.		505-6
Mario a filbe of pleafant tail.		243-6
Mariarion oyle the beft.		382-3
Marius commended by Sylla Patix for building a man- nor house in the countrie.		156-7
Termofites where bred.		554-5
Matonates their nature.		226-7
Maiorine, what Olives.		432-3
Marrow.		344-7
Marrow neuer found but in hollow bones.		344-5
Marrow of the Iuxtree and nature thereof.		526-7
Marrow of the backe descendeth from the braine.		ibid.
Marrow of a mans backe groweth a snake.		305-8
Marrowes ended with a vertue againft serpents.		154-5
Mart their nature and motion		6-8
Mart his comf leaft of all others can be observed.		12-3
his colour.		

M	Measure of the sea.	149 d
Measure of the parts of the world.	<i>ibid.e</i>	
Meadow grounds how to be chosen and ordered.	595. b. when to be moved.	<i>ibid.</i>
Meads burnt her husbands concubine by force of Naptha.		
47. a.		
Meadows called Prata or Parata.		553. f
Medita the def. <i>ipion</i> thereof.		122. d
Medica. a fersibed 573. b. how and where to be sowed. <i>ib. c</i>		
a singular forage.		<i>ibid.</i>
Medicines not applied in due season, be mischiefs.		546. g
Melampus taught to understand birds language.		296. l
Melaiti, ad, whence soeal.		71. f
Melendraya.		213. d
Melittia, a town.		51. d
Members of mens bodies of miraoulous effect.		168. b
Members lost by sundry occasions.		155.
Memorie rare examples: 167. f. reduced into arr.		168. g
Members genital of a bove publlance. 352. b. in what creatures. <i>ib.</i> are medicinal for the disease of the <i>penis</i>		<i>ibid.</i>
Memmonides, birds.		284. c
Memphis, some time were the sea.		36. e
Men slain for sacrifice.		154. g
Men converfing generally with beasts.	154. b. their deformitie and swiftness.	<i>ibid.</i>

Mars his motion and light.	15.6
Marsus hung himself in a Plane tree.	10.6
Martians descended from Iadæ Creæssonæ.	195.4
Martins, the name of a lady, which she strucken with lightning, being great with child, her child killed, and she without harme.	25 f
Martines, enemies to Betr.	292.5
Martines called Apodes.	ibid.
Martines or Martini. See Smallowes.	
Martinus Africanus strove with Apelle.	107.6
Martinus in an Oracion of his, his head was on a flaming sword.	48.6
Masaffris, what it is.	379.d
Masars trees honored especially by the Romanes.	45.6
Masaff, a great renewsom in some countries. <i>ibid.</i> ground for bread. <i>ibid.</i> fered up to the table for delicats. <i>ibid.</i>	
Masall of different kinde.	456.6
Masaff sweeter of all others.	458.i

Men above like dogs, their manners. 155*e*.
 Men had fine cubits tall, their form constitution of bod-
 ie. *ibid.*
 Men without noses and mouths in *Egypt*. 146*f*.
 Men that know not the use of fire in *Egypt*. *ibid.*
 Men that go ever naked. 177*b*.
 Men eight cubits high, called Olaby. 147*b*.
 Men headed like dogs, called Canomagi. *ibid.**e*.
 Men in *Ethiopia* which live only on wild locusts. 147*f*.
 Men and women greatly loved for their proportion. 150*d*.
 Men furnished of trees. 499*c*.
 Men made to husband and the earth. 516*e*.
 Men weigh heavier than yet. 165*e*.
 Men have been slain and yet not bled. *ibid.*
 Men canonized, wherefore. 54*g*. their strange shape. 155*f*.
 Menoba, a river. 52*i*.
 Menor plucked a spillout of a lions foot. 203*b*.
 Meniscus, so named to express his nature. 43*g*.
 Meniscus his nature and motion. 6*k*. of some called A-
 polle. *ibid.*

Iii

Mercurie

The Table to the first Tome

Ocella, who they be properly.	O C	335.e	Olives how to be gathered, prepared, and dressed.	433.b
Occhi trees.		362.m	Olives how to be kept after Cato's precepts.	ibid.
Occultation of fixed stars.		587.d	Olives, what fire they require in pressing.	ibid.e
Ocyum, a kind of proceroid.		573.b	Olives trees burnt by the licking of Goats.	435.d
	O D		Olives in the Forum of Rome.	444.g
Odontaria, a Myrthe.		369.d	Olives trees neither in Italy, Spaine, or Affricke, during the reigns of the kings of Rome.	429.e
	O E		of Olives, the opinion of Hesiodus, where they lone to grow.	ibid.f
Oenanthe, a bird.		287.a	of Olives three kinds according to Virgill.	429.e
Oenanthe, the grape of the wild vine.		379.d	Olives trees require pruning and other dressing.	ibid.
Ocyum.		370.b	Olives when to be gathered.	430.f
Odyru, a bad kind of Bee.		318.b	Olives which are best.	ibid.
	O I		Olives dregs or lees.	430.f
Odyru have healing.		306.g	Olives blacke, what they signifie.	431.a
Odyru bread.		566.g	Olives when they need watering.	ibid.
Odyru employed in wicker ware.		486.a	Olives to be gathered by hand, or flaken gently, and not to be beaten downe.	ibid.b,c
Ointment or oyle of Cinnamon.		382.k	Olives of diuers kinds to be gathered at sundry times.	ibid.d
Ointment odoriferous, whose invention.		380.k	Olives royall.	ibid.e
Ointment of Maroram.		ibid.	Olives when to be pressed after gathering.	ibid.f
Ointment of Saffron.		381.b	Olives the greatest, not moist oleum.	432.g
Ointment odoriferous how they be kept and tried.		383.c	Olives of Italy fullst of oile.	ibid.
to what use they serue. ibid.e. they may be spared.		384.i	Olives outlandish kept to be eaten.	ibid.
against ointments an edit.	O K		Olives of Decapolis no bigger than Capers.	ibid.
Oker of great age.		495.c	Olives confected or condite.	ibid.
Oker of sundry kinds.		459.a	Olives trees of India.	361.c
Oke dropping is burfull.		51.b	Olives how they are made pleasant to tast.	432.b
Oke Mail. See Acorns.			ibid.	
An Oke in Calabria alwaies Greene.		469.c	Olives purple.	ibid.
Oke fruitful.		460.f	Olives pleasant of themselves.	ibid.
Oke Robur beareth Catkins.		ibid.	Olives proud.	ibid.
Oke albes.		461.a	Olives trees of long continuance.	449.b
mightie Oke sailing upright in the sea.		455.d	Olives wild of great antiquitie.	495.e
Oke Quercus beareth berries like bull heads.		463.i	Olives trees line ordinarily two hundred yeares.	446.c
beareth bali, pills, calloities.		ibid.	Olyra, what kinde of corne.	559.d
	O L			
Olalygones, names of Frogs.		338.d	Omphacum, what it is.	430.f
Oleander, what kinde of plant.		469.a		
beasts. ibid. counterpoison to man.		ibid.	Oncos where they breed.	206.g
Oleastrum a kinde of Box tree.		467.c	Onoceratus, Alexander his capitaine and writer.	366.b
Oleum laced by a Goose.		280.k	Onocrotali, what birds.	295.e
Old oyle of Olives, the use thereof.		435.a		
Old forme of Spaine changed.		53.b	Opheosiphyle.	400.i
An Olive tree made buraine by the licking of a Goat.		542.b	Opheogenes, people, their strange nature.	154.i
ibid.			they cure the sting of serpents.	ibid.
Olive burnt unto the very stumps, hath renewed againe.		ibid.	Opinions diuers concerning the generation of Bees.	318.g
Olive garden in the Marrucine territory, crosseth the highway.		544.g	Opinion of the learned concerning nature of marrow.	339.e
it exchangeeth her place with a plot of corne.		ibid.	Opinion concerning the damage of cattell.	507.e
Olives trees require greatest diligence.		515.b	Lu. Optimus and Q. Fabius, when they were Consuls, an arch scene about the Sunne.	17.c
Olives to be graffed in Autumne.		521.e	Opimian wines.	419.d
not to be set in a bulme, whereas an Oke hath bene stocked.		522.b	Opobalsamum.	377.a
ibid.			how it was sold.	378.f
Olive plant how long it hath prospered.		ibid.	Opopanax.	533.b
when they are to be cherished.		ibid.	Opies, a tree whereunto a Vine is wedded.	
in then blanning they are most hurt by violent rainc.		540.m		
Olive chapples.		432.l		
Olive branches.		ibid.		
Olives how to be planted and ordered, according to Cato.		432.m		
ibid.				
Olive Hort-yards where to be made.		433.a		

of Plinies Natrall History.

Oricum Island.		40.k	Rice.	ibid.
Order of their digesting which chew not the cud.		343.a	Oyle Melinum.	382.b
Origin found by the storks to be medicinal.		210.m	Oyle of Oenanthe.	434.f
Orion or Orus.		165.a	Oyle of filbes.	ibid.
Oriz, people of India, 157.b. eat fish only, rest is against the Sunne.		ibid.	Oyle of Plane berries.	ibid.
Orpaelargus. See Peronopteris.			Oyle of Quince.	382.g
Oryx, a beast with one horne in the midst of his forehead.		331.d	Oyle de Bais.	382.g
Oryx, a wilde Goat.		331.d	Oyle of Myrtles.	ibid.
Oryx, a Goat that drinketh not.		307.f	Oyle of Quince. See Melinum.	
are mede against thirst.		ibid.	Oyle of Lillies.	382.b
Oryx a wilde beast in Aegypt. standeth full against the doge starre when it ariseth.		19f	Oyle of Fenigreeke.	ibid.
Orsanche.		575.a	Oyle of Myrthe.	382.m
Orpheus his descent.		78.g	Oyle, an acceptable liquor to be used downwardly.	428.i
Orphe, a fish.		245.b	Oyle, the uses thereof.	428.k
Ortygometra, what bird it is.		283.a	Oyle Licin anum.	430.i
	O S		Oyle abused by the Greekes.	ibid.
Ofines, what birds they be.		278.l	Oyle de Bais how it is made.	434.g
Ofrey or Ofrey, what kinde of foule.		272.k	Oyle Olives, the price at Rome.	424.c
Ofrey or Ofrey.		308.m	Oyle Olives of greene Olives. ibid. f. worse for age.	430.g
Ofier, a towne.		52.b	and why. ibid. it hath three degrees in goodness and no more.	432.i
Ofisagi, a towne.		ibid.g	Oyle of Graine Gnidian.	434.f
Ofisagi, a kinde of Eagle.		272.k	Oyle Glencium.	ibid.k
Ofisoda, a citie.		51.d	Oyle of Asphalubus.	ibid.
Ofippe, a towne.		51.i	Oyles of sweet Calamum, Basilme, Iris or Fleure de Luz.	
Ofiches naturally bald.		332.k	Cardamomum or graines of Paradise. French Nard. Penax, Nardora. Elecampan, Cinnamon root.	ib.
Ofiches the biggest fowles that bee.		270.d	Oyle Rofat.	434.f
their description. ibid. their swiftnesse on foot.		ibid.	Oyle of Squinanth, of Herbane, of Lupines, of Duffadill.	ibid.
their egges and feathers. ibid. m. their foolishness.		ibid.		
	O T			
Otis, why so called.		283.c	Oyle of Radish seed.	434.l
Otes used for bread.		574.b	the root of Gramen.	ibid.
Ozies, what kinde of birds.		281.c	Oyle Cortinon.	ibid.
Ovis and like Owles only have feathers like eares.		33.d	Oyle Cneceum or Cnidium.	434.l
	O W		Oyle of Lillies. ibid. Selgeticum. ibid. of Puch.	ibid.
Ovis their wit when they fight with other birds.		277.f	Oyle liquor will turne into lees.	430.m
Ovis depart for a time.		284.g	Oyle contrary to venome of Scorpions.	335.g
	O X		Oyle tees or dregs, wherefore it is good.	435.b
Oxen of the Troglodites hang their hornes downward.		331.d	Oyle kill th Insects.	355.e
Oxen at two yeares age change their teeth.		338.i	Oyle of Saffron.	504.m
draught Oxen how to be coupled in yoke, and how they labour at the plough.		579.a		
how much they plough in a day, according to the ground.		ibid.b		
Oxe gail dedicated to Nature.		342.g		
Oxen have highly honoured in old time.		225.c		
Oxycedrus.		388.l		
Oxyryphon.		424.b		
	O Y			
Oyle, who drew first out of Olives.		189.a		
Oyle of wild Olives.		433.e		
Oyle of Chamelae.		ibid.		
Oyle of Cictor Rucinus. ibid. how it is made.		434.g		
the use thereof.		ibid.		
Oyle of Almonds butter.		434.g		
Oyle of blacke Myrtle berries.		ibid.b		
Oyle of garden Celyste.		ibid.		
Oyle of Cyprus and Cipress.		434.i		
Oyle of Lentike, Ciprimus, of Chestnuts, Sefame seed.		ibid.		

P A

Pallolus, a famous river.	107.e.	the names thereof.	
ibid.			
Padianz, a people governed by women.			118.b
Petr, families in Rome.	335.e.	why so called.	ibid.
Pezon, an Eunuch how he was sold.			175.f
Pagri, filbes.			245.a
Pala, a tree of India.			361.a
Palatium, a mount wherein a chappell was dedicated to the goddesse Fauer.			3.e
Palestimum, a famous and populous citie in Tappobane.			130.g
Palicium, what starre.			592.f
Palmyra, a noble citie, with the description thereof.			104.i
Palurus, a thorneplant.			398.g
Palma Christi. See Rittum.			
Palme.			379.e
			Palmeffra

The Table to the first Tome

Palmefris fruticulos. 354.*k*.
Palmiprimum, what vine. 421.*a*.
Pamphylla of Coos, inuentress of weaning filks. 325.*a*.
Pan gonerous of Lucitania. 51.*f*.
Panaces or *Panax* what manner of plant. 378.*k*.
Panacæum eniment. 381.*c*.
Pandore, a kindred of Indians that live in vallies untill one hundred yeeres age. 150.*m*.
Panicke of may hyd. s. 558.*b*. it yett leeth very much floure. ibid.
Panicke with Deanes, much used in Piemont. 566.*g*.
Panicke, at come, why so called. 558.*d*.
Pantekon, a temple of Venus in Rome. 247.*g*.
A Panther secketh help in warts hand. 204.*g*. her backe false. ibid.
Panthers skins, ibid. i. their sweet smell and hideous looks. ibid.*k*.
Panthers marked in their shoulers. ibid.
Panthers exhibited in shewes at Rome. ibid.*l*.
Panthers how they be poisoned with Aconitum, and cured againe. 211.*b*.
Pantherine, what manner of Tables. 396.*g*.
Of Paps a discourse. 346.*k*. 347.*d*.
Pape of a Dolphin painted in the bottome of her belly. 248.*g*.
Papoe of a Saw having been newly farrowed, bee excellent meat. 344.*i*.
How they are placed in creatures. 347.*j*.
Paps of Elephants are under their shoulers. 347.*e*.
Papsy came in Ægypt. 391.*c*.
Papsy when it was first made, and where. 391.*e*.
Papsy reed or cane how it groweth. 392.*d*.
The use thereof besides Papsy. 392.*b*.
Papsy Hieratica. ibid.*k*.
Papsy Augusta. ibid.
Papsy Luna. ibid.
Papsy Amphibatica. ibid.
Papsy Eximiana. ibid.
Papsy Satrica. ibid.
Papsy Tanotica. ibid.
Papsy Emporetica, or stop-papsy. ibid.
Papsy low it was made. 393.*a*.
Papsy Macrocola. ibid.
Papsy Claudia. ibid.
 Parchment denied at Pergamus, and open what occasion. 392.*g*.
Paradallum, an ornament. 381.*e*.
Parietarie, a medicine to disperse birds. 211.*c*.
Parkes when first denfed. 231.*a*.
Parre, certaine birds. 288.*l*.
The Parrot what manner of bird. 295.*b*. named Sitace, can craite, and pronounce again. ibid. hard headed, feebly foated. ibid. loneli voice. ibid.
Tawards are the best difficult. 332.*l*.
Parvats are for his sake to the Island Giganides. 446.*b*.
Parts most principall of man, are skinned by themselves. 344.*l*.
Parts gentill most diffemur in nations. 352.*b*.
Parts gentill of Hymenophorides serve for both sexes. ibid.
Parts of the pectoratorie. 40.*k*.
Parts of the heart to corrupt breath, no difference in nature. 335.*b*.
Parts of the eye, as there have two hearts, 289.*g*.
Parts of the eye, as there have two hearts, 340.*d*.

Partidges will never be fat. 344.*k*.
Partidges, how industrious they are in building their nests. 289.*b*.
Partidges exceeding lecherous. ibid.*c*.
Cook Partidges tread one another for want of Hens. 289.*c*.
Hen-Partidges concue with the verry ear of the Cocker. 289.*d*.
their itatouffe. ibid. e. f. their pollicie to fauour young. ibid. their age. 290.*g*.
Pasena the crucians at Rome. 456.*e*.
Passiflora crispus fancied a beech tree. 496.*c*.
Patates, a famous port in India. 36.*g*.
Pateton, a kinde of Date, why so called. 287.*d*.
Of Patience sundry examples. 187.*d*.
Patroclus, the name of an Elephant. 194.*k*. his barbe aduertise and reward. ibid.
Paulinus Suetonius, a Romaine that went first over Atlas. 92.*b*.
Paunchs of booted crafts hard and rough. 343.*a*.
Paunch never compass'd with bones. 343.*c*.
Paupis, what Olites. 429.*e*.

P E

Peaches four kinds. 436.*b*.
Peaches, why called Persica. 437.*c*.
Peaches in Persia, whether they be venomous or no. ibid.*d*.
Peaches crowned with hairy feathers. 331.*a*.
Peaches becausfull, witty, and proud. 278.*m*. his life. 279.*a*. they be malicious. ibid. made fat and serued upon the table first. ibid.*b*.
Peasecocks lecherous. 301.*a*.
M. Aspidius Luro fed Peasecocks, and made a gaine therein by. 379.*b*.
The pea-been how they layeth. 300.*m*. and hatcheth. 301.*a*.
Peares more pointed than Apples. 439.*f*.
Peares how preferred. 440.*g*.
the properties of Peares and their uses. ibid.
Peares how they are kept long. ibid.*k*.
Peares Barbarian, Venetian or coloured, Royal, Patriaricall, Vocoman, Volcanian. 439.*d*.
gorard Peares. ibid.
Peares called Libratia. 436.*k*.
Peares pond. 439.*a*.
Peares Rustissime. ibid.
Peares Fulmine, why so called. ibid.
milk Peares. ibid.
Syrian Peares, why so called. ibid.
Peares Dicimanna. ibid.
Peares Dalabellian. ibid.
Peares Psoudedicimanna. ibid.
Pompetin Peares. ibid.
pop Peares. ibid.
Tyberian Peares, why so called. 439.*c*.
Peares taking name of countries. ibid.
Peares Licetan, Senurian, Tyrrannian, Favonian, Lateran, Anzian, American Picontan, Nunanian, Alexandrian, Numidian, Grecian, Tarentine, Sygneine. ibid.
Peares Tellacia, why so called. 439.*b*. Onychine. ibid.
purple Peares. ibid.
Peares Altrapia, Laumer, Nund, Bosley, Borsile, Thockking, Considan. 439.*d*.
Peares how they be engendred, why they be called Myons. 254.*m*. 255.*e*.
Peares the forenamed commodities of the world. 254.*k*.

of Plinies Natural History?

the cause of their *Amneffe* or *clareneffe*. 254*g* *Pluborium*, a wine to cause abortive fruit, how it is made, 422 *g*
Pearles much to require with the *Romans*. 256*g* *Plu.* 364*f*
Pearles out of Arabia. 371*f* *Physc.* 401*d*
Pearles found in *Acarnania* will lose their colour. 256*g* *Physmata*, watimely fruits of *foek-fishes*. 255*a*
Pearles their price and estimation. 254*g* *Physor*, what it is. 401*d*
Pease, when to be sown, 56*g* *how coddled*. 570*g* *Physeter*, what fish. 235*f*
Peccunia, whence derived. 550*b* *Physioke*, what disease. 188*g*
Pegafk, what birds. 206*g* *Physicians* taxed for dealing with dangerous medicines. 400*g*
Pegafk, winged *Donfer*. 206*g* *Physicians* that exceeded. 174*f*
Peinting who first devised. 190*g* P
Pelagie, a kind of purple. 259*a* *Pictie*. See *Kindenette*, *Natural*.
Pelamides, fishes. 243*c* *Pia* water, a treatise of the braine. 332*m*
Pelagum. 453*a* *Pictures* of great price. 175*c*
Pelicion. See *Scomber* *lucii*. 73*c* *Pics* learn to speak. 293*c*
Pelion, a hill measured unto the height thereof. 31*d* *Pig* taken from the pap, maketh it remaine flat to the bellie. 347*f*
Peloponnesus, the description thereof. 73*c* *Pigs* know their owne paps. 547*f*
Pemna of famous river. 76*f* *Pikes* of the sea. 245*c*
Pentroy, all flowers in mid-winter. 588*f* *Pills* of *Crassus* did beautifie the theatre. 499*g*
Pentroy, all flowers flourish in mid-winter. 10*b* *Pindarus*, why so called. 550*b*
People of the East feed of grasshoppers. 325*c* *Pindarus* feared the *Suns* eclipses. 9*a*
People without heads. 156*g* *Pine* tree and *Pinaster*. 462*b*
People without waies that cover their whole body. 157*a* *Pine* tree chapters. 431*g*
Pepimiers how they are to be made. 510*d* *Pine* nuts or apples how they grow. 435*c*
Pepper trees 361*c* long pepper, ibid. white pepper, blacke pepper. ibid. *Pine* trees ever full of fruit. 473*c*
Pepper sophisticate. 361*c* *Pinnas*, a cuckle in *Acarnania*. 256*b*
Pepper their price. ibid. *Pinnator*, what fish. 253*a*
Peperentes, what kinde of Hawke. 272*g*. and her properties. ibid. *Pip* in beest, 300*b* the cure. ibid.
Pererus. See *Morphus*. *Pipes* of *Cans*, *Reeds*, *Shanks*, bones, *Silver*, *Box* and *Lutes*. 484*g*
Perfumes. See *Ointments* *odoriferous*. 40*k* *Pipes* made of reeds and canes. 844*d*
Perisue cucu in the very *Capitoll*. 4*e* *Pyrrhus* his great love, and vertue thereof, 155*c* it was reserved for a holy relique. 155*d*
Perisue a venomous tree. 437*d* *Pirrie* or crew of peares. 421*a*
Perisue, what manner of tree, and the fruit. 350*a* the most durable and ferser for images. ibid*k* *Pisces* of *Camels* serve for bow-strings. 432*b*
Peslethe beginning in the South goes to the West. 183*d* *Piswires* greedy of *Cypre* feed. 512*c*
Perisue but three moneths. ibid. *Piswires* how the charge and fall of the *Moone*. ruled by the power of the *Moone*. 20*e*
P *Pisus* a notable drinker, advanced therefore by *Tiberius* *Claudius*. 427*e*
Phalangia, a sort of spiders. 321*b* *Pisones*, why so called. 550*b*
Phalangia, can condensed in *Evule*. 575*b* *Pisse* of *Beares* hard at borne. 152*b*
Phalerides, damis water-foules. 296*g* *Pissocrotes* the second foundation of the works of *Beer*, 331*g*
Pharnaces, a people in *Asiopia*. 155*b* *Pistores*, who they were in *Rome*. 567*b*
Pharus, an Island cut from *e* *Egypt* by the sea. 439*e* *Pitch* trees of six kinds. 462*b*
Phaulus, what disease. 32*e* *Pitch* plasters. 424*b*
Phedrus was accounted most happy. 180*b* *Pitch* wine. ibid.
Phenides, *Phthagores* his master fore-telling an earthquake. 37*d* *Bruttus* or *Calbrian* *Pitch*. 424*f*
Phenit, a place in *Nile*. 226*c* *Pitch* how it is knowne good from bad. 474*d*
Philip of *Macedon* fighting against *Greece*, the sky appeared bloody. 17*c* *Pitch* where it beareth to grow. 462*a* in the description thereof. 462*k*
Philopodes his *Phisopod*. 161*m* *Pitch* trees commended for their rasu. ibid.
Philofus how to breed *Bees*. 313*f* *timber* of *Pitch* tree for what it serveth. ibid.
Philonides, the carrier or Post of *Alexander*. 35*c* *Pitch* tree how it differeth from the *Larch*. 463*b*
Phonice water of 3 siter. 322*b* *Pitch* trees grow againe as they be burnt to the root. ibid.
Phonucholitus. 374*i* *Pitch* tree why it is called *Phthoriphorus*. 463*a*
Phonings water in *Argus*. 296*g* *Pitch* both liquid and stony, how it is drawne and made. 464*b*
Phononius. See *R. R. redobard*. 271*e* *Palimpfius* or stony pitch, ibid.
Phonius advised with a vision of feathers. 331*a* *Prech* join cut of the pitch tree. 465*a*
Phorigum how to wash *Capitoll* in *Nile*. 1*e* *filled*

The Table to the first Tome

Raine in midsummer naught for vines.	ibid.k	Remedie against stinging of scorpions.	325.e
Raine in Winter most insafesom for plants.	501.b	Remedies of trees common and proper.	546.l
Raine at the same time helpeeth not all trees.	ibid.	Remedies against sundry maladies in corne.	575.e
Raine by night better than by day.	501.e	Remet of a Rabbit medicinable for the flux of the belly.	346.k
Raine how it is caused.	20.k	Report of Hercules and Pyrene or of Laturne is fabulous.	51.f
Raine strange and prodigious, of milke, blond, bricke, styles, &c.	27.f.28.g	Resistance upon land.	555.a
Raine not at all in some lauds.	43.b	R H	
Raine water faued for ordinary vse to drinke.	146.m	Rhabanus, a venomous shrub.	362.l
Raine-bow sheweth what weather.	611.m	Rhododendron, a beast.	205.e
Raine-bow the nature and reason thereof.	281.m	Rhododendron. See Oleander.	
Rams-fish his manners.	226.b	Rhominus Palemon an excellent good husband.	411.d
Rams and their nature.	226.m	Rhinoceros, what beast it is. 205.e, his fight with the Elephant. ibid. horned in the nose.	133.e
Rams generally armed with crooked hornes.	331.e	Rhododaphnis. See Oleander.	
Ranke corne how to be remedied.	576.	Rhodes Iland.	40.g
Rankest best full to corne.	482.g	R I	
Rapes, and their vse. 570.k, their plentifull commoditie, they grow euery where.	ibid.k	Ricinis. 433.f. why so called.	ibid.
Rapes male and female.	570.l	Rice corne described. 561.b.c. and the vse thereof.	ibid.
Rapes of three sorts.	570.m	Rie.	572.l
wide Rapes medicinable.	571.a	Riuer-horse in some sort his owne physician.	346.l
Rapes with what ceremony to be sowne.	ibid.b	Riuers of a wonderfull and strange nature.	45.a.b
Raspis described.	485.f	a Riuer warme in Winter, and exceeding cold in Summer.	545.a
the flowers of Raspis medicinable.	ibid.	R O	
Ratunna the gate of Rome, and whence it took that name.	212.g	Robin Redbreast.	287.a
Rats of Pontus their nature.	215.m	Rocke of stone of a strong and wondrous nature.	42.b
a Rat sold for two hundred sesterces.	233.a	Rockes in Syria burne corne.	505.e
Rauens taught to speake.	293.f	Royal ointment, what it is.	383.b
Rauens their properties. 276.i. how they conuene with young.	ibid.k	Roiot and exesse of Romane Senatours.	91.f
a Rauens saluted the Emperour. 294.g. solemnly interred.	ibid.	Romanes kinde and good one to another in oldtime.	4.g
ibid. b. his death reuenged by the people of Rome.	ibid.	Romanes trafficked into India.	133.b
Rauens employed by an hawker.	294.k	Romanes excell all nations in all kinde of vermes.	176.b
a Rauens made shift to drinke at a bucket.	ibid.l	Rome diuided into quarters according to woods adioyning.	461.f
Ray killeth wheat.	575.a	R R	
R E		Rooke. See Crow.	
Red Deere. See Stags.		Root of an oke taking an acre in compass.	477.e
Red sea, why so called.	134.g	a Root of a rape weighing four hundred and one pound.	570.l. how dressed for the table. ibid. how preserved continued artificially.
Reeds of strange biggnesse.	155.e	Roratio a blasting of vines after their blowing.	540.i
Reeds where they grow. 524.m. they multiplie and encrease of themselves.	515.a	Rosat oile in great request.	382.g
Reeds and Canes to be set before the Calends of March. ib.		Rosin trees of six kinds.	462.b
Reeds cease to grow at mid winter. ibid. alwaies to be cut in the mane of the Moone.	525.b	R V	
Reeds employed to many uses.	482.g	Rubigo in corne, what it is.	598.i
Reeds vied to calist ships.	ibid.b	Rubigalia, a festiual holiday.	600.g
Reeds strene Easterlings for arrows.	ibid.f	Rue discovered by the Weasill.	210.m
Reeds of Italie compared with those of Candie and Picardie for making of flasts.	ibid.k.l	Rumbotinus, a tree.	405.b
Reeds differ in taste.	483.e	S A	
what part of the Reed fittest for curry pipe.	484.i	Saba, & Sabota, the proper place for frankincense. 366.g	
Reeds for Faulcons poles.	ibid.	Sabis a god.	368.g
Reeds for angle-rods.	ibid.	Sabines called Sevini, and why.	65.a
Reeds for vine pearches.	ibid.	Sacrifice young beasts when they be in their season. 250.g	
Reeds and canes how to be planted.	557.a	Sagunt a child being borne presently returned into his mothers womb againe.	158.g
Reeds, how to be killed.		Salt pether earth good for plants.	503.e
Reverence. See Bats.		Salt cannot be made without mingling of fresh water. 46.k	
Refusiva or Refine.	569.b	Salamander his description and nature.	305.e
Region in Theffalia, how it grew to be cold.	503.d	Salamander	
Attilius Regulus slew a monstrous serpent.	199.d		
Religions reuerence in the knees of men.	350.b		

of Plinies Natrall History.

Salamander not distinguished by sex.	305.d	325.a. they are harmelesse in Italy. ibid. b. they are harmelesse to things without blood.	325.e
the Salmon fish.	247.a	Scorpions, where they be harmelesse to strangers, and some to inhabitants: they reuenge their breibrent death.	325.e
Salloves. See Willawes.		Scutcheons for grafting how to be made.	520.b
Samar, what it is.	1468.g	Seyros wind.	23.a
Samofatis, a citie in Comagene.	46.m	Scythia free from lightning and the reason.	23.c
Sambri, people where four footed beasts haue no ears. 146.k	559.d	Scythian nation, the description thereof. 123.e. called by Persians Sacus.	ibid.
Sandalum, what corne.	287.d	Scythian sea the water thereof fresh.	124.g
Sandalides, Dates.	416.l	Scythians seed on mens flesh.	153.f
Sangualis, what bird.	147.b	S E	
Sapa, what it is.		Sea engendeth the like of all that is in the world besides.	235.a
Sapa in Aethiopia what it signifieth.	465.d	Sea Rams.	236.k
Sap of trees. See Alburnum.	488.l	Sea Elephants.	ibid.
Sapum, what it is.	391.d	Sea-calnes or Seales.	243.a
Sapinus, what it is.	580.k	Sea, where it is deepest.	44.l
Sapinus in trees, what it is.	107.e	Sea botter in winter. 46.k. made calme with oile.	ibid.
Sarcocolla, a tree and gum.	244.e	Seas in the reflux and ebbe thereof living creatures die, and not esse.	41.e
Sarceling, what it is, and of what use.	246.b	why the Sea is salt.	41.b
Sardis the capital citie of Iydia.	400.k	Seas the reason of their reciprocal ebbe and flow and where they keepe no order.	42.k
Sardane a fish-fish.	394.l	marmales of the Sea.	43.f
Sargus, what fish.	5.f	Sea, what land: haue been turned wholly into.	40.i
Sari, a form.	19.e	Seas how they haue gone backe and deuided lands.	39.f
Sardapan his letters written in papyr.	96.i	what lands they haue broken in betweene.	4.b
Sature what he is, and nature and motion thereof.	156.g	Seareds.	401.d
Sature caneth raine, &c.	156.g	Sea trees.	401.d
Sature colour.	355.e	Sea cabs.	287.f
Satyrus their shape.	516.i	Sea water vnmolestone to be used in making dough. 500.e	130.b
Satyrus haunt mountaines in India.	210.d	Sea about Tabrizane full of trees.	132.k
Satyrus what they are.	449.d	Sea makes twentie cubits long.	244.b
Sauces how they be dangerous.	246.k	Sea through fish.	ibid.
Sauine how it is helped in growing.		Sea yeeldeth precious cogwits and pearles.	254.a
Sauorie or Chulababula found in the land Tortoise.	154.i	Sea nettles and Spunges, neither living creatures nor vegetables. 263.i. their manners.	ibid.
Sawomates eat but one meale of meat in three daies.	154.i	Sea-bare.	26.g
Sauours differ in fruit.		Sea Tortoise hath neither tongue nor teeth.	319.f
Sauce, called Garum Sociorum.		Seales haue not bones.	315.a
S C		Seale fishes haue no eares.	333.g
Scallops.	253.d	Seasoning time of the yeare in plants when it is.	471.d
Scallop fish like to the sea urchin.	256.b	Sebesten, what fruit.	475.e
Scarus, a kinde of fish.	245.f	Sebesten and Seruices may be grafted both in one stocke.	511.f
Scarnus Confull, found out a vaine obseruation of lightening.	27.e	Volcanus why he was called Sedigitus.	319.e
Scenie, people why so called.	139.f	Seed, what it is.	561.a
Scerpinus. See Eryscerpinus.		Seed-corne of all sorts how to be chosen.	582.m
Schærus, what measure it is.	366.b	Seed how to be aspiensid for sundry grounds.	483.d
Scherion, a diall, and the finder out thereof.	36.k	ground take Seed, some more than other.	483.b
Sciens, fishes.	244.b	Seed falling from heauen engender all things.	2.b
Sciurus bred in Nilus. 209.b. the vertues thereof in Physicke.	ibid.	Segeffa, a goddesse.	549.e
in sundry Sciences excellent men.	174.k	Seia, a goddesse.	ibid.
Sciopodes, a people in India.	156.g	Selenitum an Iwie.	480.l
Sciope Africanus the former cut out of his mothers wombe 160.i.		Selenus Nicator purposed to cut the land through between Cimmarus Bosphorus and the Caspian sea. 120.d	284.l
Sciope Africanus the second bis trench separating the two prouinces of Africke.	93.e	Selenitum, birds enemies to locusts.	517.d
Sciope Nafica his hard hap. 173.e. his praise.	ibid.	Semantic or Autumn corne.	517.d
Scolopendres, fishes.	262.g	Sembracina.	
Scolopendres chase people out of the countrie.	212.b		
Scolopendres without wings.	327.b		
Scordasius, a tree.	363.a		
Scorpions and Solapges depopulate a countrie.	212.b		
Scorpions perisb by their young ones.	324.l		
Scorpions their sting dangerous as serpents. 324.l. how they exercise them. ibid. they cannot quench their thirst.			

Sembracena, myrrhe. 369.b
Annua Seneca. 411.f
Senses wherein men excell other creatures. 305.e
Senses wherein other creatures excell them. 411.d
Septentrio, a wind. 22.i
Seres people described. 130.i.k
Seres people famous for fine silk. 124.i. their nature. 411.d
they cannot abide to merce with others. 170.l
M. Sergius (grandfather to Castille) his commendation. 170.l
Sergius Aratus first denier of oyster pits. 266.i
Serichium. 374.b
Serpents having lost their eyes will have new. 336.g
Serpents have but one venomous tooth. 337.d
Serpents of great bignesse. 199.d. afflicte foules of the air. 411.d
Serpents destroy a citie. 212.b
Serpents and lizards have long livers. 343.b
Serpents have thirrie ribs. 343.f
Serpents some of them footed like Geese. 351.d
a Serpent barked. 202.k
Serpents how they engender. 301.g. they lay eggs. 411.d
chained together about vipers. 302.b
father of the Graecis found two serpents within his house. 174.i. what they prefiged. 411.d
Serpents chased away with the perfume of harts horne. 306.k
Serpents lute eggs. 307.a. they lute wine. 411.d
Servius Tullius being a child sleeping, had a light fire shone over his head. 48.g
Servants and flames of great price. 175.e
Sesame. See Ricinus. 558.i
Seskim a Romane Astronomer foresaw a death. 558.i
Sesels or Siler-mountaine, wherbin binds to calve. 213.d
Senta, a came in Dalmatia wherin breedeth the wind. 21.e
Sewing with the needle or nail who first denifed. 188.i
Sexes distinct in all plants. 385.d

S H

Shadow of the walnut tree noysome to men. 514.k
Shadows of trees. 411.d
Shadow of the Palme tree pleasant and comfortable. 411.d
Shadows of some trees no better than poison. 515.a
Shad, oves are not to be stene in some part of India. 156.l
Shad, wens when and where there be none at all. 35.f
twice in the year they fall contrary. 36.b
Shoe affe much paine with paine of their udders. 347.e
Shucke a beir young but six months. 348.g
Shoe Beare, hme some papi appece. 226.k
Shoep how necessary. 411.d
their time of engendering. 227.b
of Shoep two principall Kindes. 228.k
Shoep which is kindly. 496.l
Shoep rotten hals to be cured. 341.e
Shoep without galls in Euboa. 411.d
Shoep in Naxiu have two galls. 576.b
Shoep good to eat downe ranke corne. 359.b
Shearing trees when first denifed. 18.b
Shields burning in boanen. 18.b
Shelfish the occasion of much royor and excess in the world. 254.g
Shindles of that wood best. 461.e. they covered the houses at Rome a long time.
Ships web pces at both ends. 119.d

Ship that brought the Obeliske out of Egypt. 489.e. sunk in the haven of Ostia. 141.
Ship of K. Demetrius of a mighty bignesse. 490.g
Shipping of sundry forts. 109.g
Ship tackling, cables, anker, &c. who denifed. 411.d
Showelars what manner of birds. 292.l

S I

Sicilie sometimes tyred to Italy. 4.i
Sider or wine of apples. 421.a
Signes of short life. 534.i
Signifer circle in heauen. See Zodiacke. 586.g
Signes of the spring. 505.a
Signes of good earth. 332.b
Silkwormes how to be ordered. 563.e. the finest wheat for manchet and pastrie worke. 563.d. a fine floure. 564.i
Siligo, 562.m. commended. 563.e. the finest wheat for manchet and pastrie worke. 563.d. a fine floure. 564.i
Silicia or Siliqua. See Fenigreeke. 243.a
Silurus, river whale. 389.e
Similaga a fine floure. 411.d
Simones and Silones, firraces. 336.k. why so called. 411.d
Simach the fruit. 389.e
Simones bind the bones together. 345.b. being cut cause much paine. 411.d. where they are hidden. 411.d
Siluer mines who first found out. 188.k
Singing whole invention. 189.e
Siphylus. 40.m
Silurus a fish, supposed to be a surgeon. 243.a. his properties. 245.e
of Sinewes, cards, and ligaments. 345.b
Sirion lake carrying a circuit of 150 miles. 100.i
Sithes of two sorts. 395.f

S K

Skarlet graine of the oak llex. 461.a
Skie, strange fights seen therein in time of Othanius, Consul. 18.i
Skil in planting directed by the nature of the soile. 501.e
of the skin a discourse. 346.k
it hath no fellowship with understanding. 411.d
Skin of Crocodile hard. 346.k
Skin of Rineer-horse turneth iawlines and seares. 346.l
Skin of Elephants not to be pierced. 411.d
Skins of Gorgen women hung up in Innoes temple in Carthage. 148.l
Skrichowle fiesh not directly. 277.a. one of them entered the sanctuarie of the Capitoll of Rome. 411.d

S L

Slawerie who brought in first. 289.a
Slawer denoured of Lamprey. 348.a

S M

Smell most pleasant that commeth from the earth. 505.a
Smell of a snuffe of a candle causeth vniuersely birth. 159.e
Smilaces. 558.l
Smilax one of the names of Tugb. 463.f
Smilax how it is described. 481.d. supposed to be vniuersely and why. 411.d. the name of a young damself turned into the plant Smilax. 481.d. the use that the wood is employed unto. 411.d
in Smyrna a boy changed into a girl. 292.l
Showelars what manner of birds. 218.i
Snelles. 411.d
Snake

Snake casteth her slough, and by what meanes. 211.a. in Syria they hurt no Syrians, but deadly to strangers. 234.i
Snow salteth not where seas deepe. 461.k. how it is engendered. 29.b. how it is good for trees. 500.i

S O

Socrates kept one countenance alwaies. 166.b
Socrates iudged the wisest man. 173.e
Socrates neuer knowne to change countenance. 166.g
Soles, fishes. 244.b
Sorusees trees how they be kept long. 440.l. of some kind. 445.e. round as apples, pointed as peares, long as eggs. 411.d
Sorusee Torminate, why so called. 411.d. preferuacion in it. 411.d
S. Sigenes. 6.k
South wind when it bloweth, causeth creatures to be less hungry. 24.g. it raiseth more furing waves than the North-wind, and why. 411.d
Soules of men past cells, heauen. 16.m
Soules whether immortal. 187.a.b
Southerne winds make trees feeble. 600.b. a rocke cracked unto it. 21.e. arise from mid-day. 12.d
Sowes eat their own Pigs. 130.g. how they be slain. 16.k
their liver made into a dainties dish. 411.d. they use not their teeth to strike at Borei. 337.f. enraged when they see a brimming, and how remedied. 304.g.b. that bee wild, breed but once a year. 231.a. raging in their fawning. 411.d
Sophocles entred by warning from Bacchus. 171.d
Sowing of corne. 579.e. in the right season. 411.d
are in Sowing. 411.d
late Sowing more dangerous than early. 584.k
in Sowing the Moone and signes to be obserued. 411.d

S P

Spadonee Dates. 449.e
Spages. 424.g
Spaine, the description thereof. 379.f
Spate, what it is. 379.e
Sparrowes short lived and lescherome. 290.m
Spagnos, sweet mosse. 375.d
Spingere, a kinde of Monkey or Marmoset. 232.i
Spikenard. See Nard. 277.b
Spintaxius, what bird. 277.b
Spiders greates enemies to Beet. 221.e. where they begin their web. 411.d. hunt after Lizards. 324.i. lay eggs. 411.d
being young eat their mother. 411.d. the use of their web. 323.b. drinketh up the moisture of cloth. 330.b
Spring colder in Summer than in Winter. 46.k. leape upward. 411.d
Spittle noisome to serpents. 154.l
Spring entrance when it beginneth. 590.m. 591.a
Spring corne. 557.d
Spiders how they engender. 324.i. why they scatter their eggs. 411.d
of sundry forts. 262.l
Spiz, birds called Pici Martia. 278.g. why b. effectually pre-fages. 411.d. their admirable nature. 411.d. no Springs at Tarcentum. 285.e
See I. apicis served in 120 founten fields. 170.h
Spiz in 1299.b. the properties thereof. 411.d
S. Sado 1299.b. the properties thereof. 411.d
Sp. It. 363.a
Spiders foresaw the fall of an house. 211.e
Spleene fastened in the left side of the bellie. 343.c. thought

to be serpents. 411.d. it hindereth the running. 411.d. professed runners waff it in a hot yron. 411.d. may be taken out of the bodie without harme. 411.d. being taken away, the laughter is gone. 411.d
Spikenard will not thrive in Arabia. 478.l
Spindle and spinning whole invention. 178.i
Spirae, faults in wood. 489.a
Spirit. See Aere. 578.l
Spondinium, an hearbe and fruit. 161.f
Spinter and Pamphylus, two players, how they resembled Lantulus and Metellus Consul. 23.c
Spring when it beginneth. 154.l
fasting Spittle killeth serpents. 343.c

S Q

Squali, fishes. 248.l
Spilla flowerth thirce, and streweth three times of ploughing. 592.b
Squawb where it groweth. 375.a. the best, and price of it. 411.d
Squirrels, their properties. 218.g

ST

Stalle, the best Murthe. 368.m
Stadefix a towne in Egypt where the fall of Nilus maketh men deaf. 145.e
Stagonius. 367.e
Stagonitis. 378.i
Stag envious to man. 213.e. in danger seeketh to man. 411.d
white Stags of Q. Seruimus. 214.k. enemies to serpents. 411.d
long livers. 411.d. their flesh good for the liver. 411.d. lare under their tongue twentie little wormes. 333.b
Stags and Hinds. 213.c. they teach their young to run. 411.d
how they behaue themselves when they be hunted. 411.d
their sundrie qualities. 411.d. how they swim over sea. 214.g. they cast their hories yearly. 411.d. how their age is knowne. 411.d
Staphylodendrum, what it is. 467.e
Statue of man decreaseth. 165.a
fixed Stares and starrie skin preface future weather. 612.i.k
Stares predominate after the Spring of Equinox. 592.k
Stares fledge, their rising and setting to be taken two waies. 587.e.d
Stares none lesse than the Adoone. 19.d
Stares scene with the Sunne all day long. 17.a
Stares fixed which haue influence in the coming of Favonius. 590.i
Stares & signs whether to be regarded for Seedes. 584.l.m
Star fish. 269.e
Star-lizards, stellers cast their skins. 213.b. their venom attributed the enens of things when they begin to governe the seas. 597.b
Stars or Planets not appointed for every man according to his state or condition, as some vainly haue imagined. 5.c
Stars obliet in navigation first by whom. 190.i. their shooting and falling, what it is. 5.d. their power and operation. 10. that be fixed, shine as well by day as night, of their vnequall rising. 34.i. whether to be regarded for seedes. 584.l.m. rising and setting of which is diversly taken. 587.e. predominant after the Spring of Equinox. 592.k. how they preface future weather. 612.i

K & k

Stellis

The Table to the first Tome

<i>Scelus, what it is.</i>	496.k	<i>Superfluous of meat alwaies dangerous.</i>	356.b
<i>Stellions live onely by deaw and spiders.</i>	325.d	<i>Substones, a kinde of flag.</i>	331.e
<i>Stares could parle Greeke and Latine.</i>	293.e	<i>Substans wind.</i>	22.d
<i>Starlings depart for a season.</i>	284.g	<i>Summe, a divine power. 36.e. his Eclipse. See Eclipse.</i>	
<i>flight.</i>	ibid.b	<i>Sulphur Galius first found the reason of the Eclipse.</i>	8.l
<i>Stephanos Alexandri.</i>	453.a	<i>Sulpicia, a Matron that consecrated Venus image.</i>	173.f
<i>Stefichorus feared the eclipse of the Sunne.</i>	9.a	<i>Superstition in chusing Marger.</i>	4.i
<i>Starch. See Amylum.</i>		<i>Superstition in precious ointments.</i>	384.g
<i>Starch running too and fro.</i>	18.d	<i>Superstitions expence in Seeling and inlaid workes.</i>	494.b
<i>Statue in men and women is now decayed.</i>	165.a	<i>Sun greatest of the Planets. 3.b. the soule of the world. ib.</i>	
<i>Stewes for fishes who denied.</i>	266.m	<i>Island of the Sunne described.</i>	132.i
<i>Straw served for bedding.</i>	551.a	<i>Suns many felles at once. 17.f. in midwinter maketh tempest.</i>	20.g
<i>Strength of body many examples.</i>	166.k	<i>Suns motion, what it is. 13.f. the strange colour appearing therein. 17.g. the signes of weather depending of his rising or setting. 611.a.b. lends his light to the other stars. 3.c.</i>	
<i>Stimmati.</i>	381.d	<i>why the Sun departeth from vs in Winter.</i>	8.g.b
<i>Strabones, who they be properly.</i>	335.e	<i>Smiths when.</i>	13.i
<i>Strophalides crisped on the head.</i>	331.a	<i>Sunne his race.</i>	2.k
<i>Straw grow to be used and ordered.</i>	602.l.m	<i>Sunne the greatest of the world. 8.g. by how many demonstrations it appeareth bigger than the earth.</i>	ibid.
<i>Stones breasted and enflamed with fire.</i>	48.g	<i>Sunne, the best prognosticator of weather.</i>	611.a
<i>Stones of beads how they are placed.</i>	352.e	<i>Signes depending on the Suns rising or setting.</i>	611.a.b
<i>Stone quarries who first digged.</i>	188.i	<i>Summer of Summer. 587.e. what weather we shall have.</i>	
<i>Stones found in trees.</i>	489.b.c	<i>Democritus gestic by the Solstice day.</i>	590.g
<i>Stone Stones in the maw of young birds, used in Magicke.</i>	343.b	<i>Sunne his power. 44.b. fed by the salt sea.</i>	ibid.
<i>Stone of a strange power.</i>	42.b	<i>Sumach, a plant.</i>	389.b
<i>Stones raining downe.</i>	28.b	<i>Summer Oxen, whence the fable arose that they were kept in stall.</i>	43.f
<i>Stone in young heifers good for women.</i>	343.e	<i>Supernata, a kinde of Abricost.</i>	436.l
<i>Stones raining downe.</i>	19.c	<i>Sculca, what starres.</i>	592.l
<i>Stomacke how it is flawed, and the use.</i>	340.g	<i>Survame Stolo, whence it came.</i>	489.c
<i>Stockdoves out of the way for a time. 284.b. sit upon their eggs, Cocke and Hen by turns.</i>	300.k	<i>Surus the name of an Elephant.</i>	194.i
<i>Storks esteemed better meat than Cranes in old time. 283.g.</i>		<i>Susinum. See Oile of Lillies.</i>	
<i>their manner of flight.</i>	ibid.b	<i>Superstition. See more in Concepts.</i>	
<i>to kill a Stork, felonie in Rhossia. ibid. kinde to their parents.</i>	ibid.k		
<i>no Storks within eight miles of the lake Larius.</i>	285.c		
<i>Storax and other flames scene about the Sunne.</i>	17.d		
<i>Stray-ship fish. See Echebeni.</i>			
<i>Straw, how it is a signe of good ground.</i>	503.a		
<i>Straw of barley, the best.</i>	562.k		
<i>Strix, a word of cursing.</i>	347.d		
<i>Strabones, families in Rome, why so called.</i>	335.e		
<i>Strategie, what they be.</i>	119.d		
<i>Strawberrie tree. See Arbutu.</i>			
<i>Strophil plant Ladum.</i>	370.b		
<i>Strobon in Ceraunia. 321.a. a sweet tree.</i>	ibid.		
<i>Storax, a sweet odour. ibid.e. the effects thereof.</i>	ibid.		
<i>Storax (Calemita.)</i>	378.g		
<i>Styrax or Storax the tree.</i>	ibid.		
<i>Styrax gum of divers kinds.</i>	378.k		
<i>Struthia, what Quinces.</i>	436.b		
<i>Struthopodes, what people.</i>	156.b		
<i>Surgeon fish much set by of our ancestors.</i>	245.e		
<i>S V</i>			
<i>Subis, a bird.</i>	277.c		
<i>Sugar.</i>	362.k		
<i>Suns motion, what it is. 13.f. wherefore it burneth not the earth. 14.m. what Summer we shall have, Democritus flew by the Solstice. 590.g. how many sunlongs from the cloudie region to the Sunne. ibid. how to know the heightes of it from the earth up to the Sunne.</i>	15.a		
<i>Summer, what kinde of fish.</i>	230.l		
<i>Suns heat causeth monstrous shapes in Egypt.</i>	146.k		

of Plinies Naturall History

<i>Syrin, a renowned region, the description thereof.</i>	99.f	<i>Temetrum.</i>	
<i>Syrenes fabulous birds.</i>	296.k	<i>Tempest, the pitch of the mountain.</i>	418.k
<i>Syagri, kinde of Dates.</i>	387.b	<i>Temerinda the name of Meotis, and why.</i>	181.e
<i>Sycamore tree. 389.d. passing fruitfull.</i>	ibid.	<i>Tenecum, what it is.</i>	118.i
<i>Sycum, what it is.</i>	416.l	<i>Tenborania, in times past nere unto the sea.</i>	2.b
<i>Sye, what kinde of fish.</i>	463.a	<i>Tenera terra.</i>	39.e
<i>Sye, a towe, at mountide in the middle of the Summer, no shadow is to be seen there.</i>	35.f	<i>Tentyrites enemies to Cracodiles.</i>	582.g
<i>Syringias, a kinde of Cane or Reed.</i>	483.b	<i>Tentyrites play whose invention.</i>	209.d
<i>Syrtes, a flow found in a Walfer bladder.</i>	343.g	<i>Tepidare, what it signifies.</i>	190.g
<i>Syricks, people that have legs like Snakes.</i>	156.b	<i>Terra Tenera, earth as good as can be imagined.</i>	540.a
		<i>Terra plana, a tender and mellow soile.</i>	504.k
		<i>Terannon.</i>	ibid.
		<i>Terminatra, a feast instituted by king Numa.</i>	575.d. 62.m
		<i>Teredines what wormes.</i>	549.e
		<i>Terebinth wood tree.</i>	492.b
		<i>Territorie of Mastina.</i>	490.b
		<i>Territorie of Sabines and Sidicines.</i>	48.g
		<i>Terpentine the clearest rosin.</i>	ibid.f
		<i>Terebinth or Tepidare tree. 389.a. the kinde thereof and the fruit.</i>	423.f
		<i>Terpentine how it is drawne from the tree.</i>	ibid.b
		<i>Terentine, pine nuts. 455.e.f. wit-teeth.</i>	465.b
		<i>Teeth serve not only for grinding our meat.</i>	338.g
		<i>Tetractemion, what quadrans.</i>	164.k
		<i>Tetragonis, a little kinde of Grafsopper.</i>	182.g
		<i>T H</i>	325.a
		<i>Thalis, Milesius among the Greekes first found out the reason of Eclipse.</i>	
		<i>Thaspra, one of them that wrote of the Romanes.</i>	58.e
		<i>Thracia the description thereof.</i>	77.f
		<i>Thunder and lightning the reason thereof.</i>	20.m
		<i>Thorne oile.</i>	400.e
		<i>Thiristhorne.</i>	402.g
		<i>Thrasymene lake.</i>	48.b
		<i>Thripes.</i>	492.b
		<i>Thybius, their strange nature and eye-sight.</i>	155.b
		<i>Thucydides called from banishment.</i>	172.g
		<i>Thracians how they prove their fortune.</i>	176.e
		<i>Thracians how they measure their happiness.</i>	ibid.
		<i>Thralhing practised sundry water.</i>	602.k
		<i>T I</i>	
		<i>Tibur citie founded by Tiburs, more ancient than Rome.</i>	415.b
		<i>Tiberius Cesar his saying of Sarnell in wines. 414.b. hee could see by night.</i>	334.i
		<i>Tib. Cesar wrote a Poem of the comet called Acontus. 15.e</i>	
		<i>Tibul, what tree.</i>	462.i
		<i>Ticks many meanes to avoid excrements.</i>	330.g
		<i>Tigris, the river where it begins, and the diverse names it hath. 137.a. runneth through the lake Aerebia. ibid.</i>	
		<i>Tigridia province, the description thereof.</i>	92.k
		<i>Tinca, what worme.</i>	492.b
		<i>Timarchus the Paphian. 338.g. had double course of teeth in each jaw.</i>	ibid.
		<i>Timber trees in what way severally they are employed. 191.f</i>	
		<i>Tithes tree.</i>	380.g
		<i>Tissue cloath whose invention.</i>	228.e
		<i>T M</i>	
		<i>Tmolus the hill well planted with Vineyard.</i>	107.e
		<i>T O</i>	
		<i>Tokens of good honey.</i>	317.b
		<i>Tokens of good Bees.</i>	ibid.d
		<i>Tokens</i>	ibid.d

Tokens of death. 183.e
 Tokens of life uncertaine. *ibid.*
 Tooles for smiths who first densified. 188.b
 Tokens by the eares of beasts. 333.d
 Torpedo, the Crampfish. 261.d
 Torquatus Torquatus Tricongius, a worthe wine-bibber. 427.d
 Tortoise hath a kind alone of them that lay eggs. 343.e
 Tortoises of the sea. 241.b
 Tortoise shells as much as will cover houses. 134.f
 Tortoise his lungs without blond. 341.a
 Tortum wine, what it is. 425.b
 Towne, by whose first built. 188.b
 Towne walls and towers who first reared. 188.b
 of Tongues. 338.m-339.a
 Tongues of serpents and lizards three forked. 338.k
 Tongues of Lizards two forked. *ibid.*
 Tongues of Asps small as haire. *ibid.*
 Tongues of Crocodiles cleave to their pallets. *ibid.*
 Tongues of Lions and Lizards uneven. *ibid.*
 Tongues of Cats bring madness. 339.a
 Tongues of Bees very long. 339.d
 Tonilla, spunguous kernels in men. *ibid.*
 T R
 Trabea, K. Romulus his mantill of state. 260.b
 Trachylepis first densified. 187.e-188.m
 Trachelaphis his nature. 214.m
 Tragus, what it is. 502.g
 Trees the temples of the gods. 357.b. how they grow. 508.l
 Trees that never grow out of their owne kinde. 509.b. by what means they grow. 508.l. what trees bring forth young imps at the root. 510.b. what trees grow by pricking into the ground. *ibid.* how to be removed. 512.m
 Trees in windie weather. 513.a. their roots not to be handled violently. 514.g
 Trees which be slow in growth. 515.e. which be forward in fruit. *ibid.* their shoots hinder growth. *ibid.* would overspread the face of the earth, if they were not repressed. *ibid.* how they grow one upon another. 516.l
 Trees ought to be planted in Autumne. 522.m
 Trees of diverse natures how to be conioined. 123.d
 Trees planted for the use of Vines. 535.a
 Trees of much shadow not good for Vines. 495.c
 Trees admirable about the Epiphore of Proteflum. 495.c
 Trees exempt from the worme, blasting, and insect. 539.a
 Trees hunger starved, headlesse. *ibid.*
 Trees more or lesse subject to diseases. 539.b
 What Trees soone be worne-eaten. *ibid.*
 Trees troubled with certaine Rie. 541.c
 Trees when they are said to die or to be sicke. 440.g
 Trees blasted with certaine winds. 541.c. shedding of leaves a signe of their recovery. *ibid.* frozen to death in Pontus and Phrygia. *ibid.* some die having once lost their heads. 542.b
 Trees that beare roses, abide any bruse or wound. *ibid.*
 Trees growing thicke, kill one another. *ibid.*
 Trees prospering without leaves. 543.a
 Trees changing their colour from blacke to white. *ibid.*
 Trees changing from better to worse are unlucky. *ibid.*
 Trees fume and swallowed up of the earth. 443.d
 Trees yielding many prodigious foretokens. *ibid.* remedies

of Trees diseases. 544.b
 Trees when they desire to be watered. *ibid.*
 Trees turning their leaves in the Summer Sunstead. 20.b
 Trees and timber peeces of monstrous length. 489.d
 Trees troubled with Ants, how to be remedied. 547.d
 Trees of India exceeding high. 155.d
 Trees forced to grow by art. 458.b
 Trees standing upon the North, doe like best. 500.g. why sometime they lose their fruit. 500.b. nourished by raine. 500.a
 Trees standing Southward, soonest shed their leaves. 502.i
 No Trees in some countries. 454.m
 Trees are not laden with fruit after one and the same manner. 475.b
 Trees more fruitful in age than in youth, and contrariwise. *ibid.*
 What Trees live longer than others. 475.e
 Trees age soone by bearing. *ibid.*
 Trees bearing fruits diversly. *ibid.*
 Trees differ in the manner of their growth, either with single stocks or manifold bodies. 476.b
 Trees differing in root. 477.b
 Trees of longest continuance. 494.m
 Trees replanted that have beene blowne downe. 477.e
 Trees fallen of themselves rise of their owne accord. 478.g
 Trees fallen, topped and squared, and yet revive. 478.b
 Trees grow naturally by three manner of means. *ibid.*
 Trees and shrubs will not all grow in every place. 478.k
 The reason wherefore some of them Homogeneous or substantial parts are b. their bonie substance or heart. *ibid.* their fat or flesh. *ibid.* their marrow, sinewes, blond, and veins. 487.c.d
 Trees of what age best for timber. 488.g
 Trees delivered of a birth of barne. 489.b
 Trees growing in the sea. 402.g
 Trees overthrown by tides. *ibid.*
 Trees male distinguished from the female by the ax. 463.c
 Trees distinguished, according to the places where they live to grow. 468.g
 Trees some savage, others civile. *ibid.*
 Trees that lose not their leaves. 469.a
 Trees greene alwaies in the head, bend leaves in the water boghes. *ibid.*
 No Tree about Memphis in Egypt beareth leaves. 469.e
 Trees that bud, though they blossome not. 472.g
 What Trees have three springs or buddings in the yeare. *ibid.*
 Trees how they bud, blossome, and beare. 472.j-473.a.b
 Trees bearing no fruit at all. *ibid.*
 Trees unfortunate and accursed. *ibid.*
 Trees soonest forgoing their blossome, and shedding their fruit. 374.g
 Trees fruitlesse by occasion of the soile. *ibid.*
 Trees made whether they beare nut. 495.c
 Trees of shortest life. 236.g
 A Tree fish. *ibid.*
 Trebus honoured for bringing downe the corn market. 531.c
 Trenches and ditches for Vines how to be made. 529.a
 Tribes Rusticke in Rome. 550.m
 Tribes Urbane. 551.a
 Trichina a fish. 244.i
 Trichina a fish. 561.b
 Trimenon wheat, what it is. 563.a
 Tritum.

Tritum. See Racinus.
 Trivastu, a man of extraordinary strength. 166.k. his sonne. *ibid.*
 Trucum. 501.b
 Tritons, fishes, discovered at Liburn. 236.b. what they are. *ibid.* how they breed. 241.d
 Troua. 109.c
 Troches, a fish. 266.a
 Troglodytes, people alone Aethiopia swifter than horses. 157.b. eight cubits high. *ibid.*
 Troopes of horsesmen hidden under the burghs of a figure. 155.d
 T V
 Tuberes of two sorts. 438.g
 Tuberes, what fruit. 437.f. when they and Inuines were brought into Italie. 438.g
 Turneps, how, where, and when to be sown. 571.a.b
 Tullus Hostilius first ware thereof. Pretaxta. 260.b
 Tullus Hostilius killed with lightning, and why. 26.k
 Tunic, their historie. 242.m
 Tunic, fishes ready to overturne a ship. 235.c
 Turbo the name of a blist. 35.a
 Turbot, a kinde of fish. 247.d
 Tuscane, their opinion of sobining. 26.g
 Turners craft, whose invention. 188.l
 T W
 Twins dangerous to the mother if they bee of both sexes. 158.i
 T Y
 Tympania, a kinde of pearles. 255.b
 Typh. 563.a
 Tymethys, a double purple colour. 261.a
 Tyne, the description thereof. 102.g
 Typhon, the name of a whirlwinde. 24.l. how mariners may prevent the danger thereof. *ibid.*
 Tyrannicall rule, who first practised. 189.a

V A

V Alour, sundrie examples thereof. 370.b
 Valerius Antias a writer. 48.g
 Valeria, unfortunate to the place whither shee was carried. 164.i
 Varietie of mens speech and shape is wonderfull. 153.d
 Vappa, what it is. 424.k
 Vari, who they be called properly. 350.k
 Varices, swelling, veines more ordinarie in men than women. 350.k
 V B
 Vbianus sat their ground with any kinde of earth. 506.k
 V B
 Vidua Pollis his pastime to see lampies drowne men. 248.i
 Vene in timber called Ferre. 345.c
 Vene in trees what it is. 493.c
 Vene in the Capitoll. 486.k
 Venetian, from whence. 491.d
 Venus Cluacina. 451.a. Venus Martia or Myrta. *ibid.*
 Venus plaine her nature, moist, excellent, & names. 6.b. her motion making two stations. 10.i. why shee never departeth from the Sun more than 45 degrees. 12.b
 Venerium. Cicer, kinde of praef. 23.e
 Vergilia, flowers in the tale of Taurin. 20.k. called the garment hanging out at the brokers shop. 38.k
 Vermin, as lices, &c. in sea as well as in land. 264.g
 Vermin hurtfull to trees. 510.m
 Vernetum, what it is. 575.m
 Verulenus Aegulus, a singular good husband. 411.c
 Versiphan Augustinus his praef. 4.g. In bu Corijulup either Sun nor Alcone seeme in vltimate daies. 9.e
 Vesper the starre, why Venus so called. 6.d
 Vesperinus, rising or setting of fixed starres. 589.d
 Vetches when to be sowne. 572.i. not chargeable. *ibid.*
 V I
 Viatores, what officers at Rome. 552.b
 Vinalia, a festival holiday. 600.g
 Vine the nature thereof. 530.b
 Vine planting and pruning, who first practised. 188.m
 Vine, sets doe temper the hot ground Carbanculus. 505.b
 Vine bath the sense of smelling. 543.d
 Vine, warmth away from the Radish and Lawrell. *ibid.*
 Vines of fine sort. 528.i
 Vines take most harme in blouming time by raine. 540.m
 Vines erected upon trees beare latest. 536.b. wedded to trees, when to be cut. 535.b. how many may be reared to one tree. *ibid.* when such are to be cut. 535.b. when vines are to be pruned. 533.b
 Vines leaves to be cleaved once in the spring. *ibid.*
 Vine frames and trawles how they ought to be made. 51.k
 Vine bearing before the seventh yeare dieth. 531.e
 Vines to be repressed and not clogged. 511.d
 Vine frames of what best. 530.b
 Vines to be set in a drie day. 520.b
 Vine batheth all poi-beares or worts. *ibid.*
 Vines in what order to be planted. 529.e
 Vine trees how they be killed. *ibid.*
 Vines how many in an acre. 530.c. ought to be pruned once a yeare. 546.g
 Vines full of cicatrices not to be trusted. 530.b
 Vines yielding a double vintage yearly. 581.e
 Vines they die with much bearing. 475.d
 Vines the elder beare the better wine, but the younger more plentie. 477.c
 Vines bearing thrice a yeare. *ibid.*
 Vines their diseases. 540.i
 A Vine in the Forum at Rome. 444.g
 Vine Heluenaca. 408.k. of two kinds. *ibid.* very plentiful. *ibid.*
 Vine Acaabid it loneth not to beake, *ibid.* is never blist. *ibid.*
 Vine Spionia, or Spinea. 408.l
 Vine Basilica. *ibid.*
 Vine Venicula. *ibid.*
 Vine Apiana, why so called. 407.b
 Vines, Stacina, Sirculna, Numisiana. 408.m
 Vine Murgentina. 409.a
 Vine Pompeiana. *ibid.*
 Vine Marica. *ibid.*
 Vine Tuderna. 409.b
 Vine Florentia. *ibid.*
 Vine Talpiana. *ibid.* why so called. 409.c
 Vine Eresacea. 409.b. why so called. *ibid.*
 Vine Confiniana. 409.b
 Vine Irtiola. 409.c. Vine Pumila. *ibid.*
 Vine

Vine Benamica.	409.d
Vine Gaurania.	ibid.
Vine Faleria.	ibid.
Vine Tarentina.	ibid.
Vine Tarentina.	409.f
Vine Ambrosia.	ibid.
Vine Orithymol.	ibid.
Vine Dactylides.	410.g. why so called.
Vine Columbine.	ibid.
Vine Tricentia.	ibid.
Vine Rhois.	ibid.
Vine Alexandrina.	410.k
Vine Narkonica.	ibid.
Vine Scantiana.	411.b
Vine Eudæma.	414.i
Vine Taurinimutane.	414.k
Vine Thoriata.	423.a
Vine Libanotis.	ibid.
Vine compluviana.	what it is.
Vine sili.	528.l
Vine sili.	how they may grow without their marrow or pith
528.h.	how they bear grapes without kernels.
ibid.	their distance one from another.
527.c.	full of joynt.
527.b	fruitless.
605.e	fruitless.
Vintage time.	ibid.
rules serving for Vintage time.	ibid.
of wild Vine Ladrifica.	the roots and grapes good for con- vulsions.
420.k	
Vine prop.	and raisins which be best.
525.b	
Vine tendrils	and burchens how to be ordered for the table.
423.c.	
Vines afford most plants	of all other trees.
527.a	
Vine tree	how to be grafted.
520.b	
Vines draw into them	the taste of herbes and plants grow- ing neere unto them.
422.g	
Vineyard	how to be bounded.
529.b.	how to be ordered with smallest expense.
ibid.f.	ought to be exposed to the Sun.
527.c.	
Vineyards Statiana.	414.b
Vinegre	how it is made.
424.k	
Vinegre	of Cyprus figs.
412.a	
Vinegre	of Alexandrine figs.
ibid.	
L. Vitellium	forced his ferme with fig trees.
445.a	
Via maior.	what it is.
599.a	
V L	
Vlyster	ship turned into a rocke.
V N	
Vneda.	the fruit of the Arbutus tree.
447.e	
V O	
Vulvox.	a worme hurtfull to Vines.
26.k	
Volta	the name of a monster.
160.b	
Vopisei.	who be so called.
25.b	
Vortex.	the name of a stormie blast.
V R	
Vrechi	of the sea.
283.a	
Vrimus.	what kinde of addie egge.
300.k	
V I	
Vterus	or loci in a woman.
what part.	
V V	
Vulcans temple	built by Romulus.
495.a	
Vulturina.	what wind.
22.l	
Of Vices.	a discourse.
353.a.b.c	

W A

W Agons and chariots	who first made.	188.l
Watwort.	a weed sought for ground.	508.g
Walnuts	employed at weddings.	445.e. and why.
ibid.		
Walnut trees	brought out of Persia by commandment of kings.	445.f.
Walnut.	why called Persicon and Baphicon.	ibid.
Walnut	named in Greeke Caryon.	and why.
ibid.		
Walnut bukes	and the young nuts how to be used.	446.g
Walnuts	differ only in the shell.	ibid.
Walnut shells	divided in twaine.	ibid.
Walnuts	called Inglandet.	and why.
ibid.		
Walnuts	brought first into Italy by L. Vitellius.	ibid.k
Walnut tree	wood cracketh before it breaketh.	492.m
Water	an element.	2.l. the vromdneffe thereof.
31.e.	the be- nefit it bath by the earth.	and the earth by it.
32.b		
Water of what taste.		449.a
Waters	flow in the sea.	and why.
44.m		
Watering	cheerleth corne and kyerth graffe about Sulmo in Italy.	544.m
Water	bringeth forth greater lining creatures and more plentie than the earth.	134.m
Water	corne materials for corne fields.	581.f
Water	corne fields as good as a weeding in some place.	545.a
Wardens	pears.	439.d
Wax	made of all beards	saue Dockes and Goosefoot.
313.d		
W E		
Weeding	whose dewife.	188.i
Weeding	of corne.	580.l
Weeds	choking corne and pulse.	545.a
Weights	and measures whose dewife.	188.l
Weapons	and armour whose invention.	189.a.b
Wells	how to be kept from preferred fruit.	441.f
Wells	seed greedily upon serpents.	355.e
Western	wind Feronius a husband to all plants.	and to certaine more.
471.d		
Wezando.	what it is.	339.c

W H

Whales and Whirlepoles.	235.b.c. as long as four acres of land	335.c
Wheat	sold at Rome for one As by the Modus.	551.b.c
Wheat	how it is siked.	carved.
and sowed.		558.k
Wheat	of Italie best.	559.e. other countries compared with.
ibid.		
Wheat	of Bactria commended.	559.e
Wheat	of Italie praised by Sophocles the Poet.	560.b
Wheat	estimated by weight.	and so compared.
560.h		
Wheat	different in the straw or sheaf.	ibid.m
Wheat	of Thrace.	a three moneths corne.
561.a		
Wheat	of Thrace.	a two moneths corne.
561.k		
Wheat	subject to the mildew.	
Wheat	of sundry kinds different in name.	561.m
Wheat	what proportion it should yield in meale and flour.	563.f.
common	Wheat Triticum exceeding fruitfull.	564.m. the wonderfull and incredible increase of wheat in Affrike.
565.a		
Wheeler.	a kinde of fishes.	326.g
Wilding		

of Plinies Natural History.

W I

Wilding apples.		438.m
a wedded Wife	turned to be a man and a husband, and con-	
trarmife.		158.b
Willowes	of many sorts. 484.l. their manifold uses in pen-	
ches, traile, prop, and bindinge.		ibid.
red.	Willowes good both to wind and bind.	484.m
Willowes	fit for wicker workes.	ibid.
as gamefull to the misset, as corne fields, meadowes, and		
oliver rows.	485.b. See more in Willies.	
Wings	of Birds diuided into ioints.	347.a
Winds	vaine in the region of the aire. 19.e. how they arise	
and whence. 21.c. their natures and obseruations.		
22. 23. &c.		
Windpipe, what it is.		339.c
the obseruation of winds: good in husbandrie.		608.i
Winds who first distinguished.		189.d
Winds how they may be knowne distinctly one from ano-		
ther.		608.g
Wine a most pleasant liquor to be used inwardly.		428.i
of Wines 195. forti.		428.i
Wine who first delatid with water.		189.m
Wine congealed into ice.		425.d
Wine lees maintaineth fire.		ibid.e
Wine how it is knowne to decay.		ibid.b
Wines how to be seasoned and medicined. 425.a.b. how to		
be ordered, prepared, and seasoned.		425.d
Wines allowable for sacrifice and the service of the gods.		423.c.
Greeks wines ritelied in sacrifice.		ibid.
Wines when they grew in request at Rome.		418.b
Wines turne fower and reconer of themselves.		423.b
Wines reduced into 80 kinds.		418.g
Wines four principal colours.		416.l
Wine how to be tinned and kept.		425.c.d
Wine cellers how to be ordered.		ibid.e
Wine vessels how to be placed in the cellar.		ibid.
Wine vessels how to be made and chosen.		427.d
drinking Wine sasting.		ibid.
Wine of strange and wonderfull effects.		422.l
Wine causing women to be fruitful. ibid. procuring ma-		
le. ibid. driving women to sup their birb.		422.m
disabling for the all of generation.		ibid.
Wines spectand compounds forbidden by Themison.		422.k
Wines of trees and shrubs.		ibid.b
Wines of sundry herbes and roots.		ibid.g
Wine Phlorinon.		416.k
Wine Citicibellut.		ibid.l
Wine Halyntium.		ibid.
Wines street of diuerse sorts.		417.a.b.c.d
Wine Agilence.		ibid.
Wine Dulce.		ibid.
Wine Diachylon.		ibid.
Wine Mellitus. 417.d. how it is made.		ibid.
Wines after according to the climat and soile where the		
Vines grow.		415.b
Wine forced among the Romanes. 418.l. Forbidden in		
sacrifice.		ibid.b
Women in Rome not allowed to drinke wine.		418.k
Wines propitied for drinking wine.		418.k
Wines aromatized.		419.a
Wines Gricle.		419.f

Greeke wine	given in a congarie by L. Lucullus at Rome.	420.g.
Wine	of Chios prescribed for the Gardiaca passio.	420.g
left	by Hortensius to the quantitie of 10000 barrels when he died.	ibid.
Wines	given in a congarie by Int. Caesar.	420.b
Wines	artificial.	420.i
Wine	Omphacium.	ibid.
Wine	Oenanthinum.	ibid.
Wine	Adynamon.	420.l. how it is made.
ibid.		
Wine	of Millet.	420.l
Date wine.	420.m. how it is made.	420.l
Eg wine.	Sycites.	421.a. wine of Letum.
ibid.		
Wine	of Carob.	ibid.
Wine	Rhoites.	of Pomegranat.
ibid.		
Wine	of Gornel or wild cherries.	ibid. of Medlers.
ibid.		
Wine	of Myrtles	how it is made.
421.b		
Wine	Myrtidannum.	ibid.
Wine	of Beterra.	414.l. of Tarentum.
414.m.		
Wine	of Servitum.	ibid. of Conserina.
ibid.		
Wine	of Lucania.	ibid.
Wine	of Thurium.	415.a
Wine	of Lageria.	ib. brought into credit by Messala.
Wine	of Trebellia.	ibid. of Cusulum.
Wine	Trebellia.	ibid. Trifoline.
Wine	Pompey.	ibid.
Wines	of Spaine.	415.a
Wine	of Lalestane.	ibid.
Wines	of Terracon.	of Aragon.
415.b		
Wines	of the Balear Islands.	ibid.
Wine	of Thafos.	415.e. of Chios.
Wine	Arminum.	ibid.
Wine	of Lesbos	ibid. of Clazomen.
ibid.		
Wine	of Sicione.	Cypresse.
ibid.		
Wine	Hippodamian.	ibid. Cantharites.
ibid.		
Wines	of Catacearment.	416.g. of Petra.
ibid.		
Wine	Mesogites.	416.g
Wine	of Ephesus.	ibid. of Apamea.
Wine	Protagium.	ibid.
Wines	of Pontus.	Nasferemetis.
416.k		
Wine	of Ambracia.	of Peperetum.
ibid.l		
Wine	Tethalassomum.	ibid.
Wine	Thalassites.	416.k. why so called.
Wine	Greekyss.	ibid.
Wine	Seyzinum.	Isamelis.
ibid.		
Wines	of garden herbes.	422.g
Wine	of Radish.	421.c. of Sparage.
Wine	of Savorie.	ibid. of Maioram.
Wine	of Origan.	ibid. of Smallach seed.
Wine	of Southernwood.	ibid. of wild Mints.
Wine	of Rue.	ibid. of Nepor.
Wine	of Naveu.	ibid. of Calamith.
Wine	Squillitichy.	ibid.
Wine	of flowers.	421.c
421.f		

The Table to the first Tome

Wine rofat, how it is made.	421.d	World, what it is. i.e. everlasting and infinite. i.e. vna-	meafurable.	2.d
Wine of Callicke fiftymard.	ibid.	World, not innumerable. i.d. of a round forme.	2.f	
Wine fpecies or aromatized. ibid. after what fort.	ibid.	World vifible, a hemisphere.	2.g	
Wines condite, or Pepper wines.	421.e	it turneth round in foure and twentie houres.	2.g	
Wine Nettlerites, why fo called.	ibid.	whether in turning it make an audible found or harm-	2.h	
how it is made of Etecampane.	ibid.	monie. 2.h. whether the bodie thereof be all fmooth.	2.h	
worme-wood Wine.	421.f	World certaine and yet vncertain. i.e. containing all things	ibid.	
byffope Wine.	ibid.	within it fife.	1.b	
elebure Wine.	ibid.	World and heauen all one.	1.b	
Scammonite Wine.	ibid.	World, why called in Greeke <i>Xyros</i> , and <i>Mundus</i> in Latine.	14.l	
Winkles or Sea-fnailers, what fiftes. 253.e. of fundry fort.	ibid.	2.k. the geometrical limenfon.	344.k	
ibid.		Wormes hurtfull to ftanding corne.		
what Winter we fhall haue knowne by Bruma, according	589.f			
to Democritus.	155.a			
Witchcraft by praifing and eye-biting.	171.b			
Wit, iudic examples thereof.	474.b			
Wit is tree, called Spiffmit. 474.b. it groweth quickly if	ibid.			
it be prickd overy into the ground.	484.l			
Withies or willowes where they loue to grow.	ibid.			
exceeding commodious. ibid. compared with poplers and				
alders.				
W O	156.m			
Women beaving but once in their life time.	165.e			
Women feldome left handed.	155.b			
Women with a double apple in their eye witches.	157.d			
bearing children at feauen yeares of age. 157.a. at fife				
yeares. ibid. how many they may beare at one burthen				
naturally.				
Women in Egypt more fruitful than others, and the rea-				
fon.				
Woments monethly fickeneffe. 163.e. the ftange effects				
thereof. ibid. d. they faye commonly at fourtie yeares of				
age.				
a Woman deliuered at once of two boies and two girls.				
157.d. is prefaged famine.				
Women many times die for dead and whereupon.				
a Woman deliuered of twenty children at four births. 157.e				
Wood moft mafle and which fwimmeth not.				
Wood ferving to ftrike fire.				
Woods of fundry natures and for diuerfe vfes. 490.k.l. &				
493.d.e.f.				
Wood-wormes, foure forts				
Wood breeding no wormes.				
Wood how it is preferred from cleauing.				
Wood of diuerfe natures.				

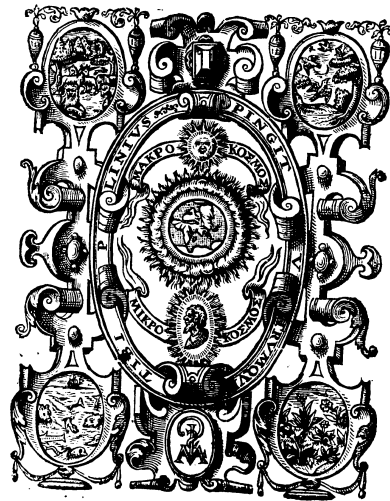


THE HISTORIE OF THE WORLD.

Commonly called,
THE NATVRAL HISTORIE OF
C. PLINIVS SECVNDVS.

Translated into English by PHILEMON HOLLAND,
Doctor of Physicke.

The second Tombe.



LONDON,
Printed by Adam fflip.

1634.



TO THE READER,



Or as much as this second Tome treateth most of Physicke, and the tearms belonging thereto (as wel concerning diseases as medicines) be for the most part either borrowed from the Greek, or, such as the vnlearned be not acquainted with (which partly vpon necessity I was forced, and partly for varietie induced to vse) I could not content my selfe to let them passe without some explanation: for since my purpose especially is to profit and pleasure the most ignorant (for whose sake *Plinie* also himselfe, as hee professeth, compiled this worke) I would not be so iniurious vnto them as to interrupt their reading with obscuritie of phrase, when the matter otherwise is most familiar. In regard whereof, I thought good to prefix a briefe Catalogue of such words of Art, as euer and anon shall offer themselues in these discourses that insue, with the explanation thereto annexed, and the same deliuered as plainly as I could possibly deuise for the capacity of the meane. In the handling whereof, so I may satisfie my countrymen that know no other Language but English, I shall thinke my paines and labour well bestowed, and lesse feare the censure of those that haply expect some deeper learning; for euer still
A 2 the

TO THE READER

the verse of that Comickall Poet resoundeth from the stage
in mine eares,

quadragesimo quarto. (id est)

Speake with lesse shew of learning, so it be with more perspe-
cutive. Vale,



A briefe Catalogue of the words of Art, with the Explanation thereof.

A

A

A *Bort*, or *Abortive fruit*, is an vntimely birth.

Absterfuit, *i.* scouring, cleansing, or wiping away, such as the Greekes call *Smectica*, and they enter into sope & washing balls.

Accessio, *i.* a fit, whether it be of an Ague, falling sickness, or any such diseases as returne at times.

Actabulum, or *Actable*, a measure among the Romans, of liquour especially, but yet of dry things also, the same that oxybaphon in Greeke: and for that, as both words do import, they vsed to dip their meats in vinegre out of such, it may wel go for a saucer with vs; for it contains, as some think, fifteen drams, which grow neere to two ounces, of which capacitie our small saucers are: but as others suppose, it receiues two ounces and an halfe, the measure of ordinary saucers.

Acrimonies, Sharpnesse.

Actually, *i.* sensibly and presently, as fire is actually hot.

Aduales, or *Adiciales epulae*, were great and sumptuous feasts or suppers, held by the Pontifices or high Priests in testimony of publike ioy.

Almonds, see *Amygdals*.

Amphora, a measure in Rome of liquors only: it seemes to haue taken that name of the two eares which it had of either side one: it contained 8 Congios, which are much about 8 Wine gallons, or rather betweene seuen and eight: so as in round reckoning it may go for a ferkin, halfe kilderkin, or half scestern with vs.

Amygdals be kernils at the root of the tongue subiect to inflammations & swellings, occasioned by deflux or falling down of humors from the head: they be called *Antiaades*, *Pacithimia*, & *Tonillae*: the foresaid infirmities also incident vnto them, doe likewise cary the same denominations.

Antidotes, *i.* countrepoysons, properly, defensatives or preseruatives against poyson, pestilence, or any maladic whatsoeuer.

Antipathie, *i.* contrarietie, enmity, and repugnancie in nature, as between fire and water, the vine, and the Colewort, &c.

S. Anthons fire is a rising in the skin occasioned by hot blood mixt with abundance of choler, and such be the shingles and other wild fires called in Greeke *Erysipelas*.

Aquefities be waterish humors apt to engender the dropies called *Ascites* and *Leucophlegmatia*.

Aromatized, *i.* Spiced.

Arthriticall griefes, such as possesse the ioints, as all the sorts of gout.

Astringit or *Astringent*, be such things as bind the body, or any part thereof.

Attrahit, *i.* drawing, as the loadstone draweth iron, amber straws or bents, *Diatamnus* arrow heads or spils out of the bodie, and cupping glasses (or ventoses) humours and wind.

Austere, harsh or hard, as in fruits vnripe, and hard wines of hedge grapes.

Acinomanie, a kind of magicke diuination by an ax head red hot.

B

B *Apis* in a compound medicine is that drug or simple which is predominant, and carrieth the greatest force in it, as the ground thereof, whereupon the whole taketh the name; as Poppy in *Diacodion*, Quinces in *Diacydonium*, &c.

Bole is the form of a medicine when it may be giuen in grosse manner at a kniues point to the quantitie of a nutmeg at a time, vntill the whole receit be taken.

Browning, a term vsuall in the mouths of mariners and winnowers of corne, when they are calmed and do call for wind.

Bulbes, although *Pliny* seemed to giue that name vnto some one speciall hearbe, yet it

A 3

signifieth

signifieth generally all those as haue round roots, as Onions, Squilla, Wake-robin, and such like, whereupon these and other of that kind are said to haue bulbous roots.

Cacoehyme is that indisposition of the body in which there is abundance of humors.

Calcinig, i. the burning of a minerall, or any thing, for to correct the malignitie of it, or reduce it into powder, &c.

Callositie, thicknesse and hardnesse of skinn in manner scurfesse, as in fistulaces, and vnder our heeles.

to *Carminat*, is to make more fine and thin the grosse humors, by such medicines as by their heat are apt to cut and dissolve them; whereupon they likewise be called *Carminative*, a terme receiued by Apothecaries, and borrowed from those that card wooll.

Cancer is a swelling or fore consuming of melancholy blood, about which the veins appeare of a blacke or swart colour, spread in manner of a Creasith eyles; whereupon it took that name in Latine, like as in Greek *Carcinoma*. And such vicers as in that sort be maintained and fed with that humor, are called cancerous, and be vtoward to heal, worse commonly for the handling.

Carnositie, i. fleshy substance.

Cataplasma, a pulstesse or grosse manner of plaistre

Cartilage in man and beast is a gristle, in roots and fruits, that substance which we observe in the radish root, and the outward part of a cucumber, as *Pliny* seems to take it; which thereupon be called Cartilaginous.

Cataract is a dimnesse of sight caused by an humor gathered and hardened betwene the nunicle of the eye, called Cornea, and the Crystalline humour; it is next coufine to blindness.

Causitick, burning, blistering, or scalding.

to *Cauterise*, is to seare or burne by a Cauterie.

Cauterie at all is fire it self for scalding liquor: and so a searing iron, gold, or other metall made red hot is called an Actual cauterie, which without the help of our natural heat doth work presently.

Cauterie potentiall is that which will raise blisters and burn in time, after it is once set on work by the heat of our body, as Cantharides, Spewwort, &c.

Ceres the first inuentress of the sowing & vse of corne.

Cerote is of a middle nature betwene an ointment and a plaister, not so hard as the one, nor so soft as the other.

Cicatrice in eyes be whitish spots, otherwise called pearls: they be the skars also remaining after a fore is healed vp: and so a place is said to be cicatrized, when it is newly skinned vp and healed.

Circulation is the deuise of subliming or extracting water or oyle by a stillatorie, a lembick, or such, because the vapor before it be refolued into water or oyle, seems to go round circlewise.

Clysterized, i. conveyed vp by a clyster into the guts.

Coliaci be those that through weaknesse of stomacke are troubled with a continuall flux of the belly.

Colature, a thin liiquor that hath passed thorow a strainer or colander.

Colligation is a falling away and consumption of the radical humour or solid substance of the body.

Collyrics, are properly medicines applied to the eyes in liquid forme; whereas the dry kind be rather called Sief & Alcohol, especially in powder: howbeit *Pliny* attributeth this terme to all eye-salues whatsoever. Also it seemeth that hee meaneth thereby, tents to be put in a fistulous vicer, as in pag. 509 b. 5 to k.

Colution, a liiquor properly to wash the mouth, teeth, and gums withall.

Concocted, i. altered to that substance by natural heate, as either in health may serue to nourish, or in sickness is apt to be expelled

Consolidat, to knit, vnite, & make found again that which was broken or burst.

Concrete, i. hardened and grown thicke.

Conditio, i. preferred in some conuenient liquor.

to *Concorporate*, i. to mix and vnite together into one masse.

Consistence, i. substance or thicknesse.

Consipate, i. to harden and make more fast and compact.

Contraction of sinews, a shrinking or drawing of them in too short.

Contusions, i. Bruises.

Convulsions, painful cramps.

Criticall daies be such, as in short diseases & those of quicke motion, doe giue light vnto the physitian of life or death. *Pliny* observes the odd daies to be most significant, and those vsually determine of health; and the euen daies contrariwise: so that the seventh is *Rex*, i. a gracious prince, the sixth *Tyrannus*, i. a cruell tyrant.

Credulitie.

Credulitie. See *Indigestion*.

Cyath, a small measure both of liquid and drie things; the twelfth part of a setarius, which was twenty ounces: whereby it appeareth, that a cyath was one ounce, one half ounce, one dram, and one scruple: it may goe with vs for foure ordinarie spoonfulls.

Cubit, a measure from the elbow to the middle finger stretched out at length, which went ordinarily for 24 fingers breadth, or 18 inches, which is one foot and a halfe: yet *Pliny* in one place maketh mention of a shorter cubit, namely from the elbow to the end of the fist or knuckles, when the fingers be drawn in close to the hand.

Cutaneum eruptions be such wheales, pustles, or scabs as do breake out of the skin and distfigure it.

D

Debilitie, weaknesse or feeblenesse.

Decoctio, a liiquor wherein things haue bin sodden.

Decurtorie daies, be such as in a sickness shew some change or alteration in the patient, either for good or bad.

Defensatives, in medicines taken inwardly, are such as resist venom or pestilent humor: in outward applications, such as defend the fore or place affected from the flux or fall of humors thither.

Denarius, a coin of silver in Rome, and in other countries of gold, the same that Drachma Attica, i. a dram in weight, which is vij. d. ob. of our money; and the piece in gold answereth neere to a full French Crowne; in posse it goeth for a dram.

Dentifices, are meanes in Physicke to preserve the teeth, and make them white and faire.

Depilatorie are those medicines which either fetch off the haire, or hinder it from coming vp againe at all, or at leastwise from growing thicke. They were called in Greek and Latine both, *Epilabra*.

Dessicative, i. drying.

Digestives be those medicines which taken inwardly, helpe concoction of meate or humors; or applied without vnto a sore, doe comfort the place, and make way for speedy healing.

Dislocation, when the bones be either out of ioynt, or else displaced.

to *Disipilate*, i. to open.

to *Disipate*, i. to scatter and dispart.

Distortion, crookednesse or turning awry vnaturally.

Diureticall, such things as prouoke vrine.

Dose, i. that weight or quantitie of any medicine that may be giuen either conueniently or without danger to the patient.

Dram, the eight part of an ounce, which is the weight of a Roman denier, or Denarius.

Dysenteric, is properly the exulceration or sore in the guts, whereupon ensueth besides the painfull wrings of the belly, a flux also of blood at the siege, and therefore it is vsually taken for the bloody flux.

E

Ecloques. See *Eidylls*.

Electuaries, be medicinale compositions or confections to be taken inwardly, made of choise drugs, either to purge humors, to strengthen the principall parts, or to withstand any infirmite for which they are made. The substance is betwene a syrrop and a Conserue, but more inclining to the consistence of conserues.

Eidylls, or *Fidyllia*, be small poemes or pamphlets written by Poets, such as *Theocritus* in Greeke compiled, and much like vnto the Pastorals or Eclogues of *Virgil* in Latine.

Embrachation is a deuise that physicians haue for to foment the head or any other part, with a liiquor falling from aloft vpon it, in manner of rain, whereupon it took the name in Greeke Embroche, and hath found none yet in Latine, vnlesse we should vse Superfusio.

Emoluitives, medicines that do soften any hard swelling.

Empiricks were those physicians, who without any regard either of the cause in a disease, or the constitution and nature of the Patient, went to worke with those medicines whereof they had experience in others, fall it out as it would.

Empirick books of *Dioscorus* contained receites approoued and found effectually by experience.

Emunctories be those kernelly places in the body, by which the principall and noble parts doe void their superfluities, or such things as offend; to wit, vnder the ears for the brain, the ampits for the heart, and the shere for the liuer, &c.

Empla-

The explanation of

Emplantation in the Hortyard, is grafting by inoculation with a scutcheon in Phy sicke, the applying of a salve or plaister.

Epilepsie, the falling sicknesse.

Errhines be deuises made like tents, sharper at one end than the other, to bee put vp into the nose, either to cure some vicer there, or to draw downe and void humors out of the head, or to prouoke sneezing, &c.

Eschare, is that crust which ariseth vpon a cauterie, either a duall or potentiall, as also the roufe or scab that groweth vpon a fore.

Eucuation, i. Voidance and riddance of any thing out of the bodie by vomite, purging, bleeding, sweating, &c.

Excelsiorie, i. Heating or chaufing.

Excortiation, i. fretting the skin off, when a part is made raw: a way to exulceration.

Excoriescence, i. ouergrowing vnnaturally of any thing in mans bodie.

Exoticall, i. forraigne, and brought from other countries.

Exorcismes, i. coniuurations by certain charmes and spels.

Exorcists, they that practised such Exorcismes.

To Expectorat, i. to rid and discharge out of the breast by coughing or reaching.

Expiatorie, were sacrifices or oblations for to make satisfaction and atonement.

Exiccative. See **Deficcative**.

Extenuat, i. to make thin.

Exulceration, i. a forenesse of any part inward or outward, when not onely the skin is off, but the humor doth fret deeper still.

Exulcerative, be such things as are apt to eat into the flesh and make an vicer.

F

Fermentation, i. an equall mixture of things working as it were together: a tearme borrowed from the leuaine, which disperseth it selfe into the whole masse or lumpe of dough.

Filaments bee the small strings that hang to a root like threads or haire, which some call the beard of the root: and in resemblance thereof, other things growing likewise, bee so called.

Figures, clifts or chaps, whether it bee in the hands, feet, lips, or fundament.

Flatusities, i. wind inesse gathered within the bodie.

Flora, the goddesse of floures among the Paignes.

Fomentations properly be deuises for to be applied vnto any affected part, either to comfort and cherish it, or allay the paine, or els to open the poores to make way for ointments and plaisters. If they be liquid things they are laid too by the means of bladders, sponges, or such like: if drie, within bags or quilts.

Fractures, i. bones broken.

Fricions or Frications, rubbings of the bodie vpward or downward gently or otherwise, as the cause requireth.

Frontall, the forme of an outward medicine applied vnto the forehead, to allay paine, to procure sleepe, &c.

Fukes, i. paintings, to beautify the face in outward appearance. They are called at this day complexioners, whereas they bee cleane contrarie: for the complexion is naturall, and these altogether artificiall.

Fumofities bee vapours steaming vp into the head, troubling the braine.

Fungous, i. of an hollow and light substance like to Fusses or Muftromes.

G

Gargarisines bee collutions of the mouth, and parts toward the throat, either to draw downe and purge humours out of the head, or to repress and restraine their flux, or to mundifie and heale any sore there growing.

Gargarising or Gargling is the action of vsing a liquor to the said purpose.

Gestation, an exercise of the bodie, by beeing carried in coach, litter, vpon horsebacke, or in a vessell on the water.

Glandulous swellings. See **Kings euill**.

Gleir, i. the white of an egge.

Gymnicke exercises, were those that were performed by men naked, and the place for such exercises, was thereupon called **Gymnasium**.

H

Habit of the bodie, is taken for the outward parts thereof, opposit vnto the bowels and principall within, which being comforted and fortified, do thrust forth offensive matters to the habit and exterior skin.

Hemina, a measure in Rome, as well of liquors as drie things: so called, because it was half Sextarius: it contained ten ounces, and is somewhat

the words of Art.

somewhat vnder out wine pint, it is the same that Cotyia in Greeke, **Humiditas**, i. moisture.

Hydromantie, a kinde of magicall diuination or foreknowledge of things to come, by obseruation of the water.

Hydrophobie, is a symptome or accident befalling to them that are bitten by a mad dog, whereby they are afraid of water.

Hypochondriall parts, be the flanks or soft parts vnder the short ribs.

I

Illiacke passion, the wrings and torments of the vpper small guts, occasioned by wind or sharp humors. Some improperly call it the collicke of the stomacke.

Inbibition, a drinking or receiuing of any liquor into a thing: as when drougs lie steeped therein vntill they be thoroughly soaked therewith.

Impolymnes properly be collections or gatherings of winde and humors especially betwene parts of the body, whereupon there appeareth a rising or swelling, and in time they become corrupt and do rankle, vnlesse by some means they be either drawn away or dispersed. Some terme them wens, however, the word is taken for inflammations and biles.

To Incorporate, is to mixe and vnite well together.

To Incrassate, is to make thicke.

Indigestion, i. want of concoction and digestion, by which means many crudities & raw humors are ingendered, & by consequence abundance of rheumes.

Inflation, i. swelling or puffing vp with winde.

Infrangible, i. that cannot be broken.

Infusion signifieth the conuaince of some medicinal liquor into the body by clystire or other instrument. It importeth also the steeping of drougs in a conuenient liquor: and the liquor it selfe, when it is strained from the reft.

Ingredients, be those simples that goe vnto the making of any medicine compound.

Iniection, is the conuaince of any liquid medicine by syringe or such like instrument into any part of the body or hollow and fistulous vicer.

Insects, little vermine or smal creatures, which haue (as it were) a cut or diuision betwene their heads and bodies, as Pismires, Flies,

Grahhoppers, vnder which are comprehended Earth-wormes, Caterpillers, &c.

Infusion be bathing tubs or vessels halfe full, wherein the patient may sit vp to the middle or above in some conuenient decoction.

Intermittent feauer, are those which come by fits, and yeeld some reft betwene whiles.

Inunction, i. anointing.

Iulebs or Iuleps, be drinckes giuen commonly as preparatiues for to open the passages of the inward parts, and to prepare the humors for a purgation, made either of some distilled waters and syrups mixed together, or of a decoction sweetened with hony or sugar, or els mingled with syrups.

K

Kings euill, is the hard swelling of the Glandules or Kernels commonly about the necke: they be called also **Scrophules**.

L

Lachrymal, is the corner of the cie where, in the teares appeare first, and thereof it taketh the name.

Lafitude, is wearinesse or vnlustinesse.

Lauature, Lotion, or Loture, is a liquor to bathe or wash withall: likewise to cleanse and mundifie any part.

Ligula, Lingua, or Lingula, a small measure among the Romanes, both of liquour and drie things, containing the fourth part of Cyathus, to wit, three drams & one scruple or scruple, somewhat vnder halfe an ounce, and may goe well for our Spoonfull.

A **Liment** is thicker than oyle, and thinner than an ointment, it may be taken for a thinner kind of ointment.

Lobes and fibres are the lappets and extreame parts of the liuer, with the master veines growing thereto.

Locall medicines, be those that are appropriate for the forehead, **Errhine** or **Nasal** for the nostrills, &c. or to be applied outwardly, ointments, which are not to be used before general or vniuersal means by euacuation.

Loch or Lochoch, is a medicin more liquid than an electuary, appropriate for the lungs and windpipe, and is to be licked and let goe downe leisuely.

Longan, is the nethermost gut reaching vnto the very fear or the fundament.

Listed.

Lused, i. close stopped with clay, dough, or such like.

M

Maturationes be medicines that help to ripen any swelling impostume, bile, or botch *Maturity*, is the ripeness thereof.

Membranes, be fine skins which inwrap other parts, as the brains, eyes, and muscles of the flesh.

Métrechyste, an instrument serving to infuse or inject a liquid medicine into the matrix of a woman, in manner of clystir.

Mitigatives, be such remedies as do assuage paine.

Mina, or *Mina*, was a Roman weight, which consisted twenty ounces, that is to say, the ordinary pound, called *Libra* or *Pondo*, & two third parts: for the common *Libra* called *Medica*, weighed twelve ounces, so that *Mina* seemed to answer unto the measure *Sextarius*.

Mollitie. See *Emollities*.

Mordicative, is biting and stinging, as *Senny feed*.

Mucilage, is a slimy liquor drawne from some roots or seeds, as from the marsh Mallow or *Althea* root, the seed of *Pillium* or *Flewort* and others.

Muscles be the fleshy parts of the bodie, contained within their severall membranes or skinned.

N

Narcotike medicines, be those that benum and stupifie with their coldnesse, as *Opium*, *Hemlocke*, and such like.

Nasals be Nose-vents. See *Erbina*.

Nerves, i. Sinewes.

Nodosties, hard knubs & knots growing upon the ioynts in old gouts, and in other parts.

O

Oculus, halfe a scruple, or the sixth part of a dram.

Obstructions, i. Stopplings.

Opiats, were properly at the first such electuaries or confections, which had a good quantity of *Opium*, i. the iuice of *Poppie* in them, such as *Philonium* and *Requies*, that were devised to mitigate intollerable

paine, and to bring the patient to sleepe: howbeit, in these daies all electuaries, even cordials, in a liquid form be called *Opiats*; although there be not one grain of *Opium* in them.

Opilation. See *Obstruction*.

Orthopnoice, are those that have the disease *Orthopnoea*, which is a difficulty of drawing their wind, vnlesse they sit upright.

Ofes, be words cast forth at vnwares, prefacing somewhat.

Otenchyste, an instrument, devised for to infuse or poure some medicinable liquor into the eares,

Oxyerate, a mixture of water and vinegar together.

P

To *Palliat*, i. to couer: & such cures be called *Palliatie*, which search not to the root and cause, but giue a shew only of cure, as when a fore is healed vp aloft, and yet festereth vnderneath: and so sweet *Pomanders* do palliat a stinking breath, occasioned by a corrupt stomacke or diseased lungs, and such like.

Paradoxe, strange opinions.

Pectorals, i. such medicines as bee fit for the breast and lungs.

Pellicles. See *Membranes*.

Penetrative, i. Percing.

Periodicall, such agues be called, as return at their iust course from day to day, every third fourth, or fifth day, &c.

Pneumony, is the inflammation of the lungs.

Pesary, is a deuise made like a finger or suppository, to be put vp into the natural parts of a woman.

Phlebotomie, i. blood-letting, or opening of a veine by incision or pricke.

Phthisicke, to speak properly, is the consumption of the body occasioned by the fault of exulcerat and putrified lungs. But *Pliny* otherwise seemeth to take it for any other consumption.

Pomona, a deuised goddesse amongst the *Painims*, of apples and such fruits.

Prodigies be strange sights and wonderfull tokens, prefacing some fearefull thing to come.

Propinquities, nearnesse or affinity.

Proscription, was a kind of outlawing and depriving a man of the protection of the state, with

with confiscation of his lands and goods. *Propagat*, to grow and increase, after the manner of *Vine* branches, which being drawne along in the ground from the motherstock do take root.

Propitius, i. gracious and mercifull.

Proximitie, neere neighbour-hood or resemblance.

Prisant, the decoction of husked *Barley*: a brewell made therewith, or the cream thereof.

Pulpous, i. full of pulpe, or resembling pulpe, which is the soft substance in Apples or such fruits, answerable to the flesh in living bodies.

Purulent, yeelding filth and Attyr.

Putrefactive, such venomous medicines or humors, as do corrupt and putrifie the part of the body, which they possesse.

Q

Quindécimvirs, were certain officers, fifteen in number, ioined in one commission.

R

Receptorie, a vessel standing vnderneath, ready to receiue that which droppeth and distilleth from something about it.

Reciprocal, going and coming, as the tides of the sea ebbing and flowing.

To *rectifie*, i. to set straight, to reforme, or amend.

Repercussive, i. driving or smiting backe.

Residence, i. the settling toward the bottome, as in wine.

Retentive facultie, i. the natural power that each part or member of the body hath to hold that which is committed vnto it, the due time, as the stomacke, meat, the bladder, urine, &c.

Reuerberative, i. rebounding or striking backe.

Rhogades, be properly the chaps in the fundament or seat.

Rubified, i. made red, as when by application of mustard plasters, called *Sinapismes*; or heating a part that is benumbed with nettles, it recovereth a fresh colour againe, whereupon such plasters be called *Rubificatione*, and the operation is named by the Greekes *Phrenigmos*.

Rupture, the discale of bursting, as when the guts or other parts fall downe into the bag of the coods.

Saluation, is a drawing of humours to the mouth, and a deliuerie of them from thence in manner of spitte.

Sarcling is the baring of roots, by ridding away the earth and weeds from about them, that did clog them.

Scarification, is a kind of pouncing or opening of the skin by way of incision slightly, with the fleame or lancet, either to giue some issue for the blood and humours to passe forth, or prepare a place for the cupping-glasse to extract more.

Schirre, is a hard swelling almost fencelesse.

Scriptule, or *Scruple* is foure and twenty grains weight, or the third part of a dram.

Scrophules. See *Kings euill*.

Seat, is the circumference or compasse about the tuill or fundament.

Secundine, i. the afterbirth that infolded the infant within the mothers wombe.

Sege, a stoole of easement, whereupon wee sit to discharge the order and excrements of the guts.

Serofities, or *Serous humors*, be the thinner parts of the masse of blood, answering to the whey in milke, such as wee see to float vpon blood that hath run out of a veine.

Sextarius, a measure among the *Romanes*, whereof six goe to their *Congius*, whereupon itooke that name: it contains two hemines, and is somewhat lesse than a wine quart with vs, it beareth twentie ounces.

Sinapisme, a practise by a plaster of mustard seed, and such like, to reuiue a place in manner mortified, and to draw fresh humors & colour to it.

Solstice, i. the Sunnestead, as well in winter as Summer, when hee is come to his vtremost points North and South, but usually it is put for Mid-summer onely.

Sophisticated, i. falsified & made corrupt, howbeit, going for the right. Thus drougs and gems are many times thrust vpon vs.

Spasmes, be painefull crampes or pluckings of the sinewes and cords of the Muscles.

Spasmatike, are such as be thus plucked.

Species, be either the simple ingredients into a composition, or else the bare powders mingled together, ready to be reduced into an electuarie liquid, or Tables.

Speculative knowledge, or *Speculation*, is the insight into a thing by reading only & contemplation

temptation, without practise & experience.
Sperme, is naturall feed.

Spandyles, be the turning ioints of the chine or backbone.

Stomachicall fluxe, is the same that Coeliaca passio. See *Calici*.

Stomachicall medicines, be such as are appropriat for the diseases incident to the mouth, and the parts adjoining.

Stypsie, be such things as by a certain harsh taste, doe shew that they bee astringent, as medlars and alumne, which thereupon is named *Stypteria*, and such like.

Succedan, that drug which may be vsed for default of another. The Apothecaries call such, *Quid pro quo*.

Suffusion, See *Cataract*.

Suffumigation, is the smoke that is receiued in to the body from vnder a stool, for the diseases of the guts, fundament or matrice.

Suppuration, is when a bile or impostume gathereth to an head and must be broken.

Sympathie, i. a fellow-feeling, vied in *Pliny*, for the agreement or amitie naturall in diuers senselesse things, as betwene yron and the loadstone.

Symptome, an accident accompanying sickness, as head-ach the ague, stich, shortnesse of wind, spitting blood, cough, and ague, the pleurisie.

Syringe, an instrument in manner of a pipe to inject a medicinable liquor into the bladder.

T

Tellus, the earth.

Tenacitis, clamminesse, such as is in glew, birdlime, and Bitumen.

Theoretique, or *Theoretique*, contemplatiue know-

ledge without action and practise.

Tinefme, an inordinar desire to the stool without doing any thing to the purpose.

Tonfils, See *Amysdals*.

Transparens, i. cleare and bright throughout, as crystal, amber, aire and water.

Transvasation, i. the pouring of liquor out of one vessell into another.

Triuial, i. vulgar, common, and of bafe reckoning.

Triumvirat, the Tripartite dominion of *Antonie*, *Octavius*, and *Lepidus*, when they held all the world in their hands, each one their third part.

Trochisques, or *Troques*, be little cakes or roundles, into which diuers things medicinable are reduced for to be kept the better, & to be ready at hand when they shall be vsed.

Twil, the same that the Fundament or nethermost gut.

V

Vegetatine, that power in nature which God hath giuen to creatures, whereby they liue, are nourished, and grow.

Ventositie, wind inesse.

Vicinie, neernesse, or neighborhood.

Victoriat, a silver coine in Rome, Halfe a denarius, so called because it had the image of victory stamped on the one side: it is low, what vnder our goate.

Vntion, anointing.

Vnguent, an ointment.

Vreteri, be the passages or conduits whereby the water or vrine passeth from the kidnies into the bladder.

Vulneraries, i. belonging to a wound; as *Santicle* is a vulnerary herbe, and *Machanon* was a vulnerarie Phytian.



THE NINETEENTH BOOKE OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proeme.

C Reate we haue in the former booke, of the stars and signes above, which giue vs intelligence as well of the seasons as the disposition of the weather to come: and that in plaine and easie manner, by so euident and vndoubted demonstrations also, as may content the meane capacitie of the vnskilfull and ignorant. And verily, if we will rightly weigh and consider the thing, we shall find and vnderstand, that our country farmers and villages stand vs in good stead to know the inclination of the heauens and stars, as the skill of a fronomy serueth our turnes for good husbandry. These points now being well and thoroughly learned, many haue bin of opinion, that the knowledge of gardens and the care thereto belonging, should by good right follow next. Howbeit, I for my part am of thimind, that: here be other matters concerning Agriculture, deserue to be handled, before we leape thus soon to gardening. And here I cannot chuse but maruell much at some men, who making such profession of learning, and namely, in the skill and science of Agriculture, as they haue done; yea, and seeking thereby to win all their credit and name of erudition and literature, haue notwithstanding omitted many things requisite therunto, without any mentio-
D on made, or one word spoken of so many herbes and simples which either come vp of themselves, or grow by means of mans hand: considering that the most part of them are in greater price and reputation, yea, and in more use and request far for the maintenance of this our life, than either corne or Pulse, or any fruits of the earth whatsoeuer.

And to begin first at those that are known commodities, and so notorious, as that the eyes thereof not only reacheth all ouer the maine and continent, but extendeth also to the very seas, and ouerpreadeth them: What say we to Linne or Flax, so commonly sowed as it is? yet may it not be ranged either among the fruits of the field, or herbs of the garden. But what region (I pray you) or part of the earth is without it; and what is there so necessary for this life of ours in all respects? Again, is there any thing in the whole world more wonderfull and miraculous, than that there should be an herb found of this vertue and property, as to bring
E Egypt and Italy together? in so much, as Galerius, Lord Deputy in Egypt vnder the Romans, was knowne set saile from the Irib of Messina in the Straits of Sicily, and in seven daies to arrive at Alexandria: Babilus also Governor there likewise, in six; and that by the means of the said herb? Moreover, what say you to Luc Lord Pretour, embarked and took ship at Puteoli, and in nine daies sailed to the said Alexandria, and yet be had but a very mild and still wind to helpe him in that voiage? Is not this a strange andoueraign les pillars, into the harbor of Ostia in Italy? can shew (I say) the kingdome of Catalogne in Spaine before the said port-towne in foure daies, Province in three, and Barbary in two? for C. Flaccus, lieutenant vnder Vibius Crispus the Pro-consull, did as much I speake of, and that with no great forewind, but a most gentle
F and mild gale. Oh the audacious boldnesse of this world, so rash, so full of sin and wickednesse, that a man should loue and cherish any such thing as might recuee and swallow the Windes, stormes, and tempests; as if the sun and tide alone were not sufficient to carrie so proud a creature! But now are wee growne moreouer to this passe, that sailes bigger than the shippes themselves, will not serue our turnes. For albeit one must be sufficient to carrie the biggest crosse-yard that can be deuised, yet are not wee content with a single
B
maine saile

maime sailes heretupon, unless we sit up Saile upon Saile, top and top-gallant: unless (I say) we have for G
sailes and sprin-sailes in the Prow, misnes also hoisted up and displaced in the Poupe; besides other trinkets
and more cloath still; and all to sit us more forward upon our death, and to hasten our end. Finally, is there
ought againe so admirable, as that of so small a graine as is the Line-seed, there should grow that which is
able to carry to and fro in a moment, this round globe of the earth, the same being so slender a stalk as it is,
and not growing high from the ground? considering withall, that twisted it is not entire and whole in the
stem; but before it can be occupied, it must be watered, dried, broke, sown, moved, and with much labor driven
down and reduced in the end to be as soft and tender as wool: and all to do violence to Nature and Mankind
most audaciously even in the highest degree, in such sort, as a man is not able to proceed so far in excecration,
as is due unto this invention. The first desire wherof I have inuighed against in convenient place else-
where, and not without desert, as who could not be content, that a man should die upon the land, but hee H
must perish upon the sea, so seed Haddockes there, without the honour of sepulture. In the booke but next be-
fore this, I gave warning and advertisement, That for to enjoy corne and other victuals necessarie
for this life, in suffisance and plenty, we should beware of wind and raine: and now behold, man is so wicked and
ungratefull, his wit so inuentive, that he will be sowing, tending, and plucking that with his own hand, that
calls for nothing else at sea but winde, and neuer rests till Browning be come. See moreover, how well this
happy hand of his feeds: for there is not a plant againe commeth up sooner, or thriveth faster than this
Flax. And to conclude, that we may know how Nature herself is nothing well pleasing therewith, and that its
growth maye; her will, it burnes the field wherein it is sowed, it eateth out the heart of the ground, and
maketh it worse where-ever it comes: this is all the good it doth upon a land.

CHAP. I.

¶ The manner of sowing Line or Flax: the sundry kindes thereof: the order how to dresse it.
Also of Napkins and other Naperie. Of Flax and Linnen that will not burne in
the fire. And when the Theatres or Shew-places at Rome
were first encountered.

Line-seed loveth grauelly or sandie grounds passing wel, and commonly is sowed with K
one tilth and no more: yet is there nothing maketh more haste to be above ground,
or sooner commeth to maturitie. Being sowne in Spring, it is pluckt in Summer. See
how * injurious it is still to the earth even this way also! Wel, say that the Egyptians
in some sort may be excused, for sowing it as they doe, and making saile-cloath thereof; in
regard of the necessitie traffique they have into Arabia and India, for to fetch in the commo-
dities of those countries; what need or reason, I pray you, hath France so to do? Can the Gauls
be forced in the same range with the Egyptians? Whether would they go? Is it not sufficient
that they see the mightie mountaines standing iust between them and the Mediterranean sea?
Will not this serve to keepe them from Navigation, that on the huge Ocean side they can dis-
cover nothing but the vast Elements of Water and Aire together? Howbeit, for all this re-
straint, the Cadurei, Caletes, Rutene, and Bituriges, the Morini also, who are supposed to be L
the farthest people inhabiting our Continent; yea and throughout all parts of France they
weave Line and make Sailes thereof. And now adways also the Flemmings and Hollanders
dwelling beyond the Rhene (I meane those ancient Enemies to the State of our Empire) doe
the like: * in somuch as the women there cannot devise to go more rich and costly in their ap-
parell, than to weave fine Linnen. The observation wherof putteth me in mind of a thing that
Mr. Varro doth report of the whole Race and Familie of the Serrani: in which House this Or-
der was precisely kept. That there was not a woman amongst them knowne to weave any Lin-
nen about her, no not so much as in a smocke next her bare skinne. Now in Germanie, the
spinners and weavers of Linnen doe all their worke in shrouds, caues, and vaults, buried, as it
were, under the ground: so do they also in Italy and that part of Lombardie that lieth between M
the Po and Ticinus, to wit, in the * Countrey Aliana; where (after the Scetabines in Castile,
which is the best) there is very fine workmanship of Linnen cloath, and may deserve the third
place for goodnesse throughout all Europe. For the Retovines, bordering hard upon the
foresaid Alliances, and the Faventines, who inhabit the broad port-way Emilia, are to be ran-
ged

* For that so
quickly it
robbereth her
of moisture.

* It seems that
fine Holland
cloth & Cam-
bricke was in
request by the
Hollands.

* Regione Alia-
na. Turaco.

Aged in a second degree and next to the Scetabines for the fine Linnen which they make. And in
very truth, this Fauntine cloth is alwaies far whiter than the Allian, which is ordinarily brown
when it is new woven, and before it be bleached. Like as the Retovine is exceeding fine & thick
woven withall, and besides, not inferior in whitenesse to the Fauntine; howbeit, no nap or down
it carrieth, a thing which as there be some who dogreatly praise and like, so there be others againe
discommend and dislike as much. As touching the third it flax that they make of their Flax, it is
more even (if euener may be) than that which the Spider spinneth; so nervous also and strong
withall, that if a man list to make triall thereof with his teeth, it will giue a twang and ring a-
gain like a Lute-string: and therefore it carrieth a double price to other. As touching the Span-
ish Flax, and namely, that which Aragon and Cartalagna doth yeeld, it is passing faire and
white, by reason of a certain brook or running water passing vnder Tarracon, wherein it is water-
ed: the nature wherof is to giue it a singular brightnesse about the rest. Vnderous fine it is,
and runneth into a dainty small thread; for there first was devised the fine Cyprus or Lawne, and
the curtains thereof. It is not long ago, since out of the same parts of high Spaine, there was
brought into Italy the flax of Zoela, most commodious & meet for hunters to make great nets
and toile. A maritime city this Zoela is, in Gallitia, situate neere the ocean. There is excellent
good Line also to be found at Cumes in Campanie within Italy, which serueth very well for
snaires and small nets to take fishes, and to catch birds with. The same also yeeldeth matter and
fluffe for the great cord-nets above said; for were well this, that Flax fitteth our turns, as well to
snare and intrap all other beastes, as it doth to indanger our own felues, [upon the sea.] But of all
C others, the toile made of Cumes flaxen cords, are so strong, that the wild bore falling into it, will
be caught, and no marvell, for these kind of nets will checke the very edge of a sword or such
like weapon. I my selfe haue seene so fine and small a thread, that a whole net knit thereof, to-
gether with the cords and strings called Couarants, running along the edges to draw it in and let it
out, would passe all through the ring of a mans finger. I haue known one man also carry so many
of them (easily) as would go about & compass a whole forest. But this is not the greatest won-
der of them; for more than so, every one of these threads that went to the making of the masnes,
was twisted 150 double, and euen of late daies, Julius Lupus, who died Lord Deputy or Gouer-
nor of Egypt, had such. This may well seem a marvell incredible to those who neither knew nor
saw the net-work Habergeon, or Curet of Anafis, a king sometime of Egypt, which was shewed
D of late daies within the temple of Minerva, in the Isle of the Rhodians; every third wherof
carried a twist * 265 double. Certes, Mutianus a man of good credit (as who had bin thrice con-
sull of Rome) hath related so much at Rome upon his own knowledge: for wheras there remai-
ned yet certain small reliques and little pieces thereof, it was his hap of late to meet with some
of them and by his own triall to find that true, which had bin reported by others. And verily,
great pittie it is, that such an excellent, rich, and rare peece of work (as it was) should thus come
to nothing, by mens injurious handling of it, raneling out the threads as they haue don, for to see
the proofe of the thing.

But to returne againe to our flax of Italy. That which groweth in the Pelignians countrey is
at this day in great account and request; howbeit, none vie it but the Fullers. There is not a
F whiter flax to be found, & indeed resembling wool neerer than this flax. Like as, for quilts, ticks
and mattraffes, the flax of the Cadurei in France had no fellow: for surely the invention thereof,
as also of flax to stuffe them with, came out of France. As for vs here in Italy, euen as our manner
was in old time to lie and sleep upon straw-beds & chaffy couches, so at this day wee vie to call
our pailers still by the name of Stramenta. The Line or flax of Egypt is nothing strong, howbeit
the people there do raise exceeding great gaine and profit thereof. And foure distinct kinds
thereof are knowne, according to the names of the sundry countreys where they grow, to wit,
Tanicicum, Pelusiaticum, Buticum, and Tentyriticum.

Moreover, in the higher parts of Egypt which bend toward Arabia, there groweth a certaine
shrub or bush carrying cotton which some call Gossypium, others * Xylon, and the linnen there-
of made they therefore call * Xylina. This plant is but small, and bringeth forth a fruit resem-
bling the bearded nut or filbert; out of the inner shell or huske wherof called * Bombyx there
breaks forth a cotton like unto downe, so easie to be spun; and there is no flax in the world com-
parable to it for whitenesse & softnesse. Of this cotton, the Egyptian priests were wont to wear
their fine surplices, and they tooke a singular delight therein. A fourth kind of linnen there is,
called

* According to
the daies of
they years.

* Cotton or
Bombace.
* Linif-wol-
ley, or out Fau-
flans rather.
* Herupon
cotton is col-
led Bombac

called Orchomenium; it cometh from a certaine fennie reed growing in marishes, I meane the G
tender muchets or chats thereof.

In Asia they haue a certaine kind of broome, the stalks and branches whereof they water and
leauie in sleepe ten daies together, and thereof make thread, passing good for to be twisted and
knit into fisher nets, for they will abide the water very well, and indure without rotting. The
Ethiopians and Indians both, find a stuffe in manner of Line or cotton in some apples or such
like fruit: and the Arabians meet with the like in gourds, growing as I haue before said vpon
trees.

To come againe to our country Line or Flax within Italy, we go by two signes, and know
thereby when it is ripe and ready to be gathered; towit, either by the swelling of the seed, or
the colour of the plant it selfe, leafe and stalk inclining to yellow. Then is it plucked vp and bound
to certain bunches as much as handfulls; which done, they are hung vp to drie in the sun one
day, with their heels or roots vpward: the morrow after, they be turned quite contrary, and so
for five daies after, they hang with the forehead roots downward, that the seed may fall downe
from their heads into the mids of every bunch or bundle aforesaid; for the seed thereof is medi-
cinable, and of effectuall operation in Physicke: yea and the rurall Peasants in Lombardie and
Piemont beyond the Poyle, to make therof a good country meat of a most sweet and pleasant
raist, but now for this good while, that kind of meat or bread is made onely for to be employed
in their sacrifices to the gods. Then after wheat harvest, the items or stalks thereof are laied
in some water that is warme with the Suns heat, charged with stones or other weights thereupon,
that they may be borne downe and sinke to the bottom: for there is not a thing besides lighter
than Line, or loeuer better to swim. When they be sufficiently watered (which you shall know
by the skin or rind thereof if it be loose and ready to depart from the towly substance of the stem)
they then must the forehead joints or stalks be hung out a second time to be dried in the sun, with
their heads and heels one while vp and another while downe, as before. After they be wel dried,
they are to be beaten and punned in a great stone mortar, or vpon a stone floore, with an hurden
mallet or tow-beetle made for the purpose. Now that part thereof which is vntoist & next to the
pill or rind, is called Tow or Hurds, and it is the worst of the Line or Flax, good for little or no-
thing but to make lampe-match or candle-wick; and yet the same must be better kembed with
hutchell teeth of yron, vntill it be clenfed from all the grosse barke and rind among. As for the
good Flax indeed, which is the teere or marrow as it were within of the Line, there be diuers and
fundry sorts and degrees of it, distinct according either to the whitenesse or softnesse thereof.
And the spinning of this fine Flax (I may tell you) is so cleane a worke, that it will become a
man ywis to lay his fingers to it. But what shall be done with all the hard refuse, the long buns,
the stalks, the short thuds or shies that are either driuen from the rest in the knocking, or par-
ted in the hutchelling? many they will serue very well to heat ovens and furnaces, or to maine-
taine fire under kills and leads. And here there is a prettie cunning and skill in the hutchelling
and dispensing of Flax to the prooffe: for if the Line bee good and well ordered, euerie fiftie
pounds of it in bunches or bundles aforesaid, must yeld fiftene ordinarily of tried and carded
Flax. Moreover, when it is spunne into thread, it must be polished againe and whitened in wa-
ter, with much punning and knocking vpon a stone together with the water. And yet there is
no end, for after it is woven to cloath, it ought to bee followed and beaten a third time with
good clubbe-headed cudgels: in such sort, as the more iniurie that is done vnto it, the better
itis.

Furthermore, there is a kin of Line found out which will not consume in the fire: this in I-
taly they call Quick-line, and I my self haue seen table-clothes, towels, & napkins thereof, which
being taken foule from the board at a great feast, haue been cast into the fire, and there they burne
before our face vpon the hearth, by which meanes they became better scoured, and looked
fairer and brighter a hundred times, than if they had bin rinsed and washed in water; and yet no
part of their substance, but the filth only, was burnt away. At the roiall obsequies and funerals
of KK, the manner was to wind and lap the corps within a sheet of this cloth, of purpose to sepa-
rate the cin ders coming of the body, from other ashes [of the sweet wood that was burnt
therewith.] This manner of Line groweth in the deserts of India, where no rain falls, where the
country is all parched and burnt with the Sunne, amongst the fell dragons and hideous Ser-
pents: thus it is inured there to line burning, which is the reason, that euer after it will abide the
fire.

A fire, Geason it is to be found, and as hard to be wouen, so short and small it is. How soeuer other-
wise it be naturally of colour reddish, yet by the fire it getteth a shining glosse and bright hew.
They that can come by it and meet withall, esteeme it as precious as the best orient pearles. In
Greece they call this Line, Asbestinum, according to the nature and propertie that it hath, not
to consume with burning.ouer and besides, *Anaxilanus* saith, That if a man would cut downe of
fall a tree by stealth and in secret, let him compass the body thereof with a sheet of this lin-
nen, he may hew as long as he will at it, and all the strokes that he giueth will be so drowned, that
they shall not be heard againe. To conclude, in all these respects aboue said, this Line may well
be counted for the principall and best that is in the whole world.

The next to it in goodnesse, is the Line called Byffus: the fine Lawn or Tiffany whereof out
B wies and daines at home set so much store by for to trim and deck themselves: it groweth in
Achaia within the territorie about Elis: and I find, that in old time it was sold as deare as gold,
for a * temple thereof was commonly exchanged for * foure deniers Roman.

The lint or nappie downe which linnen cloth beareth in manner of a soft cotton, especially
such as cometh of ship sailes that haue lien at sea, is of great vse in Physicke. * The ashes also
made thereof, be counted a good Succedane of Spodium, and for their efficacie may goe for it.
Moreover, there is a kind of Poppies much sought after for blanching and bleaching of linnen
clothes; for being skoured therewith, it is wonderfull how white and pure they will look: & yet
for all the beautie that consisteth in that colour, people are grown to this disorder & vain enor-
mity, that they haue assaid to stain and die their linnen and naperie into other colours, as well

C as their woollen cloth. Which practise was first seen in the Armada or fleet of K. *Alexander*
the Great, vpon the great riuer Indus, at what time as his captaines and Admiralls in a certaine
skirmish that they made with the Indians, changed the armes and ensignes of their ships: where-
at the inhabitants (being vpon the shore and strand) were astonied to see their sailes and breas-
ters painted with diuers colours wauing in the wind. Semblably, the sailes of that ship were
died purple, wherein *M. Antonius* tog ether with *Cleopatra* came to A *gium*, and in which they
fled both from thence and escaped. And indeed heretofore a red purple banner erected on the
top of the mast, was the badge or ensigne of the royall Admirall ship: but afterwards they be-
gan at Rome to incourtaine their Theatre with such vailes dyed in colours, onely for shade: an
invention deuised by *L. Catulus* at what time as he dedicated the temple of the Capitoll. In

D proesse of time, *Centulus Spinter* (by report) was the first man that in the solemnity of the games
and plaies Appollinate, drew fine curtains ouer the great Amphitheatre at Rome: howbeit
not long after, *Cesar* Dictator caused the grand Forum or Common place at Rome to be cou-
ered all ouer with such rich Courtains: yea and the high faire street called *Sacra*, to be hanged
on both sides from his owne dwelling house to the very Capitoll cliffe, which magnificent and
sumptuous sight, was more wondered at and scene with greater admiration, than the braue shew
and Tourney that he set out at the same time of Sword-plaies at sharpe and to the vtterance.
Then followed *Marcellus* also the son of *Octavia*, sister to the Emperour *Augustus*, who in his own
Edificship and in the tenth Consulship of his vnle *Augustus* before said, vpon the Calends or
first day of August that yeare, caused the Romane Forum to be drawne all ouer and shadowed

F with the like courtains, although he represented at that time no solemnity at all of games and
plaies: and this he did only, that they who came to plead at the barre, might stand vnder shade
more wholecomely. Lord, what a change was here at Rome since the daies of *Cato* the Censor,
who thought it meet and requisite, yea and gave aduise that the said Forum or great Hal of com-
mon Pleas should be paved and laied all ouer with caltraps vnder foot, To keep our Lawyers and
buffle pleaders from thence. Of late daies there were scene in the Amphitheatres of Emperour
Nero, traueses drawne vpon cords and ropes, with fine courtains of blew azure colour like the
skie, and those beset with stars, where the very floore of the ground vnder mens feet, was colour-
ed red. And wherefore serue these in cloister courts and walks now, but to keep the mosse foot-
sooth vpon the ground, or rather the fine fret-worke in pauements, from sun-burning? But for
all these paintings and rich dyes, yet when all is done, the white linnen held the own fill & was
highly esteemed aboue all colors. And no doubt in great price such cloth was in the time of the
Trojan war: and in good faith I see no reason why it should not be as well in bloudy battails as
at broken shipwracks: howbeit *Homer* testifies, that few there were who went to the wars with lin-
nen habergeons or cures: but it should seem that the Poet (as the better learned expostors doe

* 4 grains
* 1 about three
hal pence
the grain, and
better.
* Heres were
m de ephraim
Gala wees
i of wem
which wh
her cured
fractures and
franchised his
bleeding.

* Called by
the names of
the
cords.

terpret) meant, That ship-tackling, sailes, cords, and ropes, were made of this Line, speaking as G
he doth of * Sparta, whereby he vnderstandeth indeed Sata, i. cordage of sowne Line or garden
Flaxe.

CHAP. II.

¶ The nature of Spart or Spanish broome: the manner of handling and dressing it: when
it was first used in cordage: what Plants there be that line and
grow without root.

Spart verily was not in vse and request for many hundred yeares after, neither was it knowne
before the first voyage and expedition that the Carthaginians made in warlike manner in-
to Spaine. An herb this is also, growing of it selfe without setting or sowing (which indeed
it cannot abide.) Full well and properly it might be called, the rush of a dry and leane ground,
and a very defect or imperfection appropriate to that country alone of Spaine: for, to say a
truth, it is the fault and badnesse of the soile in the highest degree, that breedeth it, and where it
commeth vp, nothing else can be sowed and set, or grow at all. That in Affricke or Barbary
is very small, and good for nothing. In the territory of new Carthage or Cartagena (which is in
the higher part of Spaine) it groweth much: I doubt it all that tract is not given to breed it, but
look where it commeth vp, you shall see whole mountaignes all ouer-spread and covered with it.
Hereof the rustical peasants make their mattraes and beds; this is their fiewel wherewith they
keep fires, of it they make their torches and links to giue them light; with it they are common-
ly shod; and the poore shepheards cloath themselves therewith. Howbeit, hurtfull is this
plant to cattell, ylesse it be the tender tops and crops of the branches; which they may broule
and eat without harme. For other vses, when the Spaniards must plucke it vp they haue much
adoe withall, and a great toile about it; for their legs must be wel booted as it were with grui-
res; their hands covered with thick hedging-gloves, as gantlers; and being thus armed at all points,
yet they lie tugging at it, pulling, writhing, and wresting the same with hooks and crooks either
of bone or wood, until they haue their will of it. Come they about this work in winter time, it
is in manner vnpossible to get it vp; but from the Ides [i. the mids] of May vnto mid-Iune, it is
very tractable: for this is the time and season when it is ripe, and then commonly they gather it
for their ordinary vses before named. Being once pulled and sorted, the good from the bad, it is
made vp into bundles and faggots with the life still in it, and so piled on a heap for the first two
daies; the third day they vnbind it, lay it loose and scattering in the Sun for to be dried: which
done, they make it vp againe into fagots, and so bring it in and lay it vp within house. After all
this, they keep it in sea water (for that is best) or els in fresh, for want of the other. After this wa-
tering, it must be dried in the Sun, and then steeped in water a second time: but if a man haue
vrgent occasion to vse it presently out of hand, he must put it in a great tub or bathing vessel, &
let it soke there in hot water a time. Now if when it is dried againe, it be stiffe and will stand
alone, they take it for a sure signe that it is sufficiently watered, and hath that which it should
haue. This is a very neere and ready way, & sauech them much labour. Thus being prepared one
of these two waies, it ought to be brayed and beaten before it will serue the time; and then no
cordage in the world is better than that which is made of it, nor lasteth so well within the wa-
ter, and the sea especially, for it will neuer be done. For drier worke, I confesse, and out of the wa-
ter, the gables & ropes wrought of hemp are better; but Spart made into cordage will liue & re-
ceiue nourishment within the water, drinking now the full as it were to make amends for that
thirst which it had in the native place where it first grew. Of this nature is Spart besides, that if
the ropes made thereof be worn, and (with much occupying) out of repaire, a little thing will
mend and refresh them, yea and make them as good as euer they were, for how old soeuer it be,
yet will it be wrought very well again with some new among. A wonderfull thing it is to con-
sider and look into the nature of this herb, and namely, how much it is vsed in all countries, what
in cables and other ship-tackling, what in ropes for Masons and Carpenters, and in a thousand
necessities of this our life. And yet leet the place which furnisheth all this store, lying along the
coast of new Carthage, we shal find to be within the compass of thirty miles in bredth, & lesse
somewhat in length. And verily, if it were fetched farther off within the main, the cariagewould
not quit for the cost and expences,

The

A The Greekes in old time employed their riches in drawing of ropes: as may appeare by the
very word *σπάρτα*, which signifieth with them a rish, and a rope. But afterwards they vse their cor-
dage of Date tree leaves, & the thin barks of the Linden or Tillet tree: from whence verily, like
and probable it is, That the Carthaginians borrowed both their vse of Spartum, and maner also
of dressing it.

Theophrastus writeth, That there is a bulbous plant, with a root like an Onion-head growing
about the banks of riuers; between the vmoist rind whereof, and that part within, which is good
to be eaten, there is a certain cotton or woolly substance, whereof folke vie to make * woollen
sockes and some such slight peeces of apparell. But he neither named the country where they
be made, nor sets downe any other particularities more than this, That the said plant they cal-
led Eriophoron [i. Bearing wool:] so far as euer I could find in any copies comming to my
hand. And albeit *Theophrastus* was otherwise a diligent and curious writer of plants, and search-
ed deep into the nature of simples, four hundred and ninety yeeres before my time, yet hath
he made no mention at all of Spart, a thing that I haue obserued and noted in him once alre-
ady before now. Whereby euident it is, that the manner of dressing and vying Spart, came vp af-
ter his daies.

And since we are entred into a discourse of the wonders of Nature, I will follow on still and
continue the same, wherein this may be one of the greatest, That a thing should liue and grow
as a plant without root. Looke but to those Mushrooms or Toad-stooles, which are called in
Latin Tubera: out of the ground they grow, compassed about on every side with the earth, with-
out root, without any filaments, or so much as small fringes & beards resembling a root where-
upon they should rest: the place where they breed doth not swell or bear vp one jot, nay, it shews
no chink or creuasse at all out of which they should issue: and to conclude, they seem not once
to stick and cleaue to the ground whereupon they stand. A certaine barke or皮 they seem to
haue, which enloseth them, such as (to speake plainly) we cannot say is earth indeed, nor any
thing else but a very brawny skin or callositie of the earth. These breed commonly in drie and
fandie grounds, in rough places full of shrubs and bushes, and lightly in none else. Oftentimes
they exceed the quantity of good big Quinces, euen such as weigh a pound. Two sorts there be
of them. Some be full of sand and grit, and such plague folkes teeth in the eating: others bee
clean, and their meat is pure, without any such thing among. They differ also in color, for there
D be of them that are red: ye shall haue those also that seem blacke, and yet are white within. But
the best simply are those that come out of Affricke or Barbary. To determine resolutely whether
they grow still from day to day, as other plants; or whether this imperfection of the earth (for
better I know not how to call it) commeth at one instant to that full growth that euer it will
haue; also, whether they liue or no, I suppose it is a difficult and hard matter: surely this is cer-
taine, that their putrifaction is much after the manner of wood, and they rot both alike. Many
yeeres past there are not, since *Lartius Licinius*, sometimes lord Pretor and gouernour vnder the
Romans in the prouince of Spaine, chanced (of my knowledge) while he was there at Carthage,
in biting one of these Mushrooms, to meet with a slier Roman denier within it, that turned the
edge againe of some of his fore-teeth, and set them awry. Whereby a man may perceiue mani-
E festly, that they be a certaine excrecence of the very earth, gathering into a round forme, as all
other things that grow naturally of themselves, and come neither by setting nor sowing.

CHAP. III.

¶ Of the excrecence named * Misy: and of other such like Puffes and Mushrooms. Of those
flat Puffes and broad Toad-stooles, called * *Perjei*, of the plant or beaer * *La-*
serpitum. Of *Mazdavi*, of *Atadder*, of *Sape-weed*, or the
Fullers beaer *Radicala*.

* or, Mifon.

* or, Perjei.

* Laiser, wort.

Wtlin the prouince of Cyrenica in Affricke, there is found the like excrecence cal-
led Misy, passing sweet & pleasant, as well in regard of the smell as the tast, more pul-
pous also & fuller of carnositie than the restlikewise, another of that nature in Thra-
cia, called Ceranium. As touching all the sorts of Mushrooms, Toad-stooles, Puffes, Fusbals or
Fussies, these particulars following are obserued, First it is known for certain, that if the autumn
be much disposed to rain, and withal, the aire be troubled and disquieted with many thunders,
during that season, there will be good store of such Mushrooms, &c. especially, (I say) if it thun-
der

* or Mifon, and
ther, according
to Turne.

der much. Secondly, they wil not last aboue one yere. *Item*, The tenderest & daintiest be those that breed in the Spring, and that indeed is the best time for them. *Item*, In some countries the ouerflow of riuers engender Mufhromes, and namely, at Mitylene, where (by report) they wil not otherwise grow but vpon floten grounds, and namely, in such places whither the water hath brought from Tiara, a certain vegetatiue seed to breed them. And verily, That Tiara is wonderfully stored & replenished with such. As touching the Truffles or Mufhroms of Asia, the most excellent of all others be neer vnto Lampfacum and Alopecurus: but the best that Greece yeldeth are in the territorie about the citie Elis. In this Toad-stoole or Mufhrome kind are those flat Puffes and Puffes to be reckoned, which the Greekes name * Pezizae: as they haue no root at all, fo they be altogether without either stele or taile.

* or Pezici

* Some take it
for *Struthion*, or
Alfa dulcis.
* Which is
equivalent in
weight to a
dram, *scilicet*, *drab*
English.

* Thought to
be *Alfandria*.

* 500 miles.

In the next place to these I must needs speake of the most noble and famous plant *Lasertium*, which the Greeks name *Silphium*, discovered and found first in the abovesaid prouince of Barbarie Cyrenaica. The juice or liquor drawne out of this hearb they call * *Lasera*, a drug so magnified, of such singularitye and vse in Physicke especially, that it was sold by weight, and a dram thereof cost commonly * *Romane denier*. For these many yeares of late, there is none of this plant to be found in that country of Cyrenaica before said: for that the Publicans and Farmers of the pastures and grounds there, (vnder the people of Rome) doe put in their cattell among these plants, and eat all downe by that means: finding thereby a greater gaine or commodity, than by letting them stand for the juice or liquor aforesaid. One only stalk or stem thereof hath bin found in our days, which was sent vnto Emperor *Nero* as a present, for a great noueltie. If it chance at any time, that either sheepe or goat (which commonly bite neer to the ground) I do light vpon a young plant thereof, newly peeping forth and not euident to be seene, you shall know it by these signes, The sheepe presently so soone as the hath tasted it will drop asleep, and the goat fall a neefing. For these many yeres the merchants haue brought vs into Italy no other * *Laser*, than that which grows abundantly in Persis or Media, and in Armeniabut it is far inferior to this of Cyrenaica, and commeth short of it for goodnes. And this that we haue is no better than it should be, for they sophisticate and corrupt it with gum, with *Sagapeum*, or else with bruised Beans. In regard of which scarcity, I cannot chuse but remember that which befell at Rome in that yere wherein *C. Valerius* and *M. Herennius* were consuls, when by great good fortune there was brought from Cyrenae thirte pound weight of the best *Laser*, and set abroad to be seene in open place, of all commers. As also I may not let passe another occurrent, namely, *K* how *Casir* Diastour at the beginning of the ciuile war, tooke forth openly out of the chamber of the citie, with other treasure both of gold and siluer, an hundred and cleuen pounds of the best *Laser*. Moreouer, this one thing more I cannot forget: the best and most renowned Greeke Authors haue left in writing, That 7 yeares before the foundation of the citie Cyrenae, which was built 143 yeares after our citie of Rome, this plant *Lasertium* that beareth the said *Laser* was engendered at one instant, by occasion of a certain thicke, grosse, and black shewer of raine, in manner of pitch, which sodainly fell and drenched the ground, about the hordyards or gardens of the Hesperides, & the greater Syrtis: The which raine was effectual, and left the strength thereof, for the compasse of * foure thousand stadia within Africke or Barbarie. They affirme moreouer, That the herb *Lasertium*, there growing, is of so sauage and churlish a nature, that it cannot abide any culture or good ordering by mans hand: but if one should goe about to tend and cherish it, it would rather chuse to be gon into the desert and vnepeopled parts of the country, or else wander away and die. Moreouer, they set downe this description of it, That it hath many roots, and those bigge and thicke, a stemme or stalk, resembling the hearb *Sagapeum* or Fennell-giant, howbeit, not altogether so great: the leaves of this plant, which they termed by the name of *Maspetum*, come very near in all respects to those of *Smallach* or *Perseley*. As touching the seed that it beareth, flat and thin it is in manner of leaves: but the leafe it selfe thereof, sheddeth in the Spring time. The cattell that vse to feed thereupon (and whereof they be very greedie) first fall a scouring: but afterwards, when they be clesed and rid of ill humors, begin to wax fat and their flesh by this means becommeth wonderfull sweet and pleasant. They report moreouer, that after the leaues be fallen, men also were wont in old time to eat the stem or stalk thereof, either roasted and baked vnder the cindres, or else boiled and sodden in water: and their bodies likewise for the first 40 daies ensuing did nothing but purge till they were cleared of all diseases, breeding by occasion of any *Cachochymie* or collection of ill humours within them.

Now

A Now concerning the juice or sauage liquor before said, the manner was to draw it after two torts, to wit, by scarification, either out of the root, or forth of the stem and maister stalk. And hereof it came to haue two names, *Rhizias* and *Caulias*. But the later of these two, to wit, that which came of the stem, was counted the worst, subiect to putrifaction, and sold cheaper than the other. To come now to the root of *Lasertium*, it hath a blacke rind or barke vpon it, wherewith the merchants vse to sophisticate many of their drugs. As for the manner of dressing and ordering the juice thereof, it was no sooner drawne, but they put it into certaine vessels, together with brans among, then euery and anon they plied it with stirring and flogging, vntill it had lost the cruditie and verdure thereof, and by that working, came to the maturity and perfection: for if it were not thus well followed, soon would it catch a vine, begin to putrifie, and so continue but a while. In this worke of theirs they had an eye vnto the color how it changed: for when they perceived it to be high, & that they saw it once drie and haue don sweating & breathing out the raw humidity and vapor within, then they knew thereby that it was wrought sufficiently, and come to the full ripenesse. Others there be who say, that the root of *Lasertium* beareth more than a cubit in bignesse, and that out of it there swelleth an excrecence, aboue the ground, out of which there was wont by way of incision to issue forth a certaine white juice in manner of milke: vpon which grew the stalk or stem which they called *Magydaris*. And they affirme besides, that it beareth leafy flat graines for the seed, in color like gold, which shed presently vpon the rising of the Dog-star, especially if the wind be south. Of which grains or seeds fallen to the ground, young plants of *Lasertium* vse to grow vp vnderneath, that within the compasse of one yere will thrine both in root and stem to the iust and full perfection: they haue written moreover, that the vse was to dig about their roots, and to lay them bare at certain times of the yere. Also, that they sused not to purge cattell as is aforesaid, but to cure them if they were diseased: for vpon the eating thereof either they mended presently, or else ended and died out of hand: but few they were that miscaried in this sort. As touching the former opinion of purging and scouring, true it is, that it agreeth well to the other *Silphium* or *Lasertium* of Persia, aforesaid. Another kind there is of it named *Magydaris*, more tender and lesse forcible and strong in operation than the former; and affordeth no such juice or liquor at all, it grows about Syria, and commeth not vp in all the region about Cyrenae.

Moreouer, vpon the mount *Pernaflus* there is great plentie found of a certaine hearb, which the inhabitants would needs haue to be *Lasertium*, and so they call it: wherewith indeed they are wont to abuse and sophisticate that singular and diuine plant, the true *Lasertium*, so highly commended, and of so great account and regard. The principall and best triall of the true and sincere *Laser*, is taken from the colour, somewhat inclining to rednesse without: break it, you shall haue it appeare white within: and anon transparent. If you drop water vpon it, or otherwise thin spittle, it will resolute and melt. Much vse there is of it in many medicines, for to cure mens maladies.

Two plants more there be well knowne to the common fort and base multitude, and to say a truth, few e's are acquainted with them, notwithstanding they be commodities of much gaine, and many a peny is gotten thereby. The first is *Madder*, in great request among diers and curriers: and for to set a color vpon their wooll and leather, right necessarie. The best of all and most commended is our *Madder* of Italie, principally that which groweth about villages neere vnto our citie of Rome. And yet, there is no country or prouince lightly but is full of it. It commeth vp of the owne accord, and is sowed besides of seed, and set of slips in manner of *Eruile*. Howbeit, a prickie stalk it hath of the owne the same is also full of joints and knots, and commonly about euery one of them it hath fine leaues growing round in a circle. The seed is red. What medicinable vertues it hath, and to what purpose it serueth in Physicke, I will declare in place conuenient.

The second is that which is called in Latin *Radicula*, [i. Sowe-word] an hearb, the juice wherof Fullers vse to much to scoure their wooll withall, and wonderfull it is to see how white, how pure, how neat and soft it will make it. Being set, it will come up and grow in any place: but of it selfe without mans hand, it groweth most in Asia and Syria, among rough, craggie, and stony grounds. The best is that which is found beyond the riuer *Euphrates*, and that bears a stem like tall Fennell, howbeit small and slender, and whereof the inhabitants of the country there doe make a delicate dish, for besides, that it hath a commendable tast and much desired, it giueth a pleasant

pleasant colour to what meat fouer is sodden in the pot with it. It beareth a leafe like the Olive: the Greeks call it Strution: it flourish in Summer: lovely it is to the eye, but no smell at all it hath to content the nose: prickie moreouer it is like a thorne, and the stalk nor with standing covered with a soft down: feed hath it none, but a big root, which they vse to cut, shred, & mince small for the purposes aforesaid.

CHAP. IV.

¶ The manner of trimming and ordering Gardens: the sorting of all those things that grow out of the Earth, into their due places, besides corne and plants bearing fruit.

IT remaineth now to treat of Gardens, and the careful diligence thereto belonging: a commendable thing in it selfe, and recommended vnto vs besides by our fore-fathers and auncient writers, who had nothing (to speake of) in more account and admiration in old time, than the gardens of the Hesperides, of *Adonis*, and *Alcinous*: as also those pendant gardens vpon terraces and leads of houses, whether they were those that *Semiramis* Queene of Babylon, or *Cyrus* King of Assyria, deuised and caused to be made. Of which, and of their workmanship, my intent is to make a discourse in some other booke. Now for this present (to goe no farther than Rome) the Romans KK. verily themselves made great store of gardens, and set their minds vpon them: for we read, that *Tarquinius* surnamed the Proud (the last king of Rome, was in his garden when he gaue dispatch vnto that messenger that was sent from his sonne about a cruell and bloudie errand, for to know his fathers aduise and pleasure as touching the citizens of Gabij. In all the twelue tables throughout which contain our ancient lawes of Rome, there is no mention made so much as once of a Grange or Farm-house, but euermore a garden is taken in that signification, and vnder the name of Hortus [i.e. a Garden] is comprised *Heredium*, that is to say, an Heritage or Domain: and herupon grew by consequence, a certain religious or ridiculous superstition, rather of some whom we ceremoniously to sacre and blesse their garden and hortyard dores only, for to preserve them against the witchcraft, and force of spitefull and enuious persons. And therefore they vse to set vp in gardens, ridiculous and foolish images of Satyres, Antiques and * such like, as good keepers and remedies against enuy and witchcraft, howsoever *Plantus* assigneth the custodie of gardens to the protection of the goddesse *Venus*. And euén in these our daies, vnder the name of Gardens and Hortyards, there goe many daintie places of pleasure within the very citie, vnder the color also and title of them, men are possessed of faire closes and pleasant fields, yea and of proper houses with a good circuit of ground lying to them, like pretie farms and graunges in the country: all which, they tearme by the name of Gardens. The inuention to haue gardens within a citie, came vp first by *Epicurus* the doctour and master of all voluptuous idleness, who deuised such gardens of pleasure in Athens: for before his time, the manner was not in any citie, to dwell (as it were) in the country, and so to make citie and country all one, but all their gardens were in the villages without. Certes at Rome, a good garden and no more, was thought a poore mans cheineance; it went (I say) for land and liuing. The Garden was the poore commoners shambles, it was all the market place he had for to prouide himself of victualls. O what a blessed, what a secure, and harmlesse life was that, for so long as men could be content to take vp with such a pittance, and stay themselves so: but better it is I now, for to satisfie the appetit of our wanton gluttons and bellie gods, to search into the bottom of the deepe sea: for to get (I say) oysters of all sorts, to feare no tempest nor shipwrack: for to meet with daintie soules, to send out one way as far as beyond the riuier *Phasis* for those birds, which a man would thinke were sure ynough and secured from the fouler, by reason of the fearfull tales that goe of them, and of the daunger of those that approach neere vnto them (and yet why say I so, considering they are the better esteemed and more precious the farther they be set and dearer bought: to haue purveyours another way in *Numidia* and *Ethiopia*, for the rare birds there about the sepulchres, among those sepulchres (I say) where in stead of meeting with game, they stumble otherwhiles vpon their owne graues and neuer come home againe and lastly, to haue others to chase the wild and sauage beasts of the Forrests, yea and to maintain fight with them, in daunger to be deuoured as a prey, by those which for better seruise as venison for other men to eat. But to come againe to these commodious Gardens, and the cares which

* As Priapus,
Iphali, and
Lithophali.

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A which they afford: how cheape be they? how ready at hand? how fitted are they not only to fill the belly and satisfie hunger, but also to please the tooth and content the appetite, were it not that wealth and fulnesse stand in the way: the fame that loath all things els beside, and disdain (no maruell) these ordinarie viands. Wel might it be borne with and suffered, that Apples and other fruits of the trees, such as are more exquisite and singular than the rest, in regard of their beauty, bignesse, pleasant saviour, or strange and monstrous manner of growing, euén against the course of Nature; that these dainties (I say) should be reserved for our rich and mighty men of the world; that poore men should be debarred and forbidden once to taste thereof. In some fort tolerable also it is, that great States and wealthy personages should be seruiced at their table with old wines, fined and refined, with Wines delayed, neatified, and gilded, as it were, by B passing thorow an *Ipcoras* bag; that such should drink no other but that which was wine before they were born, how aged fouer they be and far stept in yeares. We may abide moreouer, that our grand-paunces and riotous persons haue deuised for themselves a delicate kind of meat out of corn and grain (which should serue for bread only) and the same made of the finest and purest flour, bolted and seared from the rest, and none but that: to say nothing of the curious work in pastrie the fine cakes, wafers, and marchpans, artificially carued, ingraued, and painted in imagerie, as if these wantons could not liue, forsooth, but of such deuises. That there should be a difference also in bread, answerable to the distinction of States in the city, one fort for noble Senators, another for the worshipfull knights and gentlemen, and a third for the mean commoners and multitude. Finally, that in other vitualls there should be a descent by so many degrees, from the highest to the lowest, many carry some appearance of reason, & be allowed. How then? must there be a distinction therefore inuented in worts and garden pot-herbs? Must the difference of persons according to their purse appeare also in a dish of * three farthings price, and no better? Surely I see no sense nor congruencie at all in this. And yet forsooth such herbes there be, that the tribes of Rome (the greater part I mean of the Roman citizens) may not presume to eat; as if the earth had brought them forth for rich men onely, being no meat yv is for poore people. Why (say they in some contempt of poeitic) here is the item of a Wort so well growne, here is a cabbage to thriuen and fed, that a poore mans boord will not hold it. Certes dame Nature ordained at the first, That Sperage should grow wilde and commonly in all places of the field, as if she meant thereby, that euery man that would might gather them for to eat: and now behold they are cherished carefully in gardens; and from *Ravenna* you shall haue of these garden Sperages so fair and big, as three of their crops or heads wil weigh a good pound, and are sold after three a Roman As. O the monstrous bellies that be now adies! O the excessive gluttonie and gourmandise which now reigneth in the world! Is it any maruell, that poore Affes and such dumb beasts may not feed vpon * Thistles, when the Commons of Rome are restrained and forbidden to eat * Thistles, and dare not once touch them? And yet here is not all: our waters also be distinguished and set apart for some persons, euén the very elements whereof this world consisteth are distinct, secured, and ranged into sundry degrees, and all at the pleasure of monied men: for some you shall haue to drinke snow, others ice: and will you see in one word their folly and vanity? the very miserie that high mountains are punished and F plagued with, they make their pleasure of, and therewith content and delight the throat. These men lay for to be prouided of chilling cold against the heat of summer, and seeke by all means that they can possiblie, to haue snow remain white still and frozen (as it first was) out of Winter season, euén in the hottest months in the yere, which are most opposite vnto the nature of snow. Some there be who first seech their water, & anon let it congeale againe to ice, after it was once scalding hot. Whereby we may see, how man neuer contenteth himselfe in natures workes, but crosse he will be alwaies and peeuish; and look what pleaseth her, shall displease him: for who euer would haue thought, that any one herb should haue grown for the rich, and not as well for the poore? Well, let no man for all this cast about and looke toward mount *Sacer*, or *Autentine* hill, that the Commons againe should by way of insurrection rise, and in the heat of their bloud depart asidether, as sometimes they did in a mutinous fit of theirs, in high discontentment with the Nobilitie. For what needs that, since they may be sure that death yv shortly will bring them together, and make equal, betwene whom now for a while Riches hath put a bar, and made distinction of place and degree.

But now it is time to returne againe vnto our gardening, from which we were digressed. Certaine

* *Esula* was
esse vesali.

* *Cordulini*
* *Artichokes*,
which are no
better than
Cordulini,
the Garden
Thistles.

tain it is, that in old time there was no market place at Rome yielded greater import vn to the G
 State than the Herberie, in such request and so much called for were worts and pot herbs. In
 regard of which exactions and painments, uermore going out of their purses, the Commons in
 the end complained, laid open their griefes, and made their mone to the Senate, of this burden
 and heauy load; and neuer gaue they ouer crying still vnto them with open mouth, for redresse,
 til they obtained a full release of rent and custome, raised before from the tallage and portage
 of this kind of ware and commoditie. Whereby it was well knowne and found by long experience,
 that therwas no one thing of greater reuenue and more assured gain; none that stood so
 safe and certaine; none lesse subiect to the will and pleasure of Fortune & Casualtie, than garden-
 denage: as being taken for no lesse than a yerely fee, that poore men might make account of as
 sure as if it were in their purse. Again, for the rent thereof paid to the land-lord, there was euer H
 good securitie: the ground or soile was a sufficient surety; the profits thereof were alwaies
 seen and exposed openly to the eye; and lightly no weather whatsoeuer hindered the crop & ga-
 therer thereof. *Cato* highly commends the garden Coules or cabbages, whereby we may know,
 that in his daies gardens were in some respect. Also in times past, as husbandmen in the coun-
 try were known especially, & their wealth valued by their gardens, so when there was a garden
 plot seen lying out of order, and not well kept, men iudged it a way, that the mistresse or dame
 there dwelling (for commonly this charge lay vpon women) was but an ill huswife, and thrif-
 lesse in her house: for in default of garding what remedy was there then, but to draw the purse
 strings, and go for every thing either to the Butchery or the herbe-market, and so to lye vpon
 the penny. Neither were in those daies Coules or cabbages so well esteemed as now they be: I
 for why, they could not away with double meats one vpon another, but condemned all dishes
 that required some addition, as help of sauce, broth, or such like to draw them downe. This was
 so spare cost, and by this means they saved oile. For as touching the pickle sauce * *Garum*, all
 those were reproched for gourmandise and gluttony, who could not eat fish or flesh without it.
 And therefore men tooke greatest contentment in their gardens & garden herbs: those were
 at hand and ready at all times, no great cookerie was required to dresse such dishes, no need of
 fire, no expense of wood and fuel. And hereupon it came, that salads of herbs were called * *A-*
cedaria, so little care and trouble went to the prouision and making of them. Beside, light they
 are of digestion, they breed no heauinesse in the head, they offend not the braine nor any of the
 senses; and least of any thing make quarrell to the loafe and spend little bread. That quarter K
 of the garden which serueth an house with poignant herbs in stead of sauce, to giue a commenda-
 ble taste and seasoning to our meat, sheweth plainly, that the master and mistresse thereof were
 not wont to run in the merchants books for spicerie, but changed the Grossier or Apothecaries
 shop for the garden; for the same contentment they had out of it, as from thence: also that they
 sought not either for pepper out of India, or for any kitchen spices transported from beyond
 the seas out of far countries. And as for the other quarters, set out with beds of floures, & sweet
 smelling hearbes, what reckoning was made of them in old time may appeare by this, That a
 man could not heretofore come by a Commoners house required in the city, but he should fee
 the windowes beautified with green quishins, wrought and tapised with floures of all colours,
 resembling daily to their view the gardens indeed which were in out villages: in somuch, as be-
 ing in the very heart of the city, they might think themselves in the country; till such times as
 these fly theues and night hookers, the wicked rabble (I say) and off-scouring of the base mul-
 titude (not to be reckoned) committed such felonious outrages, as forced men to nail vp co-
 uers and cafes before these faire lights and beautiful prospects. Lvs giue therefore to gar-
 dens their due honour: let vs not (I say) deprime things of their credit and authoritie, because
 they are common and nothing costly: for I may tell you, some of our nobilitie, yea the best of
 the city, haue not disdained to take their sir-names from thence, nay they supposed themselves
 highly credited and honored thereby. Thus we see, that in the Noble house and lineage of
 the *Valerij*, some were not abashed nor ashamed to be called *Lactucini*, in regard of the best kind of
 Lettuce that they either had in their gardens, or affected most. And here I cannot chuse but M
 mention by the way, the grace that hath growne to our name, by occasion of some diligence
 imploied and paines taken this way; whereby certaine Cherries beare our Name, and are cal-
 led *Pliniana*, in testimonie of our affection and loue to that fruit. Which I remember the ra-
 ther, for that *Virgil* confesseth how hard a thing it is, that so small matters as these be should
 grow

* Much like
to our An-
choues.

* *adith*.

A grow into the name and reputation of honor any way. And now to the purpose. No man doubt-
 eth, but that a garden should lie to a gaunge or ferme-houfe, and ioine close vnto it: as also,
 that about all things there should be water at command; from some riuer or brooke run-
 ning vnder, yea, and through it, if it were possible: if not so, yet that they are to be watered with
 pit water led with Spring, either drawne vp by plaine poles, hookes, and buckets; or forced by
 pumpe and such like, going with the strength of wind within enclosed, or else weighed with
 Swipes and Cranes. Moreouer, that a garden-plot should be broken vp and haue the first dig-
 ging presently vpon the coming of the west wind Fauonius in the beginning of the Spring;
 and for any thing that must be set or sown there, against Autumne, it ought to be prepared
 and dressed ready for to receiue seeds and sets, 14 daies after: but for Winter stuffe, it should haue
 B a stirring or second tilth and deluing before the Winter Sunstead or shortest day of the yeare.
 Also, this is to be noted, that there would not be a greater plot of ground taken in, empaled
 and fenced about for a garden, than of 8 acres or iugers at the most. Now for the manuring and or-
 dering thereof: first, for three foot deep the dung would be tempered and mingled with the
 mould. *Item*, It ought to be diuided in principal quarters: the same also must be set out into se-
 uerall beds, raised fowth as high and lying vpward. *Item*, Requisite it is, that every quarter haue
 as welcertaine open gutters or furrowes drawne about them, as conuenient allies betwene to
 giue both passage for men to come and goe gainely; and also a currant to the course of water
 that shall be let in, when the springs be set open or sluices drawne.

Garden plants and hearbs be not all commendable in one and the same respect. For of some
 C the goodnesse lieth only in their bulbous and round root: of others contrariwise in their head
 aloft. There be of them that haue no part good but their stem or maister stalk; and there are for
 them againe, the leaves wherof be only eaten. Now a man shall haue amongst them those that
 are wholesome meat, both leafe and stalk. In some the seed or graine, in other the outward pill
 or rind alone of the root is in request. And as there be that tast well in the skin or cartilage and
 gristly substance without forth, so there are that haue either their pulposus carnosity within, or
 else their fleshy coat above, as daintie. All the goodnes of many of them lieth hidden within
 the earth: and of as many againe above the ground; yet some there be that are al one, as good
 within as without. Some traile along and run by the ground, growing on end still as they creep,
 as Gourds and Cucumbers. And yet the same, as well as they loue to be nere the earth, yet are
 led Ipon trailes, and hang thereon, yea, and be knowne for to rampe vpon trees: Howbeit, much
 D weightier and better nourished be they that keepe beneath. As for the Cucumber, it is the car-
 tilage substance of the fruit thereof, that delighteth and pleaseth our taste: for of all fruits this
 propertie it alone hath, that the vmoist rind which it beareth, groweth to a very wood when it
 is once ripe. Within the earth lie hidden and are kept all Winter, Raddishes, Nauens, Turneps
 or Rapes, Elecampane also after another sort, so doe Skirworts, and Parleneps or Wypes.

Moreouer, this I would aduertise the Reader, that when I tearme some hearbes *Ferulaceae*, I
 meane such as resemble in stalk Dil or the great Mallows. For some writers doe report, That
 in Arabia there be a kind of Mallows, which after they haue grown six or seuen months, come
 to be in the nature of pretie trees: in somuch, as their stalks freightwises serue in stead of wal-
 king staves. But what should I stand vpon this? In Mauritania, by report of traouellers, near
 F the frith or arme of the sea adjoining to Lixos, the head citie of Fez, where sometimes (as folke say)
 were the hort-yards and gardens of the Hesperides, not about halfe a quarter of a mile from
 the maine ocean, hard vnto the chappell of *Heracles* (farre more ancient than that temple of his,
 which is in the Island Calis) there groweth a Mallow, that is a very tree indeed: in height it is
 twentie foot, and in bodie bigger and thicker than any man can sadome. In this kind I meane
 for to range the Hempe likewise. And as I purpose to tearme such *Ferulaceae*; so there bee
 some others, that I will call *Carnosa*, such as resemble the riuer or fresh-water Spunges, which
 commonly are seene vpon ouer-floden meadows, where the water standeth. For as touching the
 fungous substance or callioitie of some plants, I haue already spoken thereof in the Treatise
 F of Wood and Trees, and of their nature: Likewise in our late discourse of another sort of Mu-
 throoms and Toad-stooles.

C

CHAP.

OF the cartilage and pulpos kind (such I meane onely, wherof there is nothing good but that which is about the ground) I reckon the Cucumbe: a fruit that *Tiberius* the Emperour much loved and affected: for he tooke such a wondrous delight and pleasure therein, that therewas not a day went over his head, but he had them served up to his table. The beds and gardens wherein they grew were such as went upon frames to be removed every way with wheels: and in winter, during the cold and frosty daies, they could draw them backe into certaine high covert buildings exposed to the Sun, and there house them vnder roffe. Moreover, I find in some ancient Greek writers, that their feed ought to lie 2 daies in steepe, or infused in honied milke, before they be prickt or set into the ground: for by that meane the Cucumbers will be the sweeter and more pleasant. The nature of them is to grow in what forme and fashion foueuer that a man would haue them. Throughout all Italy, green they be of colour, and least of any others: in the out-prouinces they be as fair and great, and those either of a yellow color, like wax and citrons, or els blacke. In Affrick or Barbary men take delight to haue the greatest plenty of them; whereas in *Mosia* they lay for to haue them passing big and huge. Now when they exceed in greatnes they are called *Pepones*, i.e. Melons or Pompons. Let a man eat them alone, they will lie raw and Greene in the stomacke a whole day, and neuer be digested: howbeit, with meats they are not vnwholsom, and yet for the most part swim they will aloft, and ride vpon a mans stomacke. A wonderfull thing in their nature: they cannot abide oile in any wife, but water they loue well; inso much, as if they be cut off or fallen from the place where they grew, they wind and creep therinto, if it be but a little way off: contrariwise, if they will as fast from oile, if a man set it by them, and in case any thing be in their way to let them, or that they hang full vpon their plant, a man shall perceiue how they will turn vp and crooke, to shun & avoid it. This amitie to the one, and enmity to the other, may be seene euen in one nights space: for if a man set vnder them, 4 fingers off where they grow, a vessel with water ouer-night, he shall see by the morning that they will come downe to it: contrariwise, let oile stand the like distance from them, shrink they will from it, and hook vpward. Marke another experiment in the cucumber. If when it hath don flourishing, you enter the knot of the fruit into a long cane or trunk, it will grow vpon a wonderfull length. But behold a very strange and new fashion of them in *Campaine*, for there you shall haue abundance of them come vp in forme of a Quince. And as I heare say, one of them chanced so to grow first at a very venture: but after from the seed of it came a whole race and progeny of the like, which therupon they call *Melopepones*, as a man would say, the quince pompons or Cucumbers. These neuer hang on high, but go low by the ground, and gather round in forme of a globe. A strange case it is of this kind: for, ouer and besides their shape, their color, and fauor different from the rest, they are no sooner ripe, but presently they fall from the stele or talie wherto they grew, notwithstanding they hang not hollow from the ground, where their owne poise might weigh them downe. *Columella* tells of a pretie deuise that he hath of his own, how to keep of them fresh all the yere long: chuse (quoth he) the biggest bramble you can meet with among a thousand, translate it into a warm sun-shine bank, and there replant it: then cut it off, leauing not about 2 fingers breadth from the root about the ground [but this must be done about the Spring Æquinox in mid-March:] then take a Cucumber seed, & set it within the soft pit of the said bramble, bank it will round about with fine fresh mould & dung blended together: This is the way, he assureth vs, to make that the roots thereof bearing such cucumbers or Melons, will abide the greatest cold in Winter, and neuer shrink at it: of cucumbers, the Greeks haue set down 3 kinds, to wit, the *Laconick*, the *Sevaticke* & the *Bœoticke*. Of which as they say, the first sort only they be that loue waters so well: some there be who preferre to take the seed of Cucumber or Melon & to temper it in the iuice of a certain heare stamped, which

* Some take it for Cucurbit, & Pistachia Malles.

Of the like nature (I meane for their manner of growing) be the Gourds. Winter and cold weather they cannot endure: they loue also places well watered & dunged. As wel Gourds, as the cucumbers or Melons aboue said, are commonly sowed between the Æquinox in March, & the Sunstead in Iune, provided alwaies, that their seed ly in a trench within the ground a foot & a

halfe

A halfe deepe. But in very deed, the best and meetest time to sow them is about the feast *Patilia*, howeouer there be some would haue the seed of gourds to be put into the ground presently after the Calends or first day of March: but of cucumbers about the Nones, i.e. the 7 day thereof, or at farthest, by the feast or holy daies of *Minerva*, named *Quinquatrus*. They loue both alike to creep and cawle with their winding top branches or tendrels, and gladly they would be clambering vpon walls, and climbing vp to the house rooffe, if they can meet with any rough places to take hold by; for naturally they are given to mount on high. Howbeit, their strength is not auerfable to their will and desire: for stand they cannot alone without the help of some props, forks, or railes, to stay them vpright. Exceeding forward and swift they be in growth. They run on end when they are set on it: and if they may be born vp & sustained in maner aforesaid, they will gently ouerhade galleries, walking places, arbors, frames, & allies vnder them in a garden, and that right quickly. In regard of which nature and behavior of theirs, two principall kindes there be of them, the one *Camerarium*, as one would say, the frame or trail. Gourd, and cucumber, which climbeth aloft; the other *Plebeium*, i.e. the vulgar and common, which creepeth along the ground beneath. In the former kind it is worth the noting, to see how the fruit (heavy as it is) hangeth it selfe poised as it were in the wind, and will not stir, notwithstanding the stele whereto it groweth be wondrous fine and smal. Moreover, Gourds also may be fashioned in the head every way as a man will, like as the Cucumbers or Melons before named: and specially within wicker cases made of pliable oifers, into which they are put for to grow & to take their form, so soon as they haue cast their blossom. The nature of them (I say) is to receiue what figure a man will force and put them to: but commonly shaped they are in their growth like to a Serpent, winding and turning every way. There haue bin known of them (such I meane as were of the traile kind) being led vpon a frame from the ground, and permitted to run at libertie, which grew to an incredible length, for one of them hath bin seen 9 foot long. As for cucumbers, they bloom not all at once, but by piece-meale, floure after floure, now one and then another yea, and floure vpon floure, one vpon the head of another. Howeouer the Cucumber loatheth waterish grounds, yet can he abide drier places also. Couered al ouer this plant and fruit is with a white downe, euen at the first: but especially all the while he is in his growth.

Gourds are imployed sundry waies, and to many more vses than Cucumbers. For first, their yong and tender stalks be very good meat, and being dressed, are served up as a dish to the table: but the rind is of a cleane contrary nature. Gourds of late time came to be used in stoues and baines for pots and pitchlers: but long before that, they stood in stead of rundlets or small barrels to keep wine in. The green of this kind hath a tender rind, which must be scraped notwithstanding before a dish of meat can be made thereof. And certes, albeit Gourds be of digestion hard, and such as will not thoroughly be concocted in a mans stomacke, yet they are taken to be a light, mild, and wholsom meat, as they be handled and dressed diuers waies, for that they make not a mans belly to swell, as some meats doe. Of those feeds which be found within the gourd next to the neck thereof, if they be set, come the long gourds commonly: & such lightly you shall haue ingendered of those also that are in the bottom, howbeit nothing comparable to the other. Those that lie in the midft bring forth round ones: but from the seeds that are taken out of the sides, ordinarily there grow the shorter sort of Gourds, such as be thicke and broad. These grains or seeds would be handled in this manner. First they are dried in the shadow, and afterwards when a man list to sow them, they ought to be steeped in water. The longer & slenderer that a Gourd is, the better meat it yeelds, and more pleasant to be eaten: and therefore it is, that they be thought more wholsome which grew hanging vpon trailes; such indeed haue least store of seed within them. Howbeit, wax they once hard, away with them out of the kitchen, for then they haue lost all their grace and goodnes which commended them to the cooks dresser. Such as are to be kept for seed, the manner is not to cut vp before winter: and then are they to hang or stand a drying in the smoake, as proper stuffe and implements to be seen in a country house, to keep, as good chaffer, seeds for the gardner against the time. Moreover, there is a meane deuised, how to preserve them and cucumbers too, for meat, sound and good, almost til new come; & that is, by laying both the one and the other in a kind of brine or pickle. Some say also, that they may be kept fresh and Greene, interred in a caue or ditch vnder the ground in some darke and shady place, with a good course or bed of fand laid vnder them, and well couered afterward with dry hay, and earth vpon the same in the end. Ouer & besides, as in all plants

* Cucumis
* Plantagin.
* Colocynthis,
or, Colocynthis,
tides.

and herbs in maner of the garden, there be both wild and tame: so is there of Gourds and Cucumbers both a certain *sausage kinde. Such are not for the kitchen, but for the Apothecaries shop, and good only in Physick: & therefore I will put off for this present the discourse of them & their nature, reserving them for their severall treatises in other books concerning such medicinale simples.

As touching the rest of garden plants, which are of the like cartilage and pulpos substance, they be all of the sort of them roots growing hidden within the ground: amongst which, I might seem to have written already fully and sufficiently of Rapes and Turneps, but that the Physicians have observed in them both sexes, to wit, masculine & foeminine, for the rounder kind they will have to be the male, but the broader and flatter root, which also are somewhat hollow, they account the female: and these last they hold to be the better far, and more pleasant, as being easier to be kept and condite: which also, if they be often removed and replanted, will turn to be males. Physicians likewise have set down five kinds of Nauwews, namely, the Corinthian, the Cleonaeon, the Liothasian, the Boeotian, and that which simply by it self they called the green Nauew. Of all these, the Corinthian Nauewes grow to a great bignes, and in maner all the root is seennaked above ground: for this is the only kind that coueteth to be aloft, and groweth not downward into the earth as the rest do. As for the Liothasian (some call it also the Thracian) of all others it will abide and endure frost and cold weather best. Next to it is the Boeotian nauew, sweet in tast, differing from the rest in the notable thornesse and roundnesse withall that the root carryeth nothing at all like to the Cleonaeon, which is passing long. Generally this is observed as a rule, that all Nauewes, the slenderer, smaller, and smoother leaues that they beare, the more pleasant is their root to the tast: and contrariwise, the rougher that they be, the more corned aloft and prickly, the bitterer they are. There is a wild kind of them besides, the leaues whereof resemble Rocket. The best Nauewes that are sold at Rome, be those that come from Amitemum in Bruzze. The next to them in goodnes are those of Nursium. In the third place are they to be ranged which our country * about Verona yeelds. As concerning all things els, and namely the maner of sowing them, I have said enough in the treatise of Rapes or Turneps.

As for Radishes, their roots do consist of a rind without, & a cartilage or pulpos substance within: and verily many of them are known to have a thicker skin or rinde than the barke is of some trees: bitter such are, more or lesse, according to the thickness of the said rind: otherwhile also the rest is all pith, and as hard as wood. All Radishes breed wind wonderfull much, & provoke a man that eateth of them, to belch. A safe and homely meat therefore it is, and not for a gentlemen's table, especially if it be eaten with other worts, as Beets: may if a man take them with vnripe olives condite, he shall neither belch or rift wind so much, ne yet so foure and stinking will his breath be afterwards. The Egyptians make marvellous great account of radishes, for the plenty of oile that they draw out of the seed: and therefore a great desire they have to sow them if they may: for as they find it more gainfull than corn, so they pay lesse tribute & custom in regard of that commoditie, and yet there is nothing yeeldeth more abundance of oile.

* The Greeks have made three sorts of Radishes, differing all in lease: the first crisped and curled like a ruffe, the second smooth and plain, the third wild and sauge; and these wild ones will have smooth leaues, but short and round: plentiful also they be, and otherwise full of branches: a rough and harsh tast they have, howbeit medicinale they be, and as good as a purgation to loosen the belly and make it laxative. As for the other two former kinds, a difference there is in the seed, for in some it is very fair & good, in others as small and bad: howbeit these imperfections light vpon none but such as have the crisped and frizled leaues. * Our countrymen here in Italy have made other kinds thereof, to wit, Algiclenso, so called of the place: long they be, transparent and cleare, that a man may see through them. A second sort there be fashioned in maner of a Rape root, and those they call Syriaca, the sweetest for the most part of all others, and tenderest, such also as will hold out best against frost and winter weather. Yet the principal and very best indeed are those, which as it should seem were but lately brought out of Syria (at leastwise the feed of them) for that in no writers there is found any mention made of them, and they will continue all winter long. Over and besides all these, there is one sausage kind of them more, which the Greeks name Agrioton: the inhabitants of Pontus, Armon, others, Leuce, and our countrymen give it the name of Amoracia: more fleshy it maketh in lease than in the root or all the body besides. Moreover, the best token to know good Radishes by, is their stem

* or rather
saile.

* Theophrastus
writeth all this
of Radishes.
* Colewort.
See how Pity
is overcast
but that is no
newes with
him.
* Here he se-
meth to come
again to the
radish, indeed.

A stem or stalk: for such as bite at the tongues end, have rounder and longer stems than the other that be mid-they have long and hollow gutters also: the leaues besides are more bitter and vn-
fauourie, conered, more rough, and vnward to be handled. Radish feed would willingly be
sowne in a loofe or light ground, and nathelesse moist enough: it cannot abide rank mucke, but
contenteth it selfe with rotten chaffe or pugs, and such like plain mullock. It lixes and thrives
so well in cold countries, that in Germanie a man shall have their roots as big as prety babes.
To have Radish roots in the spring, the feed would be sowed presently after the Ides or 13 day
of Februarie: and a second time again about the feast of * Vulcan, which is indeed the better lease
for Seednes. Mary there be that put the seeds into the ground in March, April, and Sep-
tember. When they are come vp and begin to grow to some bigneffe, it is very good to enterre
and couer with mould round about the leaues, now one, and then another; but in any case to
banke the roots well with earth: for looke how much appeareth bare above ground, proues ei-
ther to be hard, or els fungous and hollow like a Kex, and nothing good to be eaten. *Arifoma-*
chus would haue them to be stript from their leaues in winter, & in any hand to be banked well
about, that the water stand not there in any hollow furrow or hole lower than the other ground;
promising vs by this meanes, that they will proue faire and big against Summer. Some haue
reported, that if a man make a hole in the ground with as big a stake as he will, and threw or lay
it in the bottom with a bed of chaffe six fingers deepe, and on it bestow his seed, with muck and
mould heaped thereupon, the roots will grow so big as to fill vp the said hole full. Howbeit, in
briefe, Radishes are best nourished and maintained in flat grounds: and therefore with such kind
of brackish waters they vse to be watered, which is the reason, that in *Aegypt* there are the sweet-
test and daintiest Radishes in the world, for that they are bedewed and sprinkled with Nitre.
And verily it is thought, that they will lose all their bitterness whatsoever if they be corned
or seasoned with salt, yea and become as if they were foddren and condite: for they boiled once,
they proue sweet and seruice to be eaten in stead of Nauewes. And yet Physicians giue counsell
and prescribe, That they should be eaten raw in a morning with salt, when a man is fasting, for
to gather into the stomack the sharp humors and excrements that charge the belly & entrails;
and thus taken, they are of opinion, that it is a good preparatiue to vomit, and to open the pas-
sages well for to auoid those superfluties. They giue out also, That the juice of Radish roots
is singular good and necessarie for the midriffe, and the praecordiall parts about the heart; and
namely, that nothing else but it, was able to cure a Phthisicke or vicer of the lungs, which had
settled deep and taken to the heart: The experiment end, prooue whereof was found and seen in
Aegypt, by occasion that KK. there, caused dead bodies to be cut vp, and anatomies to be made, for
to search out the maladies whereof men died. It is reported, that the Greeks (as they be other-
wise vaine in all their actions) so highly preferred the Radishes before other meats, in regard of
the good nourishment, that whereas in an oblation out of the garden-fruits to be offered vnto
Apollo in his temple at Delphos, they dedicated the Beet in silver, and the Rape or Turnep in
lead, they presented a Radish in beaten gold. A man may know hereby, that *Matian Curian* the
great General of the Roman armie, was not that countryman borne, whom the Samnite Em-
bassadors (when they brought to him a great present of gold vpon condition to successe arms)
E which he meant to refuse and not accept at their hands) found roasting of a Rape or Turnep root
at the chimney fire, according as we find in the Annals and Chronicles of the Roman history.
To come again vnto our Radishes, *Melchian* the Greek writer so highly esteemed this root, that
he compiled an whole booke of the Radish, and nothing els. Indeed Radishes are thought ex-
cellent good with meats in Winter time: howbeit they alwaies wear and marre their teeth who
eat of them; and yet I assure you they will polish Turie, which is nothing els but the Elephants
tooth. * Between a Vine and a Radish, there is by nature a secret enmitie and exceeding great
hated, inasomuch as if Radishes be sowed neere vnto her, she will writh and turne away sensibly
from them.

Touching other sorts of cartilage or pulpos plants in the garden, wherof I have before spo-
ken, they be all giuen to run much to pith, and to be of a more woodie substance. A man would
marvell therefore that they should all tast so strong and sharpe as they do. Of which there is
one kind of wild Parney growing of it selfe, which in Greek is * called *Staphylinas*. A second
sort is set of a plant with the root and sowed of seed, either in the prime of spring, or els in Au-
tumnne: howsoever *Hyzum* would haue them to be put into the ground in Februarie, August,

* 11 Cal. Iun.
or as some
think, 13 Cal.
Iun. the 20
or 21 day of
May, Thucyd-
dides named
also *Legria*.

* Here Plinie
forgetteth
himselfe a-
gain: for this
is verified of
the Colewort,
and not of the
Radish.
* Some call
these *Mad-*
raps.

September, and October; and that the plot where they are to grow, should be digged and delved very deep. This root beginneth to be good at the first yeres end, but better it is if it be two yeres old: howbeit both the one and the other, is counted whollsommer in Autum than at any other season of the yere, especially boyled and serued vp betwene two platters, and yet dreffe them so well as you can, they will not be rid of that strong, ranke, and churlish smack which it hath. As for * Hibiscum, it differeth from the Parsnip aforesaid only in this, that it is more slender and smaller, rejected altogether from the table, and condemned for no good meat; howbeit medicinable, and vsed much by the Physitian. A fourth kind is this, befid, resembling also the Parsnip, which our countrymen the Latines name the French Parsnip, but the Greekes Daucus, [i. the yellow Douce or Carot] which they haue subdivided into foure speciall sorts. The * Skirwirt root or white Parsnip, (which indeed would be written among other Physicke plants) was likewise in great name and credit by the means of the foresaid Emperour Tyberius who was very earnest to haue them yearly brought out of Germanie, and euer he would cal for them at his own table. And indeed about Gelduba (a castle situate vpon the river Rhene in Germanie) there was an excellent kind of them that grew to be passing faire, from whence he was serued; whereby it appeareth, that this plant loueth cold regions well. These roots haue a string in manner of a pith or sinew, running all the length thereof, which the Cooke vseth to take forth after they be foddren; yet for all that there remaineth still in them a great deale of bitterness: howbeit being well tempered & delaid with a sauce of mead or honyed wine, and so eaten with it, euen the same bitterness turneth to a good and pleasant tast. The greater Parsnip Pastinaca, hath the like nerue or string aforesaid (such only I mean as are a yere old.) The right season to sow the Skirwirt or Parsnip Sifer, is in these moneths, to wit, Februarie, March, Aprill, August, September, and October.

The * Elecampne hath a root shorter than the Skirwirts or Parsnips aforesaid, but more muscous and fuller as it were of brawn; bitterer also in which regards, if it be taken simply alone, it is aduerse and contrarie to the stomach, but joined & conected with some sweet things among it, is very holsum. And many deuises haue bin practised with it to take away that harsh and vntoward bitterness which it hath, whereby it is become toothsome and pleasant enough: for some there be who stamp it drie and so reduce it into a powder: then they mix it with some sweet liquid syrup, and being thus tempered, serue it vp. Others seeth it in water and vinegre mingled together, and so keepe it condite. Infused also it is in many waies, and afterwards either preferred in cuit, or incorporat with hony in manner of a confecture, or els with dried Raisons of the Sun, or last of all with faire and fat Dates. Moreover, diuers there be, who after another sort make a confectiō therof, namely with Quinces, with Sornises, or Plums, mixing therewith one while Pepper, another while Thym. And I assure you this root thus conected (as is aforesaid) is singular good for faintings; and especially quickneth the dulnes and defect of the stomach. The Emperesse *Julia Augusta* passed not a day without eating the Elecampne root thus conected and condite: and therupon came it to be in so great name and bruit as it is. The feed therof is needlesse and good for nothing: therefore to maintaine and increase this plant, gardeners vse commonly to set the joints cut from the root, after the order as they doe Reeds and Canes. The manner is to plant them as well as Parsnips, Skirwirts, and Carrots, at both times of yeere. L. nes, to wit, the Spring and the Fall: but there would be a good distance betweene euery feed or plant, at least three foot, because they spread and branch very much, and therewith take vp a deale of ground. As for the Skirwirt or Parsnip Sifer, it will do the better if it be removed and replanted.

It remaineth now to speak in the next place of plants, with bulbous or onion roots and their nature, which *Cato* recommendeth to Gardeners, and he would haue them to be set and sowed aboute all others: among which, he most esteemeth them of Megara. Howbeit, of all this bulbous kind, the Sea-onion Squilla is reputed chiefe and principall, notwithstanding there is no vse of it but in Physick, and for to quicken vinegre. As there is none that groweth with a bigger head at the root, so there is not any more agre and biting than it. Of these Sea-onions, there M be two kinds medicinable; the male, with the white leafe; the female, with the blacke. There is a third sort also of Squilla, which is good for to be eaten: the leaues whereof be narrower, and not so rough and sharp as the other, and thus they cal Epimenidum. All the sort of these squilles are plentifull in feed: howbeit they come vp sooner if they be set of cloues or bulbous which grow

A grow about their sides. And if a man would haue the head of the root wax big, the leaues which vually be broad and large, ought to be bended downe into the earth round about, and so covered with mould; for by this means all the sap and nourishment is diuerted from the leafe and runneth backe into the root. These Squills or sea-onions grow in exceeding great abundance within the Baleare Islands and Ebusus, as also throughout all Spaine. *Pythagoras* the Philosopher wrote one entire volume of these onions, wherein he collected their medicinable vertues and properties, which I meane to deliuer in the next booke.

As touching other bulbous plants, there be sundry kinds of them, differing all in colour, quantity, and sweetnesse of tast: for some there be of them good to be eaten raw, as those of Cherroneus Taurica. Next vnto them, are they of Barbary, and most commended for goodness, Bulbine, Setanios, Pythios, Acrocrois, * Eglyops, and Sisyrrinchios. But strange it is of this Sisyrrinchios last named, how the foot and bottom of the root will grow downe still in winter, but in the Spring when the Violets appeare, the same diminisheth and gathereth short vpward; by which means the head indeed of the root feedeth and thrieth the better. In this rank of bulbous plants, is to be set that, which in Egypt they call Aron, [i. Wake Robin:] for bignesse of the head it commeth next to Squilla before said: the leaues resemble the herb Patience or garden Docke: it riseth vp with a freight stem or stalk two cubits high, as thicke as a good round cudgell. As touching the root, it is of a soft and tender substance, and may be eaten raw. If you would haue good of these bulbous roots, you had need to dig them out of the ground before the spring; for if you passe that time, they will presently be the worse. You shall know when they be ripe and in their perfection by the leaues; for they will begin to wither at the bottom. If they be elder, or if their roots grow small and long, they are reiected as nothing worth. Contrariwise, the ruddy root, the rounder and the biggest withall, are most commended: know this moreover, That the bitterness of the root in most of them, lyeth in the crowne (as it were) or top of the head; for the middle parts be sweeter. The ancient writers held opinion, That none of these bulbous plants would grow, but of seed only: howbeit, both in the pastures and fields about Preneste, they come vp of themselves; and also among the corn lands and arable grounds of the Rhenians, they grow beyond all measure.

CHAP. VI.

¶ Of the roots, leaues, flowers, and colours of Garden-herbes.

All Garden plants ordinarily, put out but one single root apiece; as for example, the Radish, Beet, Parsley, and Mallow: howbeit the greatest and largest of all others is the root of the herb Patience or garden Docke, which is knowne to run downe into the ground three cubits deep. In the wild of this kind (which is the common docke) the roots be smaller, yet plumper and swelled; whereby, after they be digged vp and laied about ground, they will liue a long time. Some there be of them that haue hairy strings or beards hanging to the roots, as namely Parsley or Ach, and Mallows. Others there be againe, which haue branching roots, as the Basil. As the roots of some be carnos and fleshie altogether, and namely of the Beet, but especially of Saffron; so in others they consist of rind and carnositie both, as we may see in Radishes and Rapes or Turneps. And yet shall haue of them that be knotty and full of joints, as for example, the root of the Quioich grasse or Dent-de-chien. Such heabes as haue no streight and direct root, run immediately into hairie threds, as we may see plainly in the Orach and Blect: as for the sea Onion Squilla, and such bulbous plants, the garden Onions also and Garlicke, they put forth their roots streight, and neuer otherwise. Many heabes there be, which spring of their own accord without setting or sowing, and of such many there be that branch more & cloue in root than in leafe, as we may see in *Apalax*, * *Parietarie* of the wall, and Saffron. Moreover, a man shall see these heabes, floure at once together with the Ash, namely, the running or creeping Thyme, Southernwood, Naphwes, Radishes, Mints, and Rue; and by that time as others begin to blow, they are ready to shed their floures: whereas Basil putteth forth floures by parcels one after another, beginning first beneath and so going upward by leisure: which is the cause that of all others it is longest in the floure. The same is to be seene in the herb Heliotropium (i. Ruds or Turnsol.) In some the floures be white, in others yellow, and in others purple.

As

* Some take it for *Athysa* or the marsh Mallow.

* Sifer.

* *inula*.

* *Cariotis*, some vnde *Cariot*, i. *Fig*.

* rather, *Hem*;
* *recales*.

* *Pardium*.

Gethyum.

As touching the leaues of herbes, some are apt to fall from their heads or tops, as in Origan and Elecampane, yea, and otherwhiles in Rue, if some iniurie be done vnto it. Of all other herbes, the blades of Onions and * Chibbols be most hollow. Where by the way I cannot ouerpasse the foolish superstition of the Egyptians, who vse to sweare by Garlick and Onions, calling them to witnesse in taking their othes, as if they were no lesse than some gods. Of Onions the Greeks haue deuised sundry kinds, to wit, the Sardan, Samothracian, Alliden, Setanian, Schista [i.e. the clouen Onion] and Afcalonian [i.e. little onions or Scallions] taking that name of Afcalon a city in Iury. They haue all of them this propertie besides, to make ones eyes water, and to fetch out teares, being smelled to, especially they of Cyprus: but the Gnidian onions least of all others cause one to weep. In all kinds of them the body of the root consisteth of a certaine fatty pulp or cartilage. For quantity the Setanian be least, except the Tufculane; howbeit such are sweet. The clouen onions & the scallions afore said are proper for to make fauce of. As touching that kind of them called Schista, gardeners leaue them all winter in the ground with their leaues or head standing; in the spring they pluck off the said leaues, and then shal you see spring forth others vnderneath, according to the same clefts and diuisions, whereupon they tooke the name Schista. After which example, the like practise in all other kindes is prescribed, namely, to pull the leaues off, that they should grow rather big in root, than run vp to feed. The Afcalonian onions haue a proper nature & qualitie by themselves, for they be barren as it were, from the root, and therefore the Greeks would haue them to be sowed of seed, and not otherwise to be set of heads. Besides, that they should be translated & replanted againe late about the spring, at what time as they put forth blade: for by this vsage (say they) you shal haue them burnith and grow thicke, yea, and then make haile for amends of the former time forelipt. These must be gathered betimes, for after they be once ripe, quickly will they rot in the earth, if you make not the better haile to pluck them vp. If you let or plant their heads, a stalk they will put forth and feed vpon it, but the onion it selfe will consume and come to nothing. Moreover, there is a difference obserued in the colour of onions: for they that grow in Samos and Sardis, be moist white: those also of Candy be much esteemed, and some there be who doubt whether they be the same that the Afcalonian, or no: for that if they be sowed of seed, their heads or roots will grow big: set them, they will be all stem and feed, and no head at all. As for the rellish or taste that onions haue there is no great diuersitie, but that some are sweeter than other. Our onions here in Italy be all of two sorts principally: the one which serue for fauce to season our meats, which the Greeks call Gethyon Chibbols; but our countrymen the Latines, Pallacana: these are sowne commonly in March, April, and May: the other is the great headed onion, and these be put into the ground either after the Equinox in Autumne, or els after mid-February, when the West wind Favonius is aloft. Moreover, onions are diuided into sundry sorts, according to the degrees of their pleasant or vnpleasant and harsh tast; to wit, the African, French, Tufculan, and Amiterium. But euermore the best are the roundest. Item, the red onion is more keen and angry than the white: the dry, and that which hath lien, is more eage and sharp than the green newly drawn: the rawe also more than the foddren; and finally, the dry by it selfe more than that which is condite and preferred in some liquor for fauce. The Amiterium onion is planted in which is condite and preferred in some liquor for fauce. The Amiterium onion is planted in cold & moist grounds: and this alone would be set of a head in manner of garlick cloues, whereas the rest will come of feed. Onions, the next summer following after they be sowne, put forth no feed, but head only, which groweth, and the leafe or stem drieth and dieth. But the next yere after, by way of interchange, it bringeth forth feed, and then the head rotteth. And therefore euery yere they vse to sow onion feed apart in one bed by it selfe, for to haue onions: & set onions for feed in other by themselves. The best way to keep onions, is in corn, chaf, and such like pugs. As for the Chibbol, it hath in manner no distinct head at all, but only a long neck, & therefore it runs in manner all to a green blade: the order is to cut and sheare it often in manner of porret or leeks; which is the cause that they lose it also of feed, and do not ferit.ouer and besides, before we sow onion feed, the plot, by mens saying, ought to haue three diggings, for to kill and rid out of the ground the roots of hurtful weeds: and ten pound of feed ordinarily will sow an acre. Here and there amongst would be Sauerie sowne, for the better will the Onions like and prosper with the companie of that herbe. Also, after the ground is sowne, it requieth weeding, farcling, or raking, foure times at the least, if not oftner. Our neighbours in Italie sow the Afcalonian Onion in the moneth of Februarie: whose manner is also to gather Onion feed

A feed when it beginneth once to wax black, before it fall to wither.

Seeing now that I am entred thus far into a discourse of Onions, I shal not do amisse to treat of Leeks also, in regard of the neare affinitie betweene them: and the rather, for that it is not long since, that the Porret kind which is often kept downe with clipping and cutting, came into great name and credit, by occasion of the Emperour Nereus, who vsed for certaine daies in euery month for to scoure his throat, and cleare his voice, and to take it with oile, on which daies he did eat nothing els, nor so much as bread. We vse to sow them of seed, after the Equinox in September: and if we meane to make cut Leeks thereof, the feed would be sowed the thicker. These Leeks are kept downe with clipping and shearing (till vntill the root faile, without remouing them out of the same bed where they were sown: and alwaies they must be plied with dung. But before they be cut, nourished they ought to be, vntill they haue gotten a good head. When they are wel grown, they are to be translated into another bed or quarter, & there replanted: hauing their vppermost leaues lightly shriged off, without committing to the heat or marrow which is their body next to their roots: and their heads set deeper downward, yea, and their vtmmost pellicles and skins sluied from them. In old time they vse to put vnder their root a broad flint-stone, or els a tile, which did dilate their heads within the ground, and make them spread the better. This they practised also in other bulbous plants, as Onions, &c. thereby to haue the fairer heads. But now in these daies the manner is, lightly to barbe & pluck off with a farcling hook, the beards or fringes of the root; that being thus nipped and lipped (as it were) they might nourish the body of the plant, & not distract and suck away the humor, which is the nutriment of the whole. This is notable and wonderfull in the Porret, that ioying & liking as it doth in muck and fat ground, yet it cannot abide watery places. Howbeit, in these we must be ruled by the property of the ground, which is all in all: the principal leeks be in Egypt: the next are those of Ortia & Aricia. Of the cut Porret or vnter Leeks be two kinds: the one runneth mightily into a green blade, and the leafe thereof hath very conspicuous & euident cuts; & this is that the Apothecaries vse so much: the other hath a more pleasant and yellowish leafe, and the same rounder, the gashes or cuts whereof are smaller, & not so apparent to the eie. The voice goeth, & generally it is reported, That Metla a knight or gentleman of Rome by his place, & Procurator vnder Tiberius the Emperour, being for some misgouernment in that office, brought into question and accused, & thereupon sent for peremptorily to make his personal apparence, despairing utterly of life, tooke the weight of three Roman silver deniers in the iuice of Leeks, and drank it off: whereupon he died incontinently without any paine or torment at all. It is commonly said, That if a man take a greater dose or receit thereof, it will do no harm, nor any danger will insue thereupon.

As touching Garlick, it is held for certain, That it is a foueraigne medicine for many griefs and maladies; especially such as are incident to the country peasants and rustical people, who hold it to be as good as a Treacle. The Garlike head is couered and clad all ouer with certaine very fine and thin pellicles or membraues, which may be parted and diuided one from another; vnder which you shal see it compact and ioined (as it were) together of many cloues in manner of kernels, and those also inclosed each one apart within their leuall skins. Of a sharp and biting tast it is. The more keen and eage also you shal find it, as it hath more of those cloues afore said in one head. The aire that comes from it, is as offensive as that of the onion, & maketh their breath as strong who eat it; howbeit, foddren if it be, it is euery way harmles: the difference and diuersity of Garlick ariseth first, from the circumstance of the time, whereby you shal see a kind of hasty Garlick, that in 60 daies will be ripe and come to perfection: then, in quantity, for some grow bigger in the head than other. And of this sort is that which we call in Latine Vlpicum, and the Greeks, some the Cyprian Garlick; others, * Aphrocorodon: so much commended in Africke, that it is held for the most principall dish of meat that a Husbandman of the country can eat: and bigger it is than our common Garlick. Being brused and brated in a mortar together with oile and vinegar, it is wonderfull to see what a fume and froth will arise thereof, and to what an height it will swell thereby. Some gardeners there are, who forbid to set either this Vlpicum, or the common Garlick in any euen, flat, and leuell bed; but to put them in little hillocks (in manner of hop hills) raised in forme of castles or turrets, three foot distant one from another. Now, wherefore these cloues be set in hill or plain, they ought to lie foure fingers breadth asunder. And this would not be forgotten, That so soon as they these three leaues

once,

once, they would be farled, and the mould raised from about them: for the oftner they be thus
 ferued and laid bare, the fairer heads they will bring. When they begin to grow big and come
 to their full maturity, the stalks that they run vp vnto, must be broken downe and moulded o-
 uer : and this is to prevent, that they should not be ouer-runk in blade. In cold countries it is
 thought better and more profitable to fet them during the spring, than at the fall of the lease.
 Moreover, if you would haue Garlicke, Onions, and such like not to smel strong and stink fo as
 they do; the common opinion & rule is, that they should not be fet or sown, but when the moon
 is vnder the earth, nor yet be gathered and taken vp but in her conjunction with the Sun, which
 is the change. But *Mechander*, a Greeke writer saith, That there needs none of all these ceremo-
 nies for the matter: for if a man would haue his breath stink with eating of Garlicke, let him,
 do no more (quoth he) but take a Beet root rosted in the embers, and eat it after, it shall exting-
 uish that hot and strong fauor, and cause the breath to continue sweet. There be who thinke
 that the fittest time of setting both the common Garlicke, & also the greater kind named Vlpic-
 um, is between the two set and ordinary feasts * Comitalia & * Saturnalia. As for the vulgar
 Garlicke, it cometh vp also of feed, but slowly, and late it will be first ere it attaine to the full
 profile: for the first yere it getteth a head no thicker than Leeks; the next yere after, it begins
 to diuide into cloues; and in the third it is consummate and grown to perfection: and such vn-
 der Garlicke, some are of opinion to be fairer and better than the rest. Howbeit, Garlicke indeed
 should not be suffered to bol and run vp to feed, and therefore the blade therof ought to be wreath-
 ed, that it may gather more and stronger in the head, and that the cloues afterwards might be
 fet in stead of feed for increase. Now if a man haue a desire that both Garlicke and Onions may
 be kept long for his provision, their heads must be dipped and wel plunged in salt water, warm;
 by this means indeed last they will longer without spurning, and be better for any vse we shall
 put them to, saue only to be fet and replanted in the ground; for barren will they be, and neuer
 prosper. And yet diuers there are, who thinke it sufficient at the first to hang them in the smoke
 ouer quick and burning coles, as being perswaded, that this will seruise well enough to keep them
 from growing; for certaine it is, that both Garlicke and Onions will put forth blade aboue
 ground, and when they haue so done, come to nought themselves, as hauing spent all their sub-
 stance and vertue. Some are of this mind, that the best preseruing of Garlicke as well as of Oni-
 ons, is within chaffe.

There is a kind of Garlick growing wild in the fields of the own accord, which they call in Latine *Alum* [i. Crow Garlick] which being boiled that it should not grow, they commonly throw forth in corn fields for the shrewd and vnhappy foules which lie vpon the lands, and eat vp the feed new fown: for prently as any of those birds tast thereof, they will be fo drunke and asfoned therewith, that a man may easily take them with his hand: yea, and if one stay a little, he shall see them fall asleep therewith. Finally, there is another kind of sauage or wild Garlick called *Vrfinum* (i. Beare Garlick) the head whereof is very small, the blade or leaues great and large, and the sauer or sent mild and gentle, in comparifon of the rest.

СНАГ, VII.

¶ In how many daies euery herbe that is sowed will come vp and appeare aboue ground. The nature of seedes. The manner of sowing any of them Which they be, whereof there is but one single kind: and which haue many sorts.

Among all the herbes sowne in a garden, these come up soonest to wit, Basil, Beets, Naves
or Turneps, and Rocket: for by the third day the feed will breake and putt. Dill feed will
chit within foure daies, Lettuce in fve, Radish in six, Cucumbers and gourds in a seven-
night, but the Cucumber first. Cressies and Mustard feed in fve daies, Beets in six by Summer
time, and by winter in ten. Orach in eight daies, Onions in 19 or 20 at the farthest, Chibols in
ten or twelue at the molt. Coriander feed is more flubborne, and will not chieue so soone. Sau-
erie and Origan feed lieth thirty daies ere it come: but of all others Parsley feed is latest ere it
springs, for when it cometh up soonest, it is forty daies first: but for the most part it lieth fifty
daies before it appeare. Something there is also in the age of the feed: for the newer that the
feed is either of Leeks, or Chibols, Cucumbers & gourds, the more halt it maketh to be aboue
ground: contrariwise, Parsely, Beets, garden Cressies, Sauery, Origan, and Coriander, grow soon-
er

A ne of old feed. But the Beet feed hath a strange and wonderful quality about the rest: for *it will not come up all in one and the same year*. But *some in the first, others in the second, and the rest in the third.* And therefore *few as much feed as you will, yet shall you haue it grow but indifferently.* There be herbs which will grow and beare but one yere and no more: and there be other again which will continue many yeares together, as for example, Parsley, Porret, &c. Chibbols. For, *who thife but once in a garden, they will beare from yere to yere from the same root, or els grow themselves.* The most part of herbs do beare round feed, in some the feeds are long; in few, broad and flat in manner of a leafe, as in Orach. You shall haue feed also narrow & chamfered, like a gutter tile, as that of Cumin. Moreover, there is a difference in colour, for some feeds be white, others black: in hardnesse also and softnesse: for some be harder or softer than others.

B Some seeds at every brunch of the plant, are contained within cods or bladders, as we may fee in Raddish, Scuterie, and Turneps or Rapes. The seeds of Parsley, Coriander, Dill, Fenell, & Cummen, grow naked & bare. But that of the Bleet, the Beet, Orach and Basil, is inclosed in a huske or hull. Thee Iced leech within a downe. As touching Basil aforefaid, nothing fiftieth more than it is: to the end that it may come vp more plenty & abundance, they lay it (should be sowed with maledictions and ill words, for the more that it is cursed, the better it will speed and prosper: yea, and when it is sowed, the mould or the seed must be pacted and rammed down in manner of a pavement. And more particularly, they that sowe Cummin, pray to God that it may neuer come vp. Such seeds as lie within an husk, hardly come to be dry and ripe therein: but Basil feed especially, & Gihon *Nigella*, Roman, & Butcher.

Cefore they be feedow and fruitful. This is general in all herbs throughout, that they will thrive and grow the better, if their feede be fowled by heapes one vpon another, than feathering. And certainly both *Rue* feedes is fowen & *Garlick* cloues let in that wife, namely, bound vntied together in fowen cloues or ragges wherein they be lapped. As for *Parley* feede, against it should be fowen, there would be an hole made with a little wooden dibbl or pin, & therein it must be putwih fowne dung after it. Furthermore, all garden herbs come vpon either of feed and cloues fetorels of tips pulled from the mother-plant. Some grow of feedes and fprigs bothes as *Rue*, *O-rigan*, & *Basil*; for euen this herbe also luff named will abide cutting when it is come to be one handbreadth, or a span high and those cuttings will grow if they be planted. There be that are maintained hyvory and fowen, as *Garlick* cloues, *Parley* feede, *Rue*, *O-rigan*, & *Basil*.

D maintained by root and feed both as Onions, garlick, and those which have bulbous roots: like wife, all such as when they haue born yerely, leaue a root behind them till in strength & vertue. Off such as grow of roots replanted, their roots continue long & branch much, as we may see in the bulbs, in Chibbols, & sea Onions. Others put out branches sufficient, but not from the head or root, as Parsley and Beets. All herbs for the most part, do spring & shute again, if their stalks be cut off: yf we life it those that haue a smooth stem. And this is most seen in Basil, Raddish, & Lettuce, the stems wherefore cut for many purposes. And as for Lettuce, men hold, that the later spring thereof, when the first is gon, is the sweeter. Certainly, Raddish eat the more pleasantly, if their leaves be cropt off before the matter stem or spire be grown big. And this also we observe in Rapes or Turneps, for if you trim them all from their leaves & couer them our head with earth, yet will they grow all winter and continue till Summer.

CHAP. VIII.

¶ *Of Garden herbes which serve for to season our meats: their diuers natures, their sundry kinds and severall histories related to the number of 26.*

FOR that kind of Ach which groweth of it selfe in moist grounds with *one leafe, and is not rough, but smooth and plaine, is called in Greeke Helcofelinon, *i.* Smallach. Again, there is ano-

for so it should
seem that *Pli-
ny* read it in
Theophrastus :
wheras indeed
it is *καρφόφυλλον*,
i. with leaues
growing thin

another sort, with more leaves, resembling Smallach aforesaid, but that it cometh vp in drie places, and this the Greeks named Hippocleionum, i. Alianders. A third there is besides found in mountains, named by them thereupon Oreocelinum, i. Mountain Ach, or Parlely of the hills: it beareth leaves like Hemlocke, and a little slender root: the feed resembleth Dill feede verie much, but only that it is smaller. And as for the garden Ach, commonly called Parlely, there be many kinds thereof, differing one from another: first in leafe, whereby you shall haue some leaſed thick and ſul, and the ſame jagged and curled: others thinner, and thoſe alſo more plain, ſmooth, and broad. *Item*, in ſtalk, which in ſome is more groſſe or thin than in other: in one kind white, in another purple, and in a third of ſundry colours.

white, in another purple, and in a third of sundry colours.

Of *Leſeuce*, the Greeks haue ſet downe three kinds : whereof the firſt riſeth vp with fo large and broad a ſtalke, that by their report, little garden wickets were commonly made thereof, in partitions between quarter and quarter. And yet the leafe of this *Leſeuce* is not much bigger than others that be common and ſerue for pot-herbes : the ſame alſo paſſing narrow, by reaſon that all the nutriment is otherwiſe ſpent in the maine ſtem. The ſecond hath a round ſtalke : the third is the broad flat *Leſeuce* which ſettles neer the ground, called *Laconicon*, or the *Leſeuce* of *Lacedaemon*. But other writers haue deſcribed the diſtinct kinds thereof, by their colour and the ſundry ſeaſons wherein they be ſet-ſor (ſay they) there be black *Leſeuces*, the ſeed whereof ought to be ſowed in Ianuary : there be white alſo, and ſuch would be ſowed in March : & there are a third ſort which be red, and the firſt time of their ſeedneſſe is the moneth of April : and according to thoſe authors all the ſort of them are to be removed in yong plants, when they haue growne two moneths. Howbeit thoſe *Herbariſts* who haue looked farther into the knowledge of Simples, adde more kinds yet vnto the other, to wit, the purple, the criſp, or curled, the *Capadocian*, & the *Greek* *Leſeuce*. As for thoſe of Greece, they are taller in ſtem than the reſt, and broader withall : beſides, their leaues be long and narrow, like to thoſe of *Endiue* or *Cichorie*. The work of kind is it that which the Greeks by way of reproofe and reproch for their bitterneſſe, terme *Pieris*. Yet is there another diſtinct kind of the black *Leſeuce*, which for the plenty that it yeeldeth of a milky white iuice procuring drowneſſe, is termed *Meconis* : al- though all of them are thought to cauſe ſleepe. In old time, our anceſſors knew no other *Leſeuce* in Italy but this alone, and thereupon it tooke the name in Latine of *Laſuca*. The purple *Leſeuce* which hath the biggeſt root, they name *Caeſiliana* : but the round kinde with ſmalleft root and broad leaues, is called *Athyſis* (ſay the) the chaſte *Leſeuce*, or the ciuil *Leſeuce*, ſome giue it the name of *Eunuchis*, becauſe of all others it cooleth luſt moſt, and is an enemy to the ſports of *Venus*. And to ſay a truth, all *Leſeuces* are by nature refrigeratiue, and do coole the body, and therefore be they eaten ordinarily in Summer, for they pleaſe the ſtomacke when it is inclined to loath meat, and procureth good appetite. Certes, reported it is of *Auguſtus Caſar* late Emperour of famous memorie, that he eſcaped a dangerous diſeaſe, and was recovered by the meanes of *Leſeuce*, whereunto he was directed by the diſcreet counſell of *Muſſabis* Phyſician. And whereas in times paſt, folk preſciouſly forbore to eat *Leſeuce*, now there is no doubt or ſcruple at all made thereof, nay they are ſo far from abſtinenace that way, that it is a meat ge- nerally receiued and commended : inſomuch as they haue deuſied to keepe it in the ſyrup of Oxymel, all winter long, for to haue it ready and euer at hand : yea and more than ſo, men are verily perſuaded, that *Leſeuce* will increaſe good blood.ouer and beſides all the ſorts of *Leſeuce* before ſpecified, there is yet another kind named in Latine *Caprina*, as one would ſay, the *Goats Leſeuce*, whereof I purpoſe to ſpeake more at large among other medicinale herbs. As touching the wild *Leſeuce* called *Cilician*, ſee how it is crept apace into the garden after it came once to be knowne, and is commended as exceeding good among other herbs there found and planted : the leafe reſembleth the *Capadocian Leſeuce*, but that it is jagged & broader than it. As for *Endiues* and *Cichories*, I cannot tell what to make of them, for neither can they be truly ſaid a kind of *Leſeuce*, nor yet ranged well amongſt other herbs. More vnpatient they are and fearefull of winter, than *Leſeuces*, and withall carry vnpleaſant ſtrong taſte, howbeit their ſtalke is no leſſe acceptable than they. Their yong plants vſe to be ſet in the beginning of the ſpring, but tranſlated afterwards and replanted in the later end thereof. There is a certain wild and wandring *Endiue*, which the *Egyptians* call *Cichorie*, whereof I meane to diſcours more amply in another place. There hath bin a deuſe lately come vp to condite and preferue as well the ſtemes as the leaues of all *Leſeuces* for the winter time, in pitchers & pots, within ſome appropriate

² See *Calius Rhodiginus*: booke and 1 chap. *antig. Lætionum*: let him tell you, why women call the lettuce, *As*

A p^rop^riate liquor, as also to dresse and seeth them yong, fresh, and greene, in a kinde of broth or browell, and to serue them vp between two platters. And yet where the ground is rich & good, well watered and holpen with dung, Lettuce may be sowed at all times of the yere: for within two months they will grow to be good big plants, and in as little space come to their full maturity and perfection. Howbeit, the true time and ordinary season, is to sow their seeds about the mids of December, when the daies begin to lengthen, and then to remove their plants at the coming of the Westem wind Fauonius in February; or els to sow in that wind, and to replant in March about the Spring /Equinox. White Lettuce of all other, can best away with the winter. All Garden-herbs loue moisture, and muck they loue as well, Lettuce especially; & yet I must needs say, that Endiue more than it. Some gardeners there be, that thinke it a great point of cunning to befriend the roots of Lettuce plants and other such herbs with dung, when they are set, or after they be bared at the root within the ground, to cast in the mould againe and fill vp the place so soon as they be grafted (as it were) with muck at the root. Others there be, who practise another feat with them, to make them cabbage the better and grow fatter & bigger, by cutting them vp close to the ground when they are come once to be halfe a foot high, and then bedaubing them with green wines dung. It is thought, that white Lettuce come onely of white seed: and yet that is not sufficient, vnlesse there be some seed sowed taken fresh from the thore and laid about the heart of the plant where the leaues put forth first, and so reared and heaped vp to the mids; and then to take order that the leaues growing ouer them afterwards, be tied fast vnto them.

C Of all Garden-hearbs, Beets are the lightest. The Greeke writers make two kinds thereof, in regard of the colour, to wit, the black Beets, and the whiter, which they prefer before the other, although it be very lean and sparie of feed; these alio they call the Sicilian Beets, and for their beautiful white hew and nothing else they esteeme them aboute Lettuce. But our country-men here in Italy put no other difference between Beets, but in respect of the two fowlens when they be sowed, namely in the Spring and Autumne, whereof we have these two sorts, the spring Beets, and the Autumall, and yet they be usually sowne in June also. This herbe likewise is ordinarily remoueed in the plant, and is replanted or set againe; it is worth besides to haue the roots medicined with muck, as well as the other above said, yea and it is very well content with a moist and waterish ground. The roots as well as the leaues or herbage thereof, is to be eaten with Lentils & Beans, but the best way to eat them, is with Senio or Mustard, for to give a taste and edge as it were to that dull and wallowish flatnesse that it hath. Physicians haue set downe their iudgement of this herb, That the roots be more hurtfull than the leafe: and therefore beeing set vpon the bound before all persons indifferently, as well the sound as the sick and crasie, yet many a one maketh it nice and scrupulous once to tast thereof, and if they do it, it is but slightly for fashion only, leauing the hearty feeding thereupon to those rather that be in health and of strong constitutions. The Beet is of two diuers natures and qualities: for * the herbage or leafe hath one, and the bulbs coming from the head of the stem, another; but their principall grace and beautie lieth in their spreading and breadth that they beare as they cabbage. And this they come vnto (as the manner is of Lettices also) but haue

As they come into (as the manner is of LeCucues also) by laying some light weight vpon the leaves, when they begin once to gather into a stalk and shew their colour. And there is notable heare throughout the Garden, that taketh vp greater compasse, with fueslage than doth the Beet: for otherhiles you shall fee it to spread it selfe two foot euery way, whereunto the goodnesse and nature of the soile is a great helpe. The largest that be knowne of these Beets are those which grow in the territory about Cirij. Some hold opinion, that the only time to sow Beets, is when the Pomegranat doth blossom: or to transplant them so soon as they haue 5 leaues. A wonderful thing to see the diffieritie in Nature of these Beets, if it be true, namely, that the white should gently loosen the belly and make one soluble, whereas contrariwise the blacke doth stay a flux and knit the body. It is as strange also to obserue another effect thereof, for when the Colewort hath marred the tast of wine within the tun or such like vessell, the only fauour and smell of Beet leaues steeped therein, will restore and fetch it againe.

* *Alus*, which
word *ling*
veth much
for *Becti*.

which being bruised or beaten into powder, and drunk in water, is singular good for the pain of the stomach. The best Cumin in our part of the world, which is Europe, cometh from Car-petania; for otherwise the greatest name goeth of that in Æthiopia and Africk. And yet some here bewho prefer the Cumin of Egypt before all.

* A corrupt word from O-lus atrum: as if one would say, Olsfaret. Some like this for a ouch. * Iuxta macer- am, whereupon some Apothecaries name it *Maceranium*.

But * Alifanders, which some Greekes call Hippofelium, others Smyrneum, is of a strango and wonderfull nature above all other herbes: for it wil grow of the very liquor or juice issuing forth of the stalk. It may be set also of a root: and indeed, they that gather the foresaid juice, vie to say, that it hath the very tast and relish of Myrrhe: & by *Theophrastus* his saying, it came first of Myrrh let into the ground. The old writers ordained, that Alifanders should be set or sowed in stony grounds, without tending or looking to, neer to some * mud wall. But now in our daies it is planted in places digged & delused ouer, once or twice; yea, and at any time from the blow- H ing of the western wind Fauonius in Februarie, vntill the later Æquinox in September be past.

Capers likewise are set & sowed in dry places specially; but the bed must be digged in some low ground and laid hollow, inuironed round about with banks, and those raised with a ground-fell of stonye work, otherwise it would be ranging abroad and ouerspread whole fields, & make the ground barren and vnfruitfull. It flourisheth in Summer, and continueth green vntill the occulation or setting of the Brood-hen star Virgilix; and sandy ground is most familiar and agreeable to it. Touching the defects and imperfections of that kinde which groweth beyond sea, I haue said enough among the shrubs and plants that be strangers.

The Caraway also is a stranger, as may appeare by the name of Caria, the native country thereof; beareth one of the principal feeds that cometh into the kitchen. It careth not much where it is sown or planted, for it will grow in any ground, as well as the Alifanders beforemen- I tioned; howbeit, the best cometh out of Caria, the next to it in goodness, we haue from Phrygia.

As for Loueach or Liuid, it is by nature wild and sauge, and loueth alone to grow of it self among the mountains of Liguria, whereof it cometh to haue the name Ligusticum, as being the natural place best agreeing to the nature of it. Set or sowed it may be in any place where-foeuer; howbeit, this that is thus orded by mans hand hath not the like vertue as the other, al- though it be in tast more pleasant, & some call it Panax or Panace; howbeit, *Cretica* a Greeke writer, calleth the wild Origan or Cunila Bubula, by that name. But all others in manner, attri- bute the name of Conyza or Conyzoides to Cunilago; Fleabane Multer: and of Thymbra, i. winter Sauory, to Cunila; i. garden Sauory; which among vs hath another name in Latin, to wit, K Satureia, much vsed in sauces and seasoning of our meats.

This Sauory is commonly sown in the month of February, and hath no smal resemblance of Origan, inso much, as they are neuer both vsed at once in sauce or sallads, their vertues & opera- tions be so like. And yet the Egyptian Origanum is preferred before the said Sauory.

To come now to Lepidium, i. Dittander or Peppenwort, it was sometime a stranger also with vs here in Italy. It is usually sown after mid-February when the Western wind Fauonius hath plaied his part; afterwards when it hath put forth branches, it is cut downe close to the ground, and then it is laid bare and fared, & the superfluous roots cut away, & so in the end cherished with muck. Thus must it be sowed the two first yerres. For afterwards they vse the same in branches at all times, if the cruell and bitter winter kill them not; for surely this herb is most impa- nient of cold. It groweth a good cubit in heigh, bearing leaues like to Lawrel; & the same soft and tender. But neuer is it vsed in meat without milke.

Now for Gith or Nigella Romana, as it is an herb that groweth for the pastrie, to fit the Ba- kers hand, so Annise and Dil are as appropriat to the kitchen for Cooks, as the Apothecaries shop for the Physician.

Sacpenium likewise is an herb growing verily in gardens, but is vsed in Physicke only. Certain herbes there be that accompany others for good fellowship, and grow with them, as namely Poppy; for commonly sowne it is with Coleworts, Purcellane, Rocket, and Lettuce.

Of garden Poppies there be three kinds, first the white; whereof the * feeds in old time being made into Biskets or Comfits with hony, were sowed up as a banquetting dish. The rustical pei- M sants of the country were wont to guild or glaze (as it were) the uppermost crust of their loaves of bread with yolks of eggs, and then to bescrew it with Poppy feed, which would cleaue fast to it, hauing first vnderlaid the bottome crust with Ammi, or Annise seed and Gith; & then they put them into the oven being thus seasoned; which gaue a commendable taste to their bread when

A when it was baked. There is a second kinde of Poppie called Blacke; out of the heads or bolles whereof, a white juice or liquor issueth by way of incision, like milk, and many recieue & reserue it carefully. The third kind, which the Greekes name * Rheas, our countrymen in Latin call the wandering or wild Poppie. It cometh vp verily of the owne accord, but in some fields a- mong Barly especially, like vnto Rocket, a cubite high, with a red floure that soon wil shed and fall off, whereupon it tooke that name of Rheas in Greeke. Touching other kinds of Poppie growing off themselves, I purpose to speake in the treatise of physicke and medicinale herbes. Mean while this cannot be forgotten, that Poppies haue alwaies, time out of mind, been high- ly regarded and honoured among the Romanes; witnesseth *Tarquinius* the Proud, the last king of Rome, who when his sonnes Embassadors were come to him for to understand his aduise, how B to compasse the feignorie ouer the Gabians, drew them into his garden, and there by circum- stance of topping the heads of the highest Poppies there growing, without any answer parole, dispatched them away, sufficiently iurnished by this demonstration, with a double designe, euen to fetch off the greatest mens heads of the citie, the readiest meanes to effect his purpose.

Againe, there is another sort of hearbs, that loue for companie to be set or sowne together about the Æquinox in Autumne, namely, Coriander, Dill, Orach, Mallows, Garden dockes or Patience, Cheruill (which the Greeks call *Perderos*) and Senuie, which is of a most biting and stinging tast, of a fierce effect, but nathelless very good and wholsom for mans bodie; this hearb wil come of it selfe without the hand of man, howbeit proue it will the better if the plant be removed and set elsewhere. And yet, low a ground once withall, you shall hardly rid the place of C it cleane; for the seed no sooner sheddeth vpon the ground, but a man shall see it greene aboue ground. It serueth also to make a prety dish of meat to be eaten, being boiled or stewed between two little disles in some conuenient liquor, in such sort, as a man shall not feele it to bite at the tongues end, nor complaine of any eagenesse that it hath. The leaues besides vse to be sodden like as other pot-herbes. Now there be of this Senuie, three kinds: the first beareth small and slender leaues, the second is leaued like Rapes or Turneps, the third resembleth Rocket. The best Mustard seed cometh out of Ægypt. The Athenians were wont to call it Napy, some Thlaspi, and others Saurion.

To conclude, as touching the running wild Thyme, and Sisybrium, i. Horse-mint or Wa- ter-mint, most hills are replenished and tapised as it were therewith; and especially in Thracia, D where a man shall see a mighty quantity of wild Thyme branches, which the mountain waters or land floods carrie away and bring it downe with their streame to riuers sides, and then folke plant them. Semblably, at Sicyon there grows great store, conueighed thither from the moun- taines neere adjoyning; and lastly, at Athens, brought thither out of the hill Hymettus. In like manner also the foresaid water-mint cometh from the hills with a sudden dash of rain, and is replanted accordingly. It groweth ranket and prospereth best in the brinks and sides of pits or wells, also about fish-ponds and standing pooles.

CHAP. IX.

¶ Of Fennell or Fennell, and Hempe.

E I remaineth now among garden hearbes to speake of those that be of the Ferule kind, and namely of Fennell in particular, a hearb wherein Snakes and such serpents take exceeding great delight, as heretofore I haue declared: and which being dried, is singular good to commend many meats out of the kitchen into the hall.

There is a plant resembling it much, named Thapsia, whereof because I haue already written among other foraine herbes, I will proceed forward to Hempe, which is so profitable and good for to make cordage. This plant must be sowed of seed after the western wind Fauonius bloweth in Februarie. The thicker that it groweth, the slenderer and finer it is. When the feed ther- of is ripe, namely, after the Æquinox in Autumne, folk vse to rub it out and then drie it either in F the Sunne, the wind, or smoke. But the stalk or stem of the Hempe it selfe, they pluck out of the ground after Vintage; and it is the husbandmans night work by candle light to pill and cleane it. The best Hempe cometh from Alabanda, especially for to make nets and toile; where be three kinds thereof. That part of the Hempe which is next to the rind or pilling, as also to the inner part within is worst: the principal of it lieth in the middle, and called it is Mesa. Next to the

* A corrupt word from O-lus atrum: as if one would say, Olsfaret. Some like this for a ouch. * Iuxta macer- am, whereupon some Apothecaries name it *Maceranium*.

* This Turke- con seed was called *Cretum* by *Terestian* and *Fellus*.

the Alabandian Hempe for goodnesse, is that of Mylasium. But if you goe to the talcesse, there is about Rofoa in the Sabines countrey, Hempe as high as trees.

As touching the 2 kinds of Ferula, I haue spoken of them in my discourse of forrain plants. the feed of Ferula or Fennell-geant, is counted good meat in Italie: for it is put vp in pots of earth well stopped, and will continue a whole yeare. And of 2 sorts is this preferred Compost, to wit, the stalks, and the Bunches whiles they be knit round and not broken & spread abroad. And as they call these knobs which they doe condite and keep, Corymbi; so that Ferula, which is suffered to rife vp in stem for to beate such heads, they tearme Corymbias.

CHAP. X.

¶ The maladies incident to Garden hearbes, The remedies against Pismires, Canker-wormes, and Gnats.

THE hearbes of the garden be subject to diuerse accidents, and namely, diseases, as well as come and other fruits of the earth. For not onely Basill by age degenerates from the owne nature into wild creeping Thyme, but Sisybrium also into Calaminth. The feed of an old Cole-wort will bring forth Turneps, and contrariwise, sow the seed of an old Rape & Turnep you shall haue Coleworts come vp of it. Cumin, if it be not kept neat and trim with much cleaning, will begin to decay at one side of the stalk beneath, and dy. Now hath Cumin but one onely stalk, and a root bulbous in manner of an Onion, it groweth not but in a light and leane soile. Otherwise, the peculiar disease appropriat to Cumin, is a kind of skurf or scab. Also Basill, toward the rising of the Dog-star, waxeth wan and pale. And generally, there is not an hearb but will turne yellow, if a woman come neere vnto it whiles she hath her monthly sicknesse vpon her.

Moreover, there be diuerse sorts of little beasts or vermine engendered in the garden among the good hearbs. And namely, vpon the Nauces, you shall haue gnats or flies; in radish Roots cankerwormes, and other little grubs; likewise, in Lettuce and *beet leaues. And as for these Beetworts last named, you shall see them haunted with snails, as well naked as in shells. In Leeks moreover or Porret there settle other speciall vermine that be noisome to them severally, but such are very soone caught by throwing vpon those hearbes a little dung, for it will they gather to shroud and hide themselves. Furthermore, *Sabynus Tyro* in his booke intituled *Cepuricon which he dedicated to *Mecenas*, writeth, That it is not good to touch with knife or hooke, Rue, Winter Sauerie, Mint, and Basill. The same Author also hath taught vs a remedy against Em-mers (that do not the least mischiefe to gardens, when they lie not to haue water at command) and that is this, to take sea mud or ooze and ashes together, to temper a mortar of them both, and therewith to stop their holes. But the most forcible and effectual thing to kill them, is the hearb called Ruds or Turn-sol. Some are of opinion, that the onely meanes to chase these ants away, is, with water wherein the powder of a semi-brick or halfe-baked tile is mingled. And particularly, for to preferre Nauces, it is a singular medicine for them to haue Feni-greek sowed among, as also for Beets to do the like with Cich pease: for this deuise will driue away the Canker-worm. But say, that this practise was forgotten, & that the foresaid hearbs be already come vp, what remedie then? Mary, euen to seeth Wormwood and Houfleeck (which the Latines call Sedum, the Greekes Aezoon) and sprinkle the decoction or broth thereof among them. Now what manner of hearbe this Houfleeck is, I haue shewed you already. It is a common speech, that if a man take the feed of Beets and other pot-herbes, and wet them in the iuice of Houfleeck, otherwise called Sea-green, those hearbes shall be secured against all these hurtfull creatures whatsoever. And generally, no Cankerwormes shall do harme to any herbage in the garden, if a man pitch vpon the pales about a garden the bones of a Mares head; but he must be sure it was of a Mare, for a horse head will not serue. It is a common saying also, that if a riuier Crab or Craiftish be hung vp in the mids of a garden, it is singular for that purpose. Some there bewho make no more but touch those plants which they would preferre from the said vermin, only with twigs of the Dogge berie tree, and they hold them warifed and safe enough. Gnats *keep a foule stir in gardens where water runneth through especially, and wherein there be some small trees growing, but these are soone chased away by burning a little Galbanum.

CHAP.

CHAP. XI.

¶ What garden seeds be stronger, which be weaker than others. Also what plants prosper better with salt water.

NOW as touching the change and alteration in feeds, occasioned by age and long keeping: some there be that are firme and fast, which hold their owne wel, as namely, the seeds of Coriander, Beets, Leeks, garden Cresses, Senvie or Mustard seed, Rocket, Sauerie, and in one word, all such as be hot and bite at the tongues end. Contrariwise, of a weaker nature are the seeds of Orach, Basill, Gourds, and Cucumbers. Generally, all summer seeds last longer than winter: and the Chibbol seed least of any other will abide age. But take the strongest and hardiest that may be, you shall haue none good after foure yeares, I mean only for to sow. And yet I must needs say, that Sauerie seed will remain in force about that time. Radishes, Beets, Rue, and Sauerie find much good by being watered with salt water; for to these especially it is hol-some physick against many infirmities: and besides, it is thought to giue them a pleasant and commendable tast, yea, and it causeth them to be more fruitfull. As for all other hearbes, they find benefit rather by fresh water. And since we are light vpon the mention of waters, those are thought best for this purpose which are coldest and sweetest to be drunk. Standing waters out of some pond, such also as are conueyed into gardens by trenches and gutters, are not good for a garden, because they bring in with them the seeds of many a weed. But about all other, raine waters coming in white shoures from heauen, be they that nourish a garden best, for these shoures kill the vermin also which are breeding therein.

CHAP. XII.

¶ The manner of watering Gardens. What Herbs will proue the better by removing and replanting. Of the iuices and saues that garden Herbes afford.

THE best time of the day to water gardens is morning & evening, to the end that the water should not be overheated with the Sunne. Basill only would be watered also at noon. And moreover some think, that when it is new sown, it will make hast to come vp very speedily, if it be sprinkled at the first with hot water. Generally, all herbs proue better, and grow to be greater, when they be transplanted, but principally Leeks and Nauces: nay this removing and replanting of them is the proper cure of many forances, for from that time forward, subiect they will not be to those injuries that vse to infect them; and namely Chibbols, Porret, or Leeks, Radish, Parsly, Lettuce, Rapes or Turneps, and Cucumbers. All herbs which by nature grow wild, lightly haue smaller leaues and slender stalks, in tast also they be more biting and cagre, than such of that kinde as grow in gardens: as wee may see in Sauerie, Origan, and Rue. Howbeit, of all others the wild Dock is better than the garden Sorrell, which the Latines call Rumex. This garden Sorrell or foure docke is the stoutest and hardiest of all that grow: for if the feed haue once taken in a place, it wil by folks faring continue euer there: neither can it be killed, do what you will to the earth, especially if it grow neere the water side. If it be vied with meats, vntill it be taken with Prifane, or hushed Barly alone, it giueth a more pleasant & commendable tast thereto, and besides maketh it lighter of digestion. The wild Dock or Sorrell is good in many medicines. But that you may know how diligent and curious men haue been to search into the secrets of euery thing, I will tell you what I haue found continued in certaine verses of a Poet: namely, That if a man take the round treddles of a goat, and make in euery one of them a little hole, putting therein the seed either of Leeks, Rocket, Lettuce, Parsly, Endiue, or garden Cresses, and close them vp, and so put them into the ground, it is wonderful how they will prosper, and what faire plants will come thereof.ouer and besides, this would be noted, that all herbs wil be drier and more keen than the tame of the same kind. For this place requirith, that I should set downe the difference also of their iuice and tastes which they yeeld, and rather indeed than of Apples and such like fruits of trees. The tast or smack of Sauerie, Origan, Cresses, and Senvie, is hot and biting: of Wormwood and Centaury, bitter: of Cucum-bet, Gourds, and Lettuce, waterish. Of Majoram it is sharp only: but of Parsly, Dill, and Fennell,

* For some
Philosophers
held opinion,
That the taste
of herbs, con-
sisted of a Ter-
rene substance
and a Warie
mixed toge-
ther: others
(as
Dioscorides)
ascribed it to
their formes
and figures:
which I thinke
thinketh ridi-
culous.

nell, sharpe, and yet odorant withall. Of all smacks, the salt taste only is not naturall. And yet
otherwhiles a kinde of salt fetleth like dust, or in manner of roundles or circles of water vpon
herbs: howbeit soon it passeth away, and continueth no longer than many such vanities * and
foolish opinions in this world. As for Panax, it tasteth much like pepper: but Siliquastrum or
Indish Pepper more than it, and therefore no marvell if it were called Piperitis. Libanotis smel-
leth like Frankincense: Myrrhis of Myrrh. As touching Panace, sufficient hath been spoken al-
ready. Libanotis commeth naturally of feed in rotten grounds, lean & subiect to dew: it hath
a root like to Alifanders, differing little or nothing in smell from Frankincense. The vse of it
after it be one yeare old is most wholsome for the stomacke. Some terme it by another name,
Rosemary. Also Alifanders, named in Greeke Smyrneum, loneth to grow in the same places
that Rosemary doth, and the root resembleth Myrrh in taste. Indish Pepper likewise delighteth
to be sowed in the same manner. The rest differ from others both in smell and taste, as Dil. Final-
ly, so great is the diuersitie and force in things, that not only one changeth the naturall taste of
another, but also drowneth it altogether. With Parsly the Cooks know how to take away the
sournesse and bitternesse in many meats: with the same also our Vintners haue a craft for to
rid wine of the strong smell that is offensive; but they let it hang in certain bags within the ves-
sels.

Thus much may serue concerning garden herbs, such I mean onely as be vsed in the kitchen
about meats. It remaineth now to speake of the chiefe work of Nature contained in them: for
all this while we haue discoursed of their increase, and the gain that may come thereof: and in-
deed treated we haue summarily of some plants and in generall termes. But forasmuch as the
true vertues and properties of each herb cannot thoroughly and perfectly be known, but by their
operations in physick, I must needs conclude, that therein lieth a mighty piece of work, to find
out that secret and diuine power, lying hidden and inclosed within: and such a piece of worke,
as I wot not whether there can be found any greater. For mine own part, good reason I had, not
to set down and annex these medicinable vertues to euery herb; which were to mingle Agriculture
with Physicke, and Physicke with Cookerie, and so to make a mish-mash and confusion of
all things. For this I wist full well, that some men were desirous only to know what effects they
had in curing maladies, as a study pertinent to their profession; who no doubt should haue lost
a great deale of time before they had come to that which they looked for in running thorough
the discourses of both the other, in case wee had handled altogether. But now, seeing euery
thing is digested & ranged in their feuerall ranks, as well pertaining to the fields, as the kitchen,
and the Apothecaries shop; an easie matter it will be for them that are willing and so disposed,
to sort out each thing, and fit himselfe to his owne purpose, yea, and ioine them all at his
pleasure.



THE

THE TWENTIETH BOOKE
OF THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

The Proeme.

Since we are come thus far, as to treat of the greatest and principall work of Nature, we will begin
from hence forward at the very meates which men put into their mouths, and convey into their
stomacks, and urge them to confesse a truth, That hitherto they haue not well knowne those or-
dinarie means whereby they liue. And let no man in the mean time thinke this to be a simple
or small piece of knowledge and learning, going by the base stile & bare name that it carries: for so he may
be soon decieued. For in the pursue and discourse of this argument we shall take occasion to enter into a large
field as touching the peace and war in Nature; we shall handle (I say) a deep secret, quen the naturall hatred
and enmitie of dumbe, deafe, and senselesse creatures. And verily the main point of this is came, and which
may rauish vs to a greater wonder & admiration of the thing, lieth herein, That this mutual affection, which
the Greeks call Sympathia, whereupon the frame of this world dependeth, and whereby the course of all things
doth stand, tendeth to the vse and benefit of man alone. For to what end else is it, that the element of Wa-
ter quencheth fire? For what purpose doth the Sun suck and drink up the water, as it were to coole his heat
and allay his thirst? and the Moon contrariwise breed humors, and engender mist vapors? and both Pla-
nets eclipse, and abridge the light one of the other? But to leaue the heauen and those celestiall Bodies in
their maiestie. What is the cause, that as the Magnet or loadstone draweth iron vnto it? so there is another
stone abhorreth the same, and driueth iron from it? What should the reason be of the Diamond, that peer-
lesse stone, the chiefe & well wherein our rich worldlings repose their greatest ioy and delight, a stone other-
wise * inuincible, and which no force and violence besides can conquer, but that it remaineth still insuscep-
tible; and yet that the simple bloud of a poore Goat is able to burst it in pieces? Besides many other secrets in
nature, so strange, yea, and more miraculous. All which we purpose to referre vnto their seuerall places, and
will speake of them in order. Meane while may it please the Reader to pardon vs, and to take in good part
the manner of our entrance into this matter: for albeit we shall deale in the beginning with the smallest
and basist things of all others, yet such they be as are wholsome, and concerne much the health of man and
the maintenance of his life. And first will we see in hand with the garden, and the herbes that wee finde
there.

CHAP. I.

Of the wilde Cucumber, and the iuice thereof, Elaterium.

THis wilde Cucumber, as we haue said heretofore, is far lesse than that of the Gar-
den. Out of the * fruit hereof there is a medicinable iuice drawne, which the
Physitians call Elaterium. For to get this iuice, men must not stay vntill the
* Cucumber be full ripe: for vnles it be taken betimes and cut down the soone-
r, it will leap & flurt in the handling from the stele whereto it hangeth, against
their faces, with no small danger of their eye-sight. Now when it is once gathe-
red, they keepe it so one whole night. The next morrow they make an incision and slit it with
the edge of a cane. They vse to strew ashes also thereupon, to restrain and keep down the liquor
which

* The medici-
cal use of this* Whereupon
it is called
Toadstool

which issueth forth in such abundance: which done, they presse the said juice forth, and receiue it in raine water, wherein it setteth and afterward, when it is dried in the Sunne, they make it vp into Trochiques. And certaine these Trochiques are soueraigne for many purposes, to the great good and benefit of mankind: For first and foremost, it cureth the dimme and other defects or imperfections of the eyes: it healeth also the vlcers of the eye lids. It is said moreover, that if a man rub neuer so little of this juice vpon vine roots, there will no birds come neere to pecke or once touch the grapes that shall hang thereon.

The root of this wild Cucumber, if it be boiled in vinegre and made into a liniment, and so applied, is singular good for all kinds of gout; but the juice of the said root helpeth the tooth-ach. The root being dried and incorporated with rosin, cureth the ringworme, tettar, & wild scab or skurf, which some call Pora and Lichen: it disscuffeth and healeth the swelling kernels behind the eare; the angrie pusses also and biles in other Emunctories called Pania: and reduceth the stools or skars left after any fore, and other skarres, to their fresh and natue colour againe. The juice of the leaues dopped with vinegre into the ears, is a remedie for deafenesse. As for the liquor concrete of this cucumber, named Elaterium, the right season of making it, is in autumn: neither is there a drug that the Apothecaries bath, which lasteth longer than it doth: howbeit, before it be three yeres old, it begins not to be in force for any purpose that a man shall vse it, yet if one would occupie it fresh and new before that time, he must correct the foresaid Trochic es with vinegre, dissolving them therein ouer a soft fire, in a new earthen pot neuer occupied before: but the elder they be, the better and more effectiuall they are, in as much as (by the report of Theophrastus) Elaterium hath bin kept and continued good 200 yeres. And for fiftie yeres, it is so strong & full of vertue, that it will put out the light of a candle or lamp: for this is the triall and proofe of good Elaterium, it being set neer thereto, before that it puts out the light, it causeth the candle to sparkle vpward and downward. That which is pale of color and smooth, is better than that which is of a greenish grasse color, & rough in hand; the same also is somewhat bitter withall. Moreover, it is said, that if a woman desire to haue children, & do cary about her the fruit of this wild Cucumber fast tied to her bodie, she shall the sooner conceiue and proue with child; provided alwaies that in the gathering, the said Cucumber touched not the ground in any case. Also if it be lapped within the wooll of a Ram, & be bound to the loins of a woman in trauell of childbirth, so that she be not her self ware thereof, she shall haue the better speed and easier deliuerance: but then, so soon as the infant & the mother be parted, the said Cucumber must be had out of the house in all hast, where the woman lyeth. Those writers who magnifie these wild Cucumbers, and set great store by them, affirm, That the best kind of them groweth in Arabia; and the next about Cyrene; but others say, That the principall be in Arcadia; That the plant resemblith Turnsol; That betwene the leaues and branches thereof there groweth the fruit, as big as a Wallnut, with a white taile turning vp backward in manner of a Scorpions taile: whereupon some there bee, who giue it the name of the Scorpion Cucumber. True it is indeed, that as wel the fruit it selfe as the juice thereof called Elaterium be most effectiuall against the pricke or sting of the Scorpion, as also that it is a medicine purgatiue of the bellie, but especially cleanseth the wombe or matrice of women. The ordinarie dose is from half an Obolus to a Solid^r, an obole or half a scruple according to the strength of the patient. A greater receit than one Obolus, killeth him or her that taketh it: but being taken within that quantitie aboue named, in some broth or conuenient liquor, it is passing good for the dropsie, yea, and to euacuat those filthie humors that engender the lowlie discafe. Being tempered with honey and old oile, and foreduced into a thin ointment or liniment, it cureth the Squinancie, and such diseases incident to the windpipes.

CHAP. II.

¶ Of the Serpentine Cucumber, called otherwise the Wandring Cucumber: also of the Garden Cucumbers, & Melons or Pompions.

Many there be of opinion, that the Serpentine Cucumber among vs, which others call the wandring Cucumber, is the same that the former Cucumber which yieldeth Elaterium. The decoction whereof is of that vertue, that whatsoeuer is besprinkled therewith, no myce will come neere to touch it. The same being sodden in vinegre and brought to the

A confidence of an ointment, is a present remedie to allay the pains of gout, as wel in feet, hands, knees and armes, as in any other joint whatsoeuer. Also, if the seed thereof, or the fruit alone, dried in the Sun and beaten to powder, be drunke to the weight of 30 deniers (Romane) in one hemine or wine pint of water, it asswageth the pain of the reines and the loins. Tempered with womans milke, it resoluech all sodain tumors & swellings, being applied to the grieved place. But to come againe to Elaterium, it mundifieth the matrice and naturall parts of women, but if they be with child, they must take heed how they meddle with it, for it bringeth them to a shiff, yea and hasteneth abortiue or vntimely birth. Good it is for al them that be short winded. As for the yellow jaundise, it cureth it, if it be but snuffed vp into the nose. Annoint or bath the face with it in the Sun, it taketh away pimples & other spots there. Many attribute al the same properties and effects to the Garden cucumbers: And in very deed, this fruit would not be despised, in regard of the use thereof in Physicke: for first and foremost, Take Cucumber seeds as many as three fingers will receiue, stampe them with Cumin, and giue the powder in wine to them that haue the cough, for to drinke, you shall see present helpe. The same seeds taken in powder with breast-milke, cureth those that be lunaticke and * phranticke. Also, the weight of one * Acetabulum, (i. much about two ounces) cureth them that haue the Dysentery or bloody flux. Moreover, being taken with a like poise or quantity of Cumin seed in mead or honied water, it is singular good for them that reach vp filthie matter from their lungs, as also for those who haue * weake and diseased liuers. If one drinke the same with some sweet wine, it prouokes vrine and being injected by a Clystire together with Cumin, it causeth the paine in the kidnies and reines.

C As for the fruit called Pompions or Melons, being eaten as meat, they cool the body mightily and make it soluble. The fleshy substance of them applied to the eyes, assuageth their pain and restraineth their waterish and rheumatick flux. Their root healeth the * wens or vlcers gathered in manner of hony-combs: which swellings some call Cerio. Being dried, it slasheth vomits, so it be brought into powder and giuen to the weight of * foure Oboli in honied water: but the Patient when he hath drunk it, must walke presently vp on it half a mile. The same powder is deterfue and scouring, and therefore put into sope and washing-balls. As for the rind or barke thereof, it procureth vomit indeed, but it cleanseth the skin as wel as the other. The same doe the leaues of any domesticall or garden Cucumbers or Melons, if they be made into a liniment. The said leaues also stamped with honey and brought to the forme of a cataplasme, cure the bloody, fals or night-blains, but tempered with wine, they heale the bitings of dogs, as also, of the Millepede, which the Greeks call Seps, a long worm with hairy feet, doing much harme to cartails especially, for look where it biteth, the place presently swelleth and putrifieth. The very Cucumber it selfe is of a comfortable odor, and recouereth the faintings of the heart, and those that swoone. Finally, if you would make a delicate sallad of Cucumbers, boile them first then pill from them their rind, serue them vp with oile, vinegre, and honey: certain it is, they are by this means far sweeter and pleasanter than otherwise.

CHAP. III.

¶ Of the wild Gourd, and the Rape or Turnep,

T Here is a kind of wild * Gourd which the Greeks call Sompos, as one would say, hollow and emptie (for thereupon it tooke that name) a finger thicke, growing no where else but among rocks and stony grounds. If a man chew this Gourd and suck out the iuice thereof he shall find it very comfortable to the stomack. There is another wild gourd called Colocynthis, but that is full withing, and lesse than that of the Garden. The pale of this kind is the better, for such vsed in Physicke: and yet that of grasse greene colour when it is dried, if it be taken alone, doth purge & euacuat the belly. Also being infused into the bodie by way of clystire, it cureth all diseases of the guts, flanks, reines, and loines: it helpeth the palsie likewise, or the resolution of the sinews. After the seeds be taken forth, some fill the place with honied water, & so seeth all together, vntill halfe be consumed, and giue of this decoction the quantitie of foure Oboli, with good successe to those that be troubled with a cough: the powder thereof dyd & incorporate with sodden hony & so reduced into pills and swallowed, is good for the stomack: the seeds be singular to cure the lamie; but the party must drinke honied water presently after it.

E

The

* Phranticke;
some read Ne-
phriticke, and
then it signifi-
eth those that
haue the stone
or paine of the
kidnies.
* 15. drama.
* Iscurese.

* Melicridides

* two scruples;

* This is not
Colocynthis.

Obolus.
halfen
Serpentine or
Scruple

The fleshe pulpe within mixed with wormwood and honey, takes away the tooth-ach & a col-
lution made with the juice thereof and vinegre hot, confirmeth and fasteneth the teeth that be
loose in the head. Moreover, if with it and oile together, one rub the backe bone, the loines and
the haunches or huckle, it will immediately rid them of their pain and ach. But I will tell you a
strange and wonderfull effect indeed: If a man take their seeds of * even number & hang them
either about the necke or armes of them that haue the ague, they will drive the accesse or fit a-
way: be it any of those intermitent feuers which the Greekes call Periodicall. Thus much for
the wild Gourde, Colocynthis.

* It may be, be-
meant with a ni-
ber respectue
to the type of
the ague, that
is to say, in a
tertian, 4 in a
quartan, 5 in a
quintan, &c.

As for the domesticall Gourde of the Garden, after it is scraped and filled, take the juice
thereof, and distill it warme into the eares, it will ease the paine. The inner flesh or pulp cleaned
from the seed, is passing good for to be applied to the agnells or corns of the feet: also to be
laid vnto those impostumes or swellings, that grow to an head or suppuracion [which the
Greeks call Apotemata.] The liquor or decoction of the Gourde, foddren al whole as it is, with
rind, seed, and pulpe, doth strengthen the loose teeth, and stineth their ach. Wine wherein it is
boiled, is a singular decoction to bath the eies, for to repress and stay the fluxe or thume that
falleth vpon them. The leaues of it, together with the fresh leaues of the Cypresse tree newly
gathered, being stamped and applied to wounds, be excellent to heal them. The Gourde it selfe
enclosed within clay, and so baked or roasted vnder the embers, and then stamped and incorpo-
rate with goose grease, hath the like effect. Moreover, the scrapings or shauings of the rind,
mightily cooleth the heat of the gout, if it be not inueterat and old: the heats also of the head
and especially the * burning therein, which troubleth little infants. The said parings being in-
corporat with the silt rubbed or curried from mens bodies in baines & stoues after they haue
swet, and so laid vpon any part that hath *Sambucus* fire, allaieth the heat and bringeth the
place into temper: so doe the seeds also, oiled in like manner. The juice or liquor drawne out of
the said parings, being mingled with oile of roses and vinegre, and then made into a liniment,
doth mitigate the extreme heat of burning feaues. The ashes of Gourde parings burnt & fire-
drie vpon any part of the bodie that is burnt or skalded, healeth them wonderfully. *C. hy-*
ssippus the Physician condemned Gourds, and forbad men to eat of them. Howbeit, all Physici-
ans doe resolutely agree in this, That they be passing good for the stomacke: as also for the ex-
ulceracions of the guts and bladder.

* Scirrh.

As for Rapes or Turneps, they likewise are medicinable, and haue their vse in Physick, for
to begin withall, if one lay them very hot to kided or humbled heeles, they will cure them. Also, if
the feet be frozen and benumbed with cold, lay them thereto foddren in water, and this fomen-
tation will restore them to their former heat. The hot decoction or broth of Rapes, is passing
good for to bath the goutie members, yea if it were a cold gout. The Rape or Turnep root, raw
as it grew, brayed in a mortar with salt, is a remedie for all diseases of the feet, be they cornes,
kibes, bloody falls, swellings of cold, or any other infirmities whatsoeuer. Rape seed bruised to
a liniment drunken al with wine, is reported to be a soveraign medicine against the stinging
of serpents, and any other poison: Howbeit many think, that it is a preservative & countrepoi-
son, when it is taken in wine and oile. *Democritus* banished turneps altogether from the board,
by reason of the ventosities or windiness that it engender. But *Diocles* on the other side extol-
led and praised them as much; and affirmeth, That they will pricke forward to *Venus*. The like
doth *Dionysius* report of them, and the rather (saith he) if they be condite with Rocket. He writ-
teth moreover, That if they be roasted or baked vnder the ashes, and so incorporate with grease,
will make a notable good cataplasm for the gout and joynt-ach. The wild rape or turnep grow-
eth commonly euery where among corne fields: it brancheth much, carieth a white seed, twise
as big as that of the Poppie. This being incorporat with wine of eequal quantity, is much vfed
to take away riuialls, and so smooth the skin both of the face and also of the whole body besides.
To conclude, the roots of Eruike, Barley, Wheat, and Lupines, be good for nothing at all.

CHAP. IIII.

¶ The diuers sorts of Nauues: of the wild Radish, of the Garden Radish,
and the Parsiepe.

* *Angustif-*
caulis. folio
app. flore ca-
ribus. Rad. Dio-
scoride.

The Greek writers obserue two kinds of Nauues, which are good for Physick. The first ariseth
vp with * a cornered and edged stalk, beareth leaues

M

A floures like Dil: this they call Bunion: the decoction whereof being drunken with honied wa-
ter, or with a dram weight of the owne iuyce, is counted soveraigne for the purgations that fol-
low women for the defects of the bladder and vrine. The seed parched and beaten to powder, and
so taken in a draught of hot water, to the quantitie of foure * cyathes, cureth the bloody flux:
but it stoppeth vrine, vntil the patient drink Linseed withall. The second kind is named Bu-
nias, and resembleth both Rape and Radish: the seed of it is excellent good against poyson;
and therefore in antidotes and preseruatiues it is much vfed. That there be Radishes wilde, we
haue shewed heretofore. The most commended about all others is that which groweth in Ar-
cadia: although there are of them in other countries, and those counted better, only for to pro-
uoke vrine. Otherwise they purge choler, and namely their rindes infused in wine do the same.
Now ouer and besides their vertues and properties related heretofore, they discharge and cleanse
the stomack, cut and extenuate flegme, and withall be diuertical and procure vrine.

* *Cyathus*
ten drams.

There is a kind of garden Radish in Italy which they name *Armoracia*, vfed also in physick:
the decoction whereof if a man take a draught of it in the morning, to the quantitie of a cyath,
doth fret, break, and expell the stone by way of grauell. Boile the same in water and Vinegre,
therewith bathe or anoint the place stung with any serpent, and it will heale it vp. Radish taken
with hony in a morning next ones heart fasting, is good for the cough. The seed parched, and
so chewed alone without any thing els, asswageth the pain of the smal guts, * in the flanks and

Lagenaria

hypocondriall parts. The decoction of Radish leaues foddren in water and so drunk, or the very
iuyce of the root it selfe as much as two cyathes, is thought to be a singular medicine against
the breeding of body-lice. Radishes stamped in a mortar, and brought into the forme of a linim-
ent, are thought to be excellent good for hot inflammations: the rind also stamped together
with hony, and laid to any bruised place that looketh black and blew after a fresh stripe, dissol-
ueth that cluttered blood, and reduceth the former color. The chewing of the quickest & most
biting Radishes keeps them awake that are given to ouermuch drowiness, & inclined to the
lethargie. The seed parched and afterwards stamped and incorporate with hony, cureth them
that take their wind short. The same is also held for a countrepoyson. A defenitiue also the
Radish is against scorpions, and resisteth their poisoned sting: for let a man rub his hands well
either with the iuyce of the root, or the seeds, he may handle scorpions safely. Do but lay a Ra-
dish vpon a scorpion he will presently die. Moreover, *Nicander* affirmes, that Radishes be passing

D good for them that haue eaten either venomous Mushromes or Henbane. The two *Apollodoros*
prescribe Radish to be giuen to them who suspect themselves to be poysoned with the viscus
gum of the white Chamæleon root called *Ixias*; but taken diuersly; for the one of them sur-
named *Citius*, giueth the seed stamped, and so to drink it in water: the other *Apollodoros*, of Tan-
tarentum, ordains the iuyce of Radish for this effect and purpose. Moreover, radishes are thought
good to diminish and extenuate the swelling spleen: they are wholesome for the liuer, & mitigate
the pain of the loins. Being taken with Vinegre and Sewvy, they helpe them that are in a drop-
sie, or false into a lethargie. *Praxagoras* is of iudgement, That Radishes should be giuen for to
eat, to them that are troubled with the liack passion, to wit, the paine and ringing of the smal
guts. And *Plisponius* appointeth them to be eaten of those that be troubled with a continuall
flux, by reason of a feeble stomack, called thereupon *Cœliaci*. They heale the Dyenterie or
exulceracion of the guts: they euacuate also and rid away the filthy matter and corruption of
impostumes gathered about the midriff and principal parts, if they be eaten with hony. But
some for this purpose would haue them luted or bedadved with clay, and so roasted or bake them
afterwards vnder the ashes; and being thus prepared, they are effectual to bring down womens
termes. Being taken with vinegre and hony in manner of an oxymel, they chase worms out of the
guts and belly. If they be foddren to the thirds, and their decoction giuen to drink with wine,
they do much good to them who haue a rupture, and their guts fallen downe into the burse of
their cods: and in this wise they rid and scoure away the cluttered & offensive blood gathered
in the guts and sent thither from any other part. *Medius* the physitian prescribeth them to be
boiled and giuen to the same purpose; as also to those that spit and reach vp blood: yea and to
women in childbed newly laid, for to increase their milk. *Hippocrates* counselleth women whose
haire is giuen to shed much, for to rub their heads with radish roots: also to apply them bruised
in manner of a cataplasm vnto the nauiell, when they be tormented with the paines of the ma-
trice. They will bring to the natue & liuely colour the parts that are cicatrized or newly skar-

* *Hæmorrhoides*, *Hæ-*
moroides, *Hæ-*
moroides, & then
it signifies
Purificatio.

E F
red,

E 2

red. The seed bruised and tempered with water, and so laid as a cataplasme, stayeth the running of cancerous or eating vlcers, which the Greekes call Phagedæne. *Democritus* is of opinion, That much feeding vpon Radishes, stirreth vp lust and maketh folk amorous; which peradventure is the reason, that some haue thought they be hurtfull to the voice. The leaues of those radishes onely that haue the longer roots, are said to quicken the eye-sight; but if a man perceiue that he hath either inwardly taken for a medicine, or applied outwardly, a radish root which is ouer strong, he must presently haue Hyssope giuen him: for this Antipathy and natural contrariety there is betwene these two herbs, That the one correcteth the other. For them that be hard of hearing, Physicians vse to infill the iuice of the Radish by drop-meale into the eares. And for them that would perbreake or vomit, the best way to take it, is at the end of a meale with the last meat.

As touching Hibiscum, like it is to the Parsnep: some call it Moloche Agria, others Pistolochia: it cureth the fores and vlcers that be in gristles, and knitteth broken bones. The leaues thereof drunke with water, loosen the belly, and chase away Serpents. Applied in a liniment or otherwise rubbed vpon a place stung with Bee, Waspe, or Hornet, they are a present remedie. The roots therof digged out of the ground before Sun-rising, & enfolded or wrapped in wooll as it grew vpon the sheepes backe, without any other artificial colour, and namely of an ewe, which hath yeaned likewise an ewe lambe, is thought to be a singular thing for to be bound vnto the swelling kernels called the Kings euill, yea although they were exulcerat and ran. But some are of this mind, That for to doe this deed, it should be gotten vp with an instrument of gold; and great heed should be taken, that after it is once vp, it touch not the earth againe. Finally, *Celsus* giueth counsell, to lay the root thereof foddren in wine to the gouty joynts that are without tumor and shew no swelling.

CHAP. V.

Of *Staphylinus*, or the Parsnep, Of Cherrill, the Skirwort: of *Seseli*, *Elecampane*, and Onions.

There is a second kind of Parsnep, named *Staphylinus*, which commonly men call the Wandring Parsnep. The seed bruised and drunke in wine, is singular good for them that haue swolne bellies, the rising or fuffocation of the mother in women, with the torments and pains thereto incident; it cureth, in so much as it reduceth the matrice into the right place: being applied also as a liniment with wine cuit, it helps the wrings and throwes of their belly. It is not amisse also for men to take it, for the seed being stamped together with bread crumbs, of each a like portion, and so drunke with wine, cures the belly-ach with them also. It prouoketh vrine: and being applied fresh and new with honey, it refresheth the spreading of fretting and running vlcers. The powder thereof also being drie and strewed thereupon, hath the like effect. *Dioches* aduiseeth to giue the root therof in honied water, against the infirmities of liuer, spleene, flanks, small guts, loines, and reins. *Cleophrastus* saith, that it will helpe (in that manner taken) an old bloudie flux, which hath continued a long time. *Philistio* boileth the root in milke, and giueth 4 ounces thereof to them who are troubled with the strangury, or pisse by drop-meale: but with water, he giueth it for the dropsie, to those also that with a cricke or cramp haue their necks drawne backward; for the pleurisie, and epilepsie or falling sickness. Moreover, it is commonly said, that whoeuer hath this root about them, are safe enough for being stung with any Serpent: may it they doe but tast thereof before-hand, they shal take no harme if they be either bitten or stung by them: and say they be already stung, let them apply it to the wounded place with hogs greafe; and it will heale it vp. The leaues chewed help the indigestion & cruditie of the stomacke. *Orpheus* said moreover, That this root had an amatorious propertie to win loue, haply because much feeding therof (as it is well knowne) doth sollicit vnto the game of loue, and maketh folke amorous: which is the reason also, that some haue put down in writing, That it will helpe women to conceiue. As for the Garden Parsneps they are in many other respects of great force and very powerfull; but the wild is more effectually, and principally that which groweth in stonie grounds. The seed of the Garden Parsnep also, being drunke in wine, or vinegre and wine together, saueeth those that are stung with Scorpions. If a man pick his teeth and rub them all about with a Parsnep root, he shall be eased of his tooth-ach.

The

A The Syrians are great Gardeners, they take exceeding paines and be most curious in gardening, whereupon arose the Prouerbe in Greeke, to this effect, *Many Worrs and Pot-bearbes in Syria*. They vse to plant in their gardens a certaine herb very like to a Parsnep, which some call *Ginidium*, i. Tooth-picke Cherrill: more slender and smaller it is only, and therewith bitterer in tast, but it worketh the like effects. They vse to eat it both foddren and raw, and find it agree well with the stomacke: for it drieth vp all the superfluous humours and excrements which be bedded and deeply rooted within it.

As for the wild Skirwort that grows wandring euery where, it is like both in shape and operation to those of the garden. It stirreth vp the appetite and skoureth the stomack of those crudities which caused dulnesse therein, and loathing to meat. *Opion* is verily perswaded, that if one eat it with vinegre aromatized with *Laserpitium*, or take it with pepper & honied wine, or else with the pickle of fish named *Garum*, it profokes vrine, and putteth him or her in mind of loue delights. Of the same opinion also is *Dioles*. Furthermore, that it is a cordiall, and doth mightily corroborate and strengthen the heart, vpon the recouerie of a long and dangerous sickness; and is besides singular good to stay the stomacke after much casting and vomiting. *Heracides* was wont to giue Skirworts to them who had drunke Quick-siluer: so much also as were but cold & could not sufficiently perform the duties of marriage: finally, to them that being newly crept out of their beds after some grievous disease, had need of restoratiues. *Hicetius* was of this mind and said, they were good for the stomacke, because no man could possibly eat; Skirwort roots together: and yet he thinks that they would agree very well with those weak persons who were lately sick and newly walking abroad, against they should fall to their old drinking of wine again.

But to come more particularly to the garden Skirwort, if the iuice therof be drunke with Goats milke, it stayeth the flux of the belly called the Lasse. And thus much for the Skirwort, named in Latin *Sifer*. But forasmuch as the proximitie and likenes in many Greeke names many a time confounds the memorie and deceives them, causing them to mistake one thing for another, I wil for vicinitie and neighborhood sake annex vnto *Sifer*, the herb *Sifer* or *Seseli*; for me thinks they will doe very well to stand together: but this is an herb very common and well known. The best is that which comes from *Marfells*, & is therupon named *Seseli Massiliense*: it hath a broad flat seed and a yellow. A second kind thereof is named *Ethiopicum*, with a blacker seed: but the third which is brought from Candie, and therefore termed *Creticum*, is of

D all other most odoriferous & smells sweetest. The root of *Seseli* or *Sifer*, casts a pleasant fauor: and as men say, the Vultures also or Geirs feed on the seed. If a man or woman drinke it with white wine, it cures an old cough; it knits those who are brufen bellied, or haue ruptures; and lastly, helps them that be much troubled with cramps or convulsions. Also if it be taken to the weight or quantitie of two or three * *Ligules*, it cures those who haue their necks drawn backward to their shoulders with the Spasme; it corrects the defects and faults of the liuer, it allaieth the wrings and torments of the guts; and bringeth them to pisse with ease and freely who are afflicted with the Strangurie. The very leaues of filer are also medicinale, for they procure easy childbirth: yea and in that respect the very dumb four-footed beaſt findeth the benefit therof; and that know the Hinds well enough by a secret instinct of nature, who being near their time

F and readie to calue, feed vpon this herbe most of all others. Good it is against *S. Anthonic* first applied to the place in manner of a liniment. Certes, if a man eat either the leafe or the seed of *Sifer*, presently after meat, or at the latter end of repast, it helpeth digestion. It staves the gurrie or running out of the belly in 4 footed beaſts, whether it be giuen stamped by way of a trencher, and so injected, or chewed drie among their last meat. If kine or oxen be sicke, flampe it and pour it down their throats, or els clyster ite them with it. As for *Elecampane*, if it be chewed vpon an empty stomacke fasting, it confirms the loose teeth, so that it be taken as it was digged forth of the earth before it touch the ground againe. Being confected or condite, it cures the cough. The iuice of the root foddren, expells the broad wormes bred in the guts. The powder of it dried in the shadow helpeth the cough, the stitch and cramp, dissolueth windines & is good

F for * the accidents incident to the throat and windpipes. It is a soveraign medicine against the pricks or stings of venomous beaſts. The leaues applied as a liniment, with wine, appease the extreme pain of the loins. As for Onions, I cannot find that there be any of them grow wild. Those which are sown in gardens, I am sure, wil with their smell only cause the eyes to shed tears, & by that means clarify the sight: but if they be anointed with the iuice, they will mundeify the bet-

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* *Ligula* may
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ounce, as a
good spoon
will doe with
v.

* *Antig*

ter. It is said that they will procure sleepe, and heale the cankers or vlcers of the mouth, being chewed with bread. Also greene Onions applied with vinegre to the plaec bitten with a [mad] dog, or els drie, and laid to with Honey and Wine, fo the plaster or cataplasm be not remoued, in three daies cureth the hurt without danger. In this maner also they will heal * galled places. Being roasted vnder the ashes, many vse to apply them with Barly floure or meale, as a pulstiffe or cataplasm to the eies that be waterie or rheumatick, as also to the vlcers of the priuy parts. The imundion of the eies, with the iuice therof, is thought to clemente their cicatrices or * cloudines of the eies called the pin and web; as also to cure the pearle there breeding; moreover, the blood (hotting or red streaks, in the white, and the white spots appearing in the blacke circle about the apple. Moreover, it cureth bitings & stings of serpents, yea, and heales al vlcers, being emplastrated with honey. Also the exulcerations or impostumes within the ears, are by it & womens milke cured. And for to amend the ringing and vnkind sound and noise therein, & to recover those that be hard of hearing, many haue vsed to droppe the iuice of Onions together with Goose greafe or els hony. Furthermore, they giue it to be drunke with water, to those that suddenly become speechelesse and dumb. A collution also made with Onions, helps the tooth-ach. And being laid vpon wounds, made either with prick or bite of any venomous beast, and especially of Scorpions, it is thought to be a souverain salub. Many are wont (to very good effect) for to bruse Onions, and therewith to rub those parts that be troubled with a skurfe and running mange, as also to recover haire where it is shed and gon. Being boiled, they are giuen for to be eaten, vnto those who are diseased with the bloodie Flux or pain of the reins & loins. Their outward pilings burnt into ashes & mingled with vinegre, cure the bitings and stings of serpents, if the place be bathed or anointed therewith, yea, and the very Onion it selfe being applied with vinegre, cures the sting of that shrewd worne Milliped. As for all other vertues and properties of Onions, the Physicians are wonderfull contrary one to another in their writings: for our moderne and late writers do hold and to haue deliuered in their books, That onions are hurtful to the parts about the heart, & other vitall memberas also, that they hinder digestion, breeding wind and ventosities, and causing drought or thirstinesse. *Aesclepiades* and his sect or followers, contrariwise affirme, That onions are so wholesome, that they will make them well colored who vse to feed vpon them: and more than so, they say that if one in health euery day eat of them fasting, he shall be sure to continue healthful, strong, & lusty: that they be good for the stomack, in this regard, that they cause risting and breaking of wind vppward, which is a good exercise of the stomack: and withall, that they keepe the bodie loofe and laxatiue, yea, and open the Hemorrhoid veins if they be put vp in maner of suppositories. Also, that the iuice of onions and Fennell together, be maruellous good to be taken in the beginning of a * dropisie. *Item*, That their iuice being incorporat with Rue and Hony, is soueraigne for the Squinane. As also that they will keepe waking those who are fallen into a Lethargie. To conclude, *Varro* saith, That if Onions be braied with salt and vinegre, and then dried, no worms or vermine will come neece that composition.

CHAP. VI.

Of Cut Leekes or Porret: of bolled Leeks: and of Garlicke.

Porret, otherwise called Cut-Leekes or vnset Leeks, stancheth bleeding at the nose, in case it be stamped and put vp close into the nostrills, or otherwise mingled with the powder of the Gall-nut, or Mints. Moreover, Porret staith the immoderat shift or fluxe of blood, that follows women vpon a slip or abortiue birth, if the iuice thereof be drunke in breast-milke. In the same manner it helps an old cough and al other diseases of breast and lungs. Burnes and scaldings are healed with a liniment made of Porret or Leek blades: likewise the Epinyctides, for so in this place I tearme that vicer, which in the lachrymal or corner of the eie runneth and watereth continually: some call it Syce, that is to say, a fig. And yet others there be who vnderstand by that word [Epinyctides] the blackish or blew blistring wheals, the cloudy fals I mean. And angrie chilblanes, that in the night disquiet and trouble folk that haue them. But to come againe to our Porret: the blades thereof stamped and laid too, with Honie, healeth all sores and vlcers whatsoeuer. The biting of any venomous beast, the sting also of Serpents, are cured therewith. As for the impediments of the hearing and the ears, they be remedied with the iuice

A of Leeks and Goats gall, or els a like quantitie of honied wine instilled therein. And as for the whistlings or crasping noises that a man shall heare within head otherwhiles, they are dis-
cuffed with the iuice of Leeks and womans milke dropped into the ears. If the same be snuffed vp into the nostrills, or otherwise conueighed that way vp into the head, it easeeth head-ach: for which purpose also it is good to poure into the eares, when one goeth to bed and lieth to sleepe, two spoonfulls of the said iuice, and one of Honie. The iuice of Porret if it be giuen to drinke with good wine of the grape, against the sting of serpents, and namely, Scorpions: likewise fo taken with an * Hemine of wine, it cureth the pains of the loines or small of the back. Such as spit or reach vp blood, such as be diseased with the Phthisick or consumption of the lungs, such also as haue bin long troubled with the Pese, the Murre, Catarrhe, and other rheums, find great
B help by drinking the iuice of Porret, or eating Leeks with their meat. Moreover, Leeks are taken to be very good either for the jaundice or dropisie. Drink the same with the decoction of husked Barley called Prifane, to the quantity of one Acetabell, you shall find ease for the pains of the reins or kidneys. The same measure and quantity being taken with honey, muniteth the Matrice and naturall parts of women. Men vse to eat of Porrets or Leekes, when they doubt themselves to haue taken venomous Mushrooms. And a cataplasm therof cureth green wounds. Porret is a solicitor to wantonnesse and carnal pleasures: it allaieth thirstinesse, & dispatcheth those fumes that cause drunkennesse. But it is thought to breed dimnesse in the eie: fight ag-
C in gendervind and ventosity, howbeit, not offensive to the stomack, for that withall it maketh the belly laxatiue. Finally, it scoureth the pipes & cleareth the voice: thus much of Porret in blade
C or cut Leeks vnset.

These headed Leeks that are bolled and replanted, are of the same operation, but more effec-
tual than the vnset Leeks. The iuice therof giuen with the powder either of Gall-nuts, or fran-
kincense or els Acacia, cureth those that reject or reach vp blood. *Hippocrates* would haue the
simple iuice therof giuen, without any thing els for that purpose: and hee is of opinion, that it
will disoluate the neck of the Matrice and the naturall parts of women, yea, and that they will
proue fruitful and beare children the better, if they vse to eat Leeks. Being stamped and laid to
filthie sores or vnclean vlcers with hony, it cleneth them. Being taken in a broth made of Pri-
fane or husked barley, it cureth the cough, staith the rheume or catarrh, that distilleth into the
chift or breast-parts: it scoureth the lungs and wind-pipe, and healeth their exulcerations. The
D like it doth if it be taken raw without bread, 3 bols or heads of them together each other day:
and in this maner it will cure the patient, although he raught vp and spit out purified and cor-
rupt matter. After the same maner it cleareth the voice, & it enableth folk to the seruice of lady
Venus, and auaieth much to procure sleep. If Leekes bolts or heads be foddren in two waters, (i.)
changing the water twice, and so eaten, they will stop the Lask, and stay all inueterat fluxes what-
soeuer. The pillings or skins of Leek heads if they be foddren, the decoction therof wil change
the haire from gray to blacke, if they be washed or bathed therewith.

As touching Garlicke, it is singular good and of great force for those that change aire, and
come to strange waters. The very sent thereof chaseth Serpents and Scorpions away. And as
some haue reported in their writings, it healeth all bitings & stings of venomous beasts, either
E eaten as meat, taken in drinke, or annointed as a liniment: but principally it hath a special pro-
perty against the Serpents called Hemorrhoids, namely, if it be first eaten, and then cast vp a-
gain by vomit and wine. Also, it is soueraigne against the poisonous bizing of the mouse called
Shrew: and no marvell, for why, it is of power to dull and kill the force of the venomous herb
Aconitum. *L.* I bard bane, which by another name men call Pardalians, because it strangeth or
chokech Leopards, yea, it conquereth the poisonous & deadly quality of Henbane: the bit-
tings also of a mad dog it healeth, if it be applied vpon the hurt or wounded place with him. As
for the sting of serpents verily, Garlicke is exceeding effectual, if it be taken in drinke: but with-
al, you must not forget to make a liniment of it, the hairy strings or beard growing to the head,
the skins also or tails and all, whereby it is bunched, tempered all together with oile, & laid vpon
the grieved place: and thus also will it help any part of the body fretted or galled, yea, though
F it were risen vp to blisters. *Hippocrates* moreover was of this opinion, that a suffumigation made
therewith, fetcheth downe the after-birth of women newly deliuered and brought to bed: who
vsed also with the ashes of them burnt and reduced together with oile into the forme of a lin-
iment, to annoint the running skulls of the head, and thereby cured and healed them vp. Some
giue

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* Hemine, is
much about
ten ounces* Called Man-
na Charas* Hydropis
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dropsis, i. Suf-
fusory, out
of Disparidies,
to wit, the
Catarrh.

L

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gills and tor-
ment of the
upper small
guts.Parientes, nec
parientes, out
of Disfe.* A great desire
to goe to the
flepe, with
doling little or
nothing.* Called Men-
taria.Scurvignets,
called other-
wise S. Anthi-
nichia, or
Brijpyle.* Contrary to
Galina.

giue it boiled, others raw, to them that be short-winded, *Diocles* prescribeth it with *Centaure* to G them who are in a dropfie, he giue it also to purge the belly between, or in two figs. But green *Garlick* taken in good wine, together with *Coriander*, doth the deed more effectually. Some are wont to minnifer it to those that draw their wind short, being stamped and put into milke. *Praxagoras* the Physitian ordained to drinke it with wine, against the laundise also against the black passion, in oile and thick *gruel. And in that sort he uied to annoint the swelling kernels called the kings cuill. In old time the maner was to giue raw *garlick* to such as were bestraght or out of their wits. But *Diocles* appointed, that it should be boiled for phrentick persons. Certes, if it be bruised and so laid to the throat, or otherwise gargled with some conuenient liquor, it will do much good to them that haue the squinancie. Take three heads or cloues of *Garlick*, beat them well, and together with vinegre apply them to the teeth, they will mightily auiage the paine. Or do but make a collution with the broth wherein they were boiled, and hold it in your mouth, and afterwards put some of the *Garlick* it self within the hollow teeth, you shall fee much ease inue thereupon. The iuice of *Garlick* together with good greafe, is passing good to be dropped into the ears, to auiage their paine, and bring the hearing again. Being taken in drinke, it cleneth the head from dandriffe, and killeth lice, so doth it also, if it be stamped and applied to the place with vinegre and nitre. Seeth it in milke, or do but stamp it and mingle it with soft fresh cheefe, and so eat it, you shall see how it will repress and stay *Catarhes* and Rheumes: after which manner it will make them speake cleare that be hoarse, and haue a rusty voice. But let a man who hath the *Phthisicke*, and is fargone into a Consumption of the lungs, drinke it in bean broth ordinarily, he shall recouer or find great ease. Generally, *Garlick* is better boiled or roasted, than raw and yet of the twain it is not so good roasted as foddren: for in that order must it be taken for to help the voice and make a cleare breath. Also, being boiled in honied vinegre or Oxy mell, and so drunke, it drieth out the broad wormes and all other such like vermin forth of the guts. Being taken in a thicke broth or gruel, it cureth the disease * *Tinef-mus*. Being foddren to the consuffience of an Vnguent, and so applied as a frontal to the temples of the head, it allaieth their paine. Boiled with hony, then stamped and reduced to a liniment, it represseth red pimples. Seeth it with good oile of seame or greafe, or in milke, it is singular for the Cough. See you one to reach vp blood, or to spit filthy matter: Roast *Garlick* vnder the bottembers, and giue it the party to eat, with equal quantity of hony. Being taken with salt and oile, it is a souverain remedy for them that be bursten or Spasmatike, that is to say, vexed with the Crampe. Applied with the fat or greafe of an hog, it cureth all tumors and suspicious impostumes. Being emplastrd with brimstone and rosin, vpon *Fistulae* or such hollow and blind vlcers, it draweth out all the filth and corruption that lieth rankling and festering within. But lay it to a sore with pitch, you shall see it fetch out spils and ends of broken arrowes sticking still within the flesh. The Leprosie, the running and dangerous * *tetter*, the red pimples also rising in the skin, *Garlick* doth first et and exulcerate, but afterwards, with *Origanum*, it cureth and healeth the same. Yea, the very ashes of *Garlick* burnt, and so tempered with oile and the pickle, [Garum] it may take the form of a liniment, doth the like. The wild fire also, or shingles, that hath gotten to a place, if it be annointed therewith, will be extinguished. Be any place of the body grown black and blew by stripes or blows, a liniment made of *Garlick* burnt to ashes and tempered with hony, will bring the natue and flesh colour again quickly. There is a deepe and settled opinion among men, that if a man or woman do ordinarily take *garlick* with meat & drinke, they that find remedy thereby for the falling sicknesse. Also, that one head of *Garlick* taken in some styppick & harsh raw wine, with *Lactepitum*, to the weight of one *Obolus*, driues away the Quartan ague for euer. But after another sort, if it be sed & to wit, boiled with bruised Beanes, and so eaten ordinarily with meat, there is noough so tough, no vicer within the brest so foule and filthy, but it will stay the one, and cleanse yea, and heale the other, so as the patient shall recouer perfect health. *Garlick* maketh folk to sleep well, and giue it a good, fresh, and ruddy colour to the whole body. *Garlick* stamped with green *Coriander*, and drunken with strong wine, increaseth the heat of lust, and prouoketh to Lecherie. But as many good properties as *Garlick* hath, it is not without some bad qualities for them againe. It maketh the eyes dim, it breedeth windnesse and ventositie, it hurte the stomack, ouer liberally taken, & * *cau-* feth thirst: but let me not forget among other vertues which it hath: namely, that if it be giuen to Hens, Cocks, and other Poultry, among their corne, it will keepe them from the pip.

As

A As for Horses, Mares, Affes, and such like beasts that cannot stale, or be ground and wrong in the bellie: stampe *Garlick*, and therwith rub the shap and naturall parts; it will prouoke the one, and ease the other.

CHAP. VII.

¶ Of wild Lettuce, as well that called *Caprina* as *Efopus*. Of *Isatis* and *Garden Lettuce*.

THE first kind of Lettuce that groweth wild of it selfe without mans hand, is that which is commonly called *Caprina*. Goats Lettuce. This hearbe hath a propertie, that if it be thrown into the sea, it will presently kil all the fishes that approach neere vnto it. The milke iuice of this Lettuce being turned thick, and soon after mixed with vinegre, to the weight of two *Oboli*, and one Cyath of water put thereto, is giuen with good successe to those that haue the Dropfie. The stalks and leaues stamped, with some salt strewed among, and so applied as a cataplasme, do heale vp the sinews that be cut or wounded. The same herb being bruised together with vinegre, preferueth a man from the tooth-ache, if he vse two mornings euery moneth to wash his mouth with a collution made thereof.

A second kind there is of wild Lettuce, which the Greeks name *Efopus*. The leaues thereof being beaten in a mortar and with barley floure, applied as a pulsteffe, heale all vlcers: this groweth ordinarily in corn fields.

C A third sort coming vp in the woods, is named otherwise * *Isatis*. The leaues wherof being likewise beaten together with Barley-meale or floure aforesaid, cureth green wounds.

A fourth kind there is besides of wild Lettuce, named *Gladium*. Wood, wherewith diuers vse to colour their wooll. It might be likened to the wild Dock for the leaues, but that they be more in number, and of a blacker green withall. This hearb stancheth blood. It represseth and cureth the ferie and eating tertars, the cankerous and filthy vlcers also which run and spread ouer the whole and found parts: also it dissolueth swellings before they gather to an head, & tend to supuration. The root or leaues thereof be good against *S. Anthelmis* fire, applied in a cataplasme or liniment. It is a singular remedy also for the swelled & puffed spleene, and thus much for their properties in particular, respectue to each feuerall kind: but to speak generally of them all that grow wild, they agree all in this, that they be white; that their stem growes otherwise to the height of a cubit, that both it and the leaues be rough in handling. Of these wilde Lettuces, That which hath round and short leaues, some there be who call *Hieracia*; because that *Faulcons* and such like *Haukes* are wont to scrape and scratch this herb to get forth the iuice, wherewith they annoint and rub their eyes, and thereby recouer their sight, when they perceiue it to be darkened or dim. All the sort of them are full of a white iuice: & the same of the like vertue as is the iuice of *Poppies*. Ordinarily is this iuice gathered in harvest by incision of the stalk: put vp it is in new earthen pots neuer occupied, and so referred for many excellent effects that it hath. For first and foremost, being applied with womens milk, it healeth all maladies that the eyes be subiect vnto, as namely, it riddeeth away the cloudy webs therein, the cicatrices and scars: all filthy sores with a burnt roof ouer them, and principally disparteth the mist and dimnesse that troubleth the eye sight. It is vially also laid with a locke of wooll to the eyes, for to repress and stay the waterish humor that hath found a way thither: the same iuice, if one drinke it, to the weight of 2 *Oboli*, in vinegre and water, is a good purgation. Being taken in wine, it cureth the venomous stinging of serpents. To which purpose, the leaues being parched & dried against the fire, their tender stems also being bruised, are drunk with vinegre. A liniment made of them, is passing good against the pricking itch of scorpions; but peculiarly for the sting of the venomous spiders *Phalangia*, there must be wine and vinegre mixt therewith. Soueraigne defences also these wild Lettuces be, against other poisons; save those that kill by strangling and suffocation, or such as haue a special spight to the bladder, neither are they of any power against

F Ceruse or white lead. A cataplasme made thereof with hony and vinegre, & so laid to the belly, purgeth the rotten humors, & expelleth the worms thereof bred: their iuice is singular good for them that pisse with pain and difficulty. *Cratesus* prescribeth to giue the weight of 2 *Oboli* of the said iuice, in one Cyath of wine, to those that be in a Dropfie. Some there be who draw the iuice out of the garden Lettuce also for the same purpose, but not with like effect. The peculiar propertie:

It should seeme here to be deccied: for *Isatis* is the same that *Gladium* is. Wood, and the wilde thereof indeed is leaved like Lettuce which was the occasi on of his error.

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* For that be-
ing eaten with
meat, it ma-
keith the breath
sweet.

As for another wild kind, some call it *Hedynois, & that hath a broader leafe than the rest. Being foddren, it is astringent and will strengthen a weak stomack, and eaten raw, it bindeth the belly, and staith the lask. Hefome it is for such as haue the bloody flux, the rather if it be taken with Lentils. In sum, as we saw as foddren, both kinds, the one & the other, help those that haue cramps and ruptures. Comfortable it is likewise to such as vpon occasion of debility or sicknesse, haue their nature or feed run from them against their wills.

Touching Cichory of the garden, which is very like vnto the LeCucce, there be two kinds thereof, but the green that seemeth to be of a wilde and sauage nature, is the better: of a more brown and duskyish colour it is, and a Summer herb only. The other indeed is whiter and continueth all winter, howbeit worse of the twaine: and yet both the one and the other, are right comfortable to the stomack, especially when it is overcharged with waterish humors. Beeing eaten in a salad with vinegre at meat, they refresh and coole mightily: so do they also in forme of a liniment, and by that means resolute other humors besides those in the stomack. Generally the roots of all wild Cichories being foddren with barley gouts to a gruel, and so supped off do comfort a weak stomack. Being reduced into a liniment, & applied to the region of the heart aboue the left pap, with vinegre, they cure the trembling thereof, and the faint cold sweats that break out vpon weaknesse. All the sort of these Cichories as well tame as wild, being taken in broth each other day, be good for gouty persons, for such also as reach and cast vp blood, shed their sperm or haue the running of the reins. Howbeit *Petrus Diodorus* in his booke intituled *Contradictions, utterly condemned the garden Endiue Seris, and alledged many reasons and arguments to confirme that position of his, howbeit the whole collige of all Physicians be- sides stand against him.

CHAP. IX.

¶ Of Garden Coleworts, *Lappins*, Sea Coleworts, or *Seldanella*, of *Squilla*, of other bulbous roots, as the Potatoes: and of Balsium.

The commendable proprietie of the Colewort are so many, that it were a long labor to decipher them all, considering that both *Chrysippus* and *Diocles*, two Physicians, haue compiled each of them a booke particularly of this herbe, wherein they haue collected their vertues, as they be appropriat and respectiue to euery part of mans body, yea and before all others, *Pythagoras*, and after him *Cato*, haue as amply set out the praises thereof. As for *Catoes* opinion and judgement of the said herb, I am the more willing in this place to set downe and follow diligently, because it might be knowne what simples and what drugs they were which the old Romans vsed for their Physicke * 600 yeres after the foundation of the city. The Greeke writers of greatest antiquity, haue made three kinds of Coleworts; to wit, the crisped or ruffled cole, which they called *Selinas* or *Selinoides*, for the resemblance that the leaues haue to Parsley: these Coleworts be good for the stomack, and gently loosen the belly. The second sort is named in Greeke * *Lea*, with broad leaues springing forth from a great stem: whereupon some haue giuen it the name of * *Caulodes*: these worts are to vs use at all for Physicke. The third is properly called by the name of *Crambe*; very well stored with leaues this is, but those are smaller than the rest, simple also & plain: better besides this Cole is in comparison of others; but most effectual in Physick. Howbeit, *Cato* preferreth before all, that which is crisped and frizled: next vnto it, the smooth Cole, with the large leaf & big stalk. He commendeth the Colewort (stamped raw together with vinegre, honey, Coriander, Rue, Mints, and the root of *Lafer*) to be singular good for the head-ach, the mist and dimnesse of the eyes, the appearance of sparkling mores before them, the stomack and precordial parts; if a man take fasting. 2 Acetables of this composition. And he saith moreover, that this confection is so foueraign, that they who do but bray and beat the ingredients, shall sensibly find themselves mightily comforted and fortified thereby. And he concludeth withall, that Coleworts may be either stamped together with the foresaid species, and so taken in a supping; or els be eaten, first dipped and foked in the forenamed liquor: as also that a liniment made of them, together with Rue, a little Coriander, some few corns of salt, and barley meale, is foueraign to assuage the paines of any gout, be it in feet, hands, or any other ioint whatsoeuer. Moreover, that a decoction made thereof, doth wonderfully comfort and fortifie the sinewes, yea and mitigate the arthriticall griefes or ioint-ach,

* For about
that time *Cato*
liued.

* *Lea* smooth
and plain:
* *Lea* The stem-
mic Cole.

A if the parts be tormented therewith.ouer and besides, a fomentation made therewith, is singular for all fresh wounds, old vlcers, yea and cankers, which could not possibly be repressed or healed by any other medicines: but he appointeth first that they be bathed in hot water, and then a cataplasme of the said worts to be laid vpon the afflicted place, and the same to be refreshed twice a day. By which manner of cure, he saith, that fistulous sores may be healed: dislocations set straight, swellings and imposthumes drawn outward to an head; or otherwise where need is, discolled & rescolled, before they tend to suppuration. He addeth moreover & saith, that whosoever eat good store of loddren Coleworts, together with oile and salt fasting in a morning, shall fall to sleep again in the night if they were before overcharged with watching, & in their sleep shall not be troubled with dreams or other vnquiet fancies and imaginations. Furthermore he affirmeth, that worts twice boiled are excellent good for the torments and wrings of the belly, so there be ioyned to the second decoction, oyle, salt, cumin, and barley groats; and thus being eaten without bread, they are the better among other effects that these Coleworts do work, this is not to be forgotten that they purge cholerick humours, being taken with sweet growine wine. More than that, he auoucheth, That if his wine, who vs to feed of Coleworts, be reserved, it is singular good for the sinews, if the griued part be bathed therein after it is made hot again. But because you should fully vnderstand his meaning, I care not much to set downe his very words for to expresse the same the better. If (quoth he) you wath little children with the said vrin prepared in manner aforesaid, they will neuer be weak and feeble in their liues. He aduiseith moreover, to diop the juice of Coleworts warme into the eares with wine, and assureth vs that it is good for them that be hard of hearing. Finally, that ringworms, nettles, itch, and dry scabs (such as be not exulcerat) are healed thereby.

Now concerning the opinion of the Greeks also, as touching Coleworts, I thinke it meet to set them down for *Catoes* sake, I mean touching those points only that he ouersaiped and omitted. First and forme of these, the Greeks hold, that the Colewort being not thoroughly foddren, purgeth choler & keeps the body soluble, howbeit twice foddren, it bindeth the belly. Item, That it is contrary to wine, and a very enemy to vines. And more particularly, if it be taken fasting, or in the beginning of a meale before other meat, it preserueth a man from drunkennesse, and eaten after meat when a man is drunken indeed, it riddeth away the fumosities in the brain and bringeth him to be sober. Also, that it is a meat appropriate to the eyes, and cleareth the sight very much; inso much as the iuce of it raw is passing foueraign for that purpose, in case it be mingled with the pure Atticke hony into an eie-salue, and therewith the corners of the eyes be but touched only. Moreover, that it is passing light of digestion, and clarifieth all the senses, if it be ordinarily eaten. *Erasistratus* and all his schoole, doth ring and resound again with one voice and open mouth, That there is nothing in the world better for the stomack, nothing more wholesome for the sinews, and therefore with one accord they prescribe the vse thereof, for those that haue the pallie or resolution of the nerues; for as many as be troubled with the trembling and shaking of their limbs, to such also as reach & cast vp blood. *Hippocrates* giueth counsell to them that be afflicted with the bloody flux or exulceration of the guts; to those likewise who be subiect to the flux proceeding from the weaknesse of the stomack, for to eat it twice foddren with salt. Also he prescribeth it in the cure of Tinesmos (which is a prouocation or extraordinary appetite to sleepe, without doing any thing;) and of the paine in the back or reines. And he is of this judgement, That women in childbed shall be good nourses and haue plentie of milke, if they eat of Cabbages or Coleworts; yea and women in general, by feeding therewith, shall see their monthly termes duly. As for the Cole it selfe, if it be chewed raw, it is (by his saying) of force to expell a dead infant in the wombe. *Apollodorus* holdeth resolutely, That either the feed or iuce thereof taken in drinke, is a singular remedy for them who suspect that they haue eaten venomous mushrums. *Philisition* giueth the iuce thereof in Goats milke, together with salt and honey, vnto such as haue a cricke or cramp drawing their necks backward, that they are not able to turne their heads. I find moreover, that by eating Coleworts at meat ordinarily, and by drinking the decoction thereof, many haue been deliuered from the gout. It is an vsual medicine and approved by experience, to giue it with salt for the fainting sweats & trembling of the heart, as also for the falling euill. Such as be troubled with the spleene, finde much ease thereby, if they continue drinking the iuce thereof in white wine at their meals forty daies together; like as those that be sped with the yellow jaundie, or in fits of frensie, be cured

F

with

with gargling & drinking juice of Cole-roots raw. But against the Hocquet or Yex, there is a notable medicine made with it, together with Coriander, Dill, hony, pepper, and vinegre. If the pitch of the stomacke be annointed therewith, the Patient shall evidently perceiue, that it will dissolue the wind and putting ventosities therein. Also, the very water of the decoction incorporate together with barley-meale, vnto a liniment, is singular good for the stinging of Serpents, and mundifieth filthy old vlcers: to which purpose also serueth the juice thereof, applied with vineger and Foenigreek. After the same manner, some make a cataplasme, and apply it to goutie joints. The bloody, falls and blistering chilblanes, and generally all humors that ouer-run the body and fret the skin, are allayed by the application aforesaid. In like manner, the sudden mists and dimmeff which commeth ouer the eie-sight, is dissolued & dispatched clean, in case one do no more but chaw this herb in vineger. A liniment made with it and * brimstone together, helpeth the black and blew spots of dead brused blood lying vnder the skin, and reduceth them to their owne colour. But if round alume and vineger be joined therewith, it cureth the white leprosie, and dry scab [called of some *S. Magnus* euill.] And in that manner prepared, it keepeth the haire fast that is ready to shed. *Epicharmus* saith, That this herb is soueraigne good to be implaistred vpon those tumors and swellings that be incident to the priuy members, and the rather, if the said implaister be made with bean meale. The same being applied with Rue, is good for convulsions or crampes. Moreover, there is a medicine prescribed to bee made of Coleworts and Rue-seed, against the extreme heat of feuers ardent, as also for the defects and infirmities of the stomack, and to send out the after-birth in women newly laid. The powder of Colewort leaues dry, doth expell or euacuate one way or other, the venom left behind by the biting of the hardy threw-moule. Of all kinds of Coleworts, the sweetest and most pleasant to the tast, is the * Col-flory, although it be counted good for nothing in Physick, and besides vnto wholsome, as being hard of digestion and an enemy to the kidneys. Ouer and besides, I must not forget this one thing of Coleworts, That the broth or decoction thereof (so highly praysed for many good vices that it is put vnto) if it be poured on the ground, bath but a stinking smel with it. Wort-floes being dryed and burnt into ashes, is thought to be a caustick medicine or potentiall cautery. The same ashes mingled with old greafe and reduced into a cataplasme, helpeth the pain of the Sciatica: but with Lafer and vineger, it is a depilatory, (i.) keepeth the hayre from growing againe where it was once fetched vp by the roots. The sayd Colestocke ashes set ouer the fire vntill it suer only, or haue one warme at the most, and so drunk with oyle, or otherwise foddene, and the decoction taken alone without oyle, is good for Spasmes and crampes, for inward bruises, and for such as are false from some high place. Lo, what a number of prayse-worthy vertues are recounted of Coleworts! And is there (I pray you) no fault to be found with them? are they blamelesse? ywis no: for euen those writers who extolled them so highly, note them for making a stinking breath, and for hurting the teeth and gums: in so much as in Egypt, they be in so bad a name for their bitteresse & vnpleasant tast, that no man knoweth how to eat them. But to come again vnto *Cats*, he commendeth the effects of the wilde or wandering Colewort infinitely aboue the rest; in so much as he affirmeth, that the powder of it dried, being gathered and incorporat with some conuenient liquor into the forme of a pomander, or otherwise strewed vpon any poise or nosegay, so as it may be receiued and drawn vp into the head by the nostrils, cureth the * filthy vlcers growing therein, and the stinking smel that commeth from them. This Cole-wort, others call *Petræa*, and this is that which of all the rest is most aduerser and the greatest enemy to wine; this is it that the vine (by a secret Antipathie in nature) doth especially auoid, if it haue room to decline from it; but in case she cannot shifte from it, she dieth for very griefe. This plant hath the leaues growing two by two together, and those small, round, smooth, and liker indeed to the young plants of * Beets than to other Coleworts; whiter also it is, and more rougher clad with a moflie downe, than is the garden Colewort. *Chrysippus* writeth, That it is a soueraigne medicine for flatuositie, and such as be oppressed with melancholy: that it is a singular salve for fresh wounds, being applied with hony; but with this charge, That the plaister be not taken off in seven daies. Also, if it be stamped and applied with water, it is an excellent cataplasme for the Kings euill, and fistulous inward vlcers. Other Chirurgions and Physitians do affirm, that it represseth running & corrosiue sores which eat into the flesh, such as the Greeks name *Nomus*. Item, that it doth extenuate and resolueth all excrecence of proud, ranke, or dead flesh; yea, and it doth incarnate, heale vp, and skin very faire without

* Cam Sulphure illita.

* Gyna.

* Some call it Petrea.

* Oleria.

A without skar, by their saying. Moreover, if it be chewed, or the juice thereof gargarisd with hony, so that the herb were foddene before, it cureth the sores in the mouth called cankers, as also the mumps and inflammation of the kernels in the throat, called amygdals, or almonds. Semblably, if a man take three parts of this herbe, with twaine of alume, and together with Vinegre make a liniment thereof, it will cleanse the inueterate dry scab, and the mortified leprosie. *Epicharmus* is of opinion, That for the biting of a mad dog, a man need doe no more but lay to the fore a cataplasme of this herb alone: but surer it were (saith he) and more effectual, if Lafer and strong sharp vinegre were ioyned thereto. He addeth moreover and saith, That if it be giuen to dogs with some piece of flesh it will kill them. And yet the seed being parched is a remedie against the sting of serpents, and a countre-poison to venomous Mushrooms and Buls blood. The leaues boiled and giuen with meat, or otherwise raw and made into a liniment together with brimstone and nitre, help those that be diseased in the splene. The same liniment mollifieth the hard swellings of womens breasts. The ashes of the root being burnt cure the vula, or swelling of the weill in the throat, if it be but touched therewith. Also a liniment thereof with hony applied to the inflamed kernels behind the eares, represseth them, yea and healeth the stinging of serpents. I haue not yet done with the Colewort and the vertues thereof; but one instance more I will giue you, to proue the wonderfull force and effect that it worketh. If any brasse pot caldron, or such like vessel wherein we vse to seeth water ouer the fire, haue gathered in continuance of time a fur or crust baked within, such as by no washing or scouring can be rid away, bee the same neuer so hard, deep setled, and inueterate; boile but a cabbage or Colewort in it, and the same will pill and go from the pot sides.

C Among wild worts we may place *Lapfana*, a plant growing to the height of a cubit, bearing a furred or hairy leafe, like for all the world to the Navey, but that the floure is whiter. This herb is commonly foddene and eaten in pottage, and so taken it moderately loosneth the belly.

The fea Colewort (otherwise named *Soldanella*) of all others purgeth most forcibly: in regard of which acrimony that it hath to stir the belly, Cookes vse to seeth it with fat meat and yet is it most contrary to the stomack.

Touching Squills of Sea-Onions, Physitians hold that the white is the male, and the blacke the female: but the whitest of them be euer best and of most vse. The manner of preparing and dressing them is after this sort: First, the dry tunicles or skins being pilld off, the rest, which is quick and fresh vnderneath, must be cut into slices, & so inslaid vpon a thred along, with a pretty distance between euery one, and hanged vp to dry: afterward, when the morcels be sufficiently dried, they are to be put, hanging still as they did by a string, into a barel or vessel of the strongest and quickest vineger that can be gotten, and therein they must hang so as they touch no part of the said vessel: but this would be set in hand with 48 daies before the summer solstice.

Which done, the barel of Vineger before said being well luted and stopp'd close with plaister, must be set vnder a rooffe of tiles, to receiue the heate of the Sun all the day long from morning to night. Now when it hath bin thus sunned so many days as are before named, the vessel is removed from vnder the cale of tiles, the Squilla taken forth, and the vinegre poured out into another vessel. This vinegre clarifieth their eie-sight who vse it: comfortable it is to the stomack and sides, and draweth their paine, if it be taken in small quantitie once in two daies: for if a man should dring ouer-liberally of it, so forkein it is that it would take away his breath, and cause him to seeme dead for the time. Squilla chewed alone by it selfe is wholsome for the gums and teeth. Being drunk with vineger and hony, it chafeth out of the belly the long flat worms and all other such like vermin. If it be but held vnder the tongue while it is Greene and fresh, it allaieth thirst in the dropick, and causeth that the Patient shall desire no drink. The boiling of Squilla or the sea-onion is after many sorts: for some, after they haue either well luted, or els greased it all ouer with fat, put it into a pot of earth, and then set it into an oven or Furnace to be baked. Others slice it into gobbets, and so seeth it between two platters. Some take it green and dry it, then they cut it in pieces and boile it in vineger; and being thus vsed and

F prepared, apply it to the places which be stung with serpents. Others againe roist it first in the embres, and after they haue cleanse it from the vntoost pilling, take the best of it only in the mid, and seeth the same again in water. Being thus baked and sod both, it serueth to be giuen in a dropick. And if it be drunk to the quantitie of three Obolus with hony and vinegre, it prouoketh trine with ease. In like maner, this composition is good for those that be troubled with

the spleen, or haue weak and feeble stomacks, or be troubled with gnawing and pain therein, such also as cannot hold their meat, but it will floure above and come vp again: provided alwaies, that there be no vicer within the body. Moreouer, it is excellent good for the wringing in the guts, the jaunice, the old cough, with shortnesse of wind. The leaues emplastred resolueth the wens, or swelling kernels in the neck, commonly called the Kings eul, but they must lie some daies before they be removed. Being sodden in oile and reduced to a liniment, and so applied, it mundifieth the skurfe or dandruffe of the head, the running skalls likewise that are bred there. It is vsed also (boiled vp with hony into a certain cōfection) taken with meat for to helpe digestion, and in that sort it purgeth the intrals, sodden in oile and tempered with rosin, it heales the chaps and clifts in the feet. The seed of Squilla implastred with hony vpon the reins of the back or the loins, easeeth the pains. *Pythagoras* was of opinion, and so reported, that if the Squilla or Sea-onion were hanged vp in the entry of any dore, it kept out all charms, enchantments, or forceries. And thus much of Squilla.

Moreouer, the plants called Bulbs, being applied in form of a liniment, with brimstone and vineger, do cure the wounds of the visage: and stamped by themselves alone, and so laid to, they help the contraction or shrinking of sinues: and if there be wine added thereto, it clenseth the dandruffe in head, beard, and eye-browes: but applied with hony it cureth the biting of mad dogs: howbeit *Erastophilus* taketh pitch in stead of hony for the said purpose: who writeth besides, That a cataplasme of them and hony together, stancheth blood in a green wound: but others ioyne Coriander and corn-meale to the rest, properly for bleeding at the nose. *Theodorus* cureth wild tetteris and ring-wormes therewith, being applied with vineger: and with styptick harsh wine, or an egge, he vseth it for the breaking out in the head. Moreouer, a liniment made of Bulbs he applieth about the rheumatick humors that fall to the eyes, and by that means cureth those that be bleere-eyed. Semblably, the red of this kinde especially reduced into a liniment, and first incorporat with hony and nitre, taketh away all the spots and blemishes that disfigure the face, if they be anointed with it in the sun: but with wine and Cucumber sodden they rid away also the red pimples. They be wonderfull good of themselves alone for green wounds; or with honied wine (according to the practise of *Damian*) so they be not removed in fūe dayes; and he was wont therewith to cure cracked eares also, and the flatuous flegmatick tumours of the cods. Others there be who apply them with meale mingled among, to assuage the pain of the gout. Sodden in wine, and so applied as a liniment to the belly, they mollifie the hardnesse in the precordial parts and midriffe: and for the bloody fluxe, a drinke made thereof, together with raine water and wine, is a singular remedy. Being taken in pils as big as beanes, with Silphium, they are foweraigne for the contraction of nerues or inward crampes within the bodie. Stamped into a liniment, they restrain immoderate sweats that be diaphoreticall. Comfortable they be to the nerues, and therefore they are prescribed and giuen in case of the palfie. Those with the red roots being made into a cataplasme with salt and hony, doth speedily cure the dislocations of the feet that be out of ioynt. The bulbs of Megara especially do prouoke lust. As for those that be called Hortensij, taken with Cuit wine or Bastard, make speedy deliuerance of the child out of the mothers belly. The wild bulbs brought into the form of pils, with Laserpitium, and so swallowed downe, do heale inward wounds and other maladies of the intrals. The seed of the garden Bulbes in wine, is a good potion against the sting of the spiders called Phalangie: and the roots with vineger serue for a liniment against the stings of other serpents. The ancient physicians in times past were wont to giue the seed in drinke to them that were out of their wits. The floure of these Bulbes being bruised into a Cataplasme taketh away the red dappled spots in their legs who haue sit nere the fire and burnt their shins. But *Dioles* is of opinion, that all these bulbous plants do dim the cie-sight: who saith moreouer, That they are not so good boiled as roasted: and yet be they all (saith he) hard of digestion more or lesse, according to the nature of each one that eateth them.

There is an herb which the Greekes call Bulbine, with a red bulbous root, and leaues resembling Porret: of which there is a singular good faile made for to heale green wounds, but none els. To conclude, as touching the bulb called Vomitorius (of the effect that it hath to prouoke vomit) it hath blackish leaues, and those longer than the rest.

CHAP.

CHAP. X.

¶ Of Garden Sperages, and the wilde Sperage Corruia: of Lybicum and Hormenim.

OF all Garden herbs, the Sperages are (by report) the best meat to be eaten, and agree passing wel with the stomack, and verily being taken with Cumin, they dissolve the ventosities in the stomack, and dispatch the wind cholick, and withall they cleare the sight passing well. Kindly do they mollifie the belly and keep it soluble. If they be sodden in water, and a little wine put thereto in the boiling, and so giuen to drinke, they are very good for the pain of the brest & the backbone, for the diseases also within the guts. If one take the weight of three Oboli of the seed, and as much of Cumin, and so drinke it in some conuenient liquor, hee shall find a singular remedy for the pain of the reins, hanch, and loines. Garden Sperages sollicit vnto the game of loue, and procure good deliuerance of vrine; for which they had no fellow, but for feare that they will fret and exulcerate the bladder. Most Physicians doe highly commend their roots bruised and taken in white-wine, for to expell the stone and grauell, as also to allay the pains of the reins, flanks, and loins. Some there be, who giue to drinke in some sweet wine the said root, for the grievous pains of the matrice; and the same being well and thoroughly boiled in vineger, is a foweraigne remedy for the leprosie, to as many as will vse to drinke the said decoction. If a man be anointed with Asparagus or garden-Sperage, stamped together with oile and so made into a liniment, there will not (by report) a Bee come nere for to sting him. The wild Sperage, some name it Corruia, others Lybicum, but the Athenians call it Hormenim: this herb is more effectuell in all those matters above rehearsed than the former, & the whiter that it is, the greater force it hath. The jaundice it doth dissipate and driue away. When it is sodden in water, the decoction thereof to the quantity of a wine pint or somewhat lesse, is usually prescribed to them that desire to performe the act of generation lustily. For the same purpose also, the seed thereof and Dill, of each three oboli, is counted very good beeing taken in drinke. The iuice therof boiled, is giuen against the stinging of serpents. The root of it and Fennell together, is thought to be most singular and of greatest efficacy in that case: for pissing blood, *Chrysippus* prescribeth to giue in two cyaths of wine for fūe daies together, three oboli of the seed of Asparagus, Parsley, and Cumin; but he saith withall, That this medicine is nothing good for the dropsie, notwithstanding that it is diuretical and prouoketh vrine. Also that it is aduerse and contrary to the delights of *Venus*, yea and to the bladder, vnlesse the same ingredients be sodden, and yet will that decoction kill dogs if it be giuen to them. To conclude, the iuice drawne out of the root therof, being first boiled, and so held in the mouth, is good for the teeth.

CHAP. XI.

¶ Of Parsley, wild Ach, of Smalbach, and Ach of the mountains.

Parsley is in great request, and no man lightly there is so loweth it: for nothing is there more ordinary, than to see large branches of Parsley good store, swimming in their potage: and commonly you haue not a salad or sauce serued to the boord, you see not a peece of meat farced or seasoned, but Parsley carrieth therein a great stroke, and contenteth euery body.ouer and besides, if it be applied as a liniment, together with hony vnto the eyes, so that they be fomented also: cuer and anon with the hot iuice of Parsley boiled, it is a singular remedy for the humours distilling thither. Also if it be stamped by itselfe alone, or els with bread or barley groats, it wonderfully helpeth the defluction falling vpon any other part, if the same be laid vpon the place affected in manner of a cataplasme. Moreouer, if a man perceiue that the fish in any pond or stew do milke and grow sickly, it is a common practise to giue them green parsley to scoure and refresh them. Howbeit, for all that Parsley is so good, there is not an herb growing vpon the face of the earth, that learned men varie and disagree in opinion more about, than they do in it; & yet they hold all, that there is a distinct difference therein by the sex: for Parsley there is both male & female; many which is the one & which the other, they accord not. *Chrysippus* saith, That the female hath more crispe & curled leaues than the male, and those boistrous & hard, that the stalk is thick, & the taste of the herb biting & hot. *Dionysius* describeth it

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to be more blackish, hauing a more stubbed & short roote, & that it is apt to breed little worms. Both of them jump in this, that it is not to be admitted to the table, nay, they forbid to eat of it at all. Making a matter of conscience once to touch it as a meat, and why for because, forsooth, it is one of the viands ordained to be serued up at funerrall feasts.ouer and besides, Parsley is thought to be an enemy to the eyes, and to trouble the sight. Also that the stem of the female ingendred grubs & such like worms; and so, whosoever eateth thereof, man or woman, shall thereby become barren. Moreover, they affirm, that if women newly deliuered, or such as nurse children, doe eat of Parsley, the babes that suck and draw their breasts, shall be subiect to the falling sicknesse. And yet of the two, the male is lesse hurtfull: which is the very reason that it is not condemned among the forbidden herbs and such as be held vnlawfull to be eaten. Parsley being laid as a cataplasme to womens breasts, doth mollifie their hardnesse, & break the kernells. It giueth a pleasant tast to any water wherein it is sodden: the iuice of this herb, & especially of the roote being taken in wine, doth mitigate the pains in the loins and flanks: and being dropped into the ears, cureth the hardnesse of hearing. The seed of Parsley moueth vrine, draweth downe womens floures, and fetcheth away the after-birth. Seeth the said seed, and with the decoction bath the black and blew marks remaining after stripes or drie blows, it wil bring them to their own colour again. The same being laid as a liniment with the gleire or white of an egge vnto the reins of the backe, or being sodden in water, and the broth drunken, easeeth their paines and strenghtneth them. Being bruised & vsed in cold water by way of a collution, it cureth the cankers or vlcers in the mouth: the seed drunk with wine, breaketh the stone of the bladder: so doth the roote of it also if it be giuen in old wine. Also the said seed in white wine cureth the iauine.

* It seemeth
that the mea-
sure by Apia-
strum is kind of
Rauensculet,
a Crow-foot,
called Flam-
mula, out
Sporewort,
or Apian rifo.

As touching our wild Ach, which we call in Latine * Apiastrum, Hygins verily nameth it Meliophyllon. A venomous herb this is in Sardinia, and by all writers confession vtterly condemned: for surely I cannot chuse but range together in one rank all such as seem to depend vpon one name in Greeke.

But Alsanders, which the Greeks terme Hippofelinum is a good counterpoison against the biting of Scorpions. If the seed be taken in drink, it cureth the wrings & torments of the guts. The same being boiled and drunk with honied wine, helpeth the Strangurie and difficulty of making water. The roote sodden in wine, expelleth stone and grauell by vrine: it putteth away also the paine of the loins, flanks, and sides. Taken in drinke, or applied as a liniment, it healeth the biting of a mad dog. The iuice thereof in drinke, heareth them that are ready to chill and be frozen with cold.

* Whereby,
someread Or-
thoglossum.

A fourth kind of Ach or Parsley some haue made that, which the Greeks call Oreofelinum. A plant this is, growing to the height of a span, and * upright. The seed resembleth Cumine, and is found effectuell to procure vrine and prouoke womens termes. Finally, as Smallege hath a propertie and vertue by it selfe to heale the pricke or iting of the venomous Spiders: so this mountaine Ach or Parsley of the hill, being taken in wine, is as effectuell to bring down the naturall purgation of women.

CHAP. XII.

Of Stone-Parsley, named Petroselinum: and of Basil.

There is another kind of Ach or Parsley growing vpon rocks, which some call Petroselinum. An excellent herb for soule imposthumes and botches, vsed in this manner: take 2 spoonfulls of the iuice thereof, put it into a Cyathe of the iuice of Horehound, and mingle all together in three Cyaths of water, and so drink it hot. Some haue set in the range of these Aches, that which is called Buselinum: which differeth from the garden Parsley, in that it hath a shorter stalk, and a roote of red colour: but of the same operation and effect it is. For both taken in drinke, and applied as a liniment, it is of great power against the iting of serpents.

Also, Chrysippus mightily crieth out vpon Basil, as being hurtfull to the stomack, suppressing vrine, and an enemy to a cleare sight. Moreover, he saith, that it troubleth the brains, and putteth folk besides their wits: that it bringeth the Lithargie vpon as many as vse it, and breedeth opilations and diseases in the liuer. In which regard he saith, That Goats by a secret in Nature doe refuse and eschew it, concluding thereupon, that men also should take heed thereof and auoyd it. Some there be who haue not done with it so: but adde moreover and say, That if Basil

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A stamped and put vnder a stone, it will breed to a serpent: if it be chewed in ones mouth and layd abroad in the Sun, it will ingender worms and magots. The people of Africk are verily perswaded, and so they giue out, That if one be stung with a scorpion the same day that he hath eaten Basil, it is vnpossible for to scape with life. Likewise some hold opinion and would beare vs in hand, That if a man stamp a bunch or handfull of Basil, together with ten sea crabs, or as many crafishes of the fresh water, all the Scorpions thereabout will meet and gather together about that bait. Finally, Dioscorus in his Empiricks or book of approued receits and medicines, saith, That the eating of Basil ingendred lice. Contrariwise, the later writers and modern phisitions defend & maintain the vice of Basil as stoutly as the other blamed it: for first they auouch constantly, That Goats vse to feed thereon. Secondly, That no man was euer known to go beside himselfe who did eat thereof. Thirdly, That Basil taken in wine, with a little vinegar put thereto, cureth as well the iting of land scorpions, as the venom of those in the sea. Moreover, they affirme vpon their knowledge by experience, That a perfume made of Basil and vinegre is singular good to recoore and fetch them again that be gon in a swoond. Also, that in the same manner prepared, it rouseth and wakeneth those that be in a lethargie and sleep continually; yea, and mightily cooleth and refresheth them that be inflamed & vna burning heat. A liniment made with Basil, oile of Rose, or oile of Myrtles in stead thereof, with vinegre, aslwageth the paine of the head. Moreover, being laied to the eyes with wine, it staith the waterish rheume that runs thither. Furthermore, comfortable it is to the stomack (as they say) for being taken with Vinegre, it dissolueth ventosities, and breaketh wind by rising vpward. Being applied outwardly, it bindeth and staith the running out or flux of the belly, and yet it causeth free passe of vrine in abundance. After the same manner it doth good in case of launie and dropsie. It represseth the rage of choler that moueth both vpward and downward, yea, and staith all fluxions from the stomack. And therefore Philistho knew what he did well enough, when he gaue it to those that were troubled with the stomackish flux. As also Plinios was well aduised, in ministring it sodden, for the bloody flux, the exulceration of the guts, and the Collicke. Some there be who giue it in wine to them who run euer and anon to the close stoole, sit downe and do nothing: to those that reach and cast vp blood; yea, and to mollifie the hardnesse of the precordial parts. Being laied as a liniment to the nurses paps, it restraineth the abundance of milk, yea and drieth it vp. There is not a better thing in the world for to be dropped into the eares of little babes and sucking children, and namely with goose-grease. If the seed be bruised, and so snuffed or drawn vp into the nostrils, it prouoketh sneezing. The iuice moreover laied as a liniment to the forehead, openeth the passages, that the rheumes or cold which lay in the head may breake away. Being taken at meat and dipped in vinegre, it mundifieth the matrice and natural parts of women. Mixed with Copperose or Vitriol, it taketh away warts. Finally it fettereth folk forward to venenous pleasure: which is the reason that men vse to lay Basil vpon the shap of mares or the Asses at the time of their couering.

CHAP. XIII.

Of * wild Basil, Rocket, Cressis, and Rue.

* Orysmatis,
Dioscor.

Wild Basil is endued with vertues and qualities seruing to all the purposes abovesaid: but the same is of better operation and more effectuell. And these properties ouer and besides it hath by it selfe, namely, To cure the weaknesse of the stomack, and those accidents which come by often casting or immoderate vomits. The roote thereof taken in wine, is singular good for the apostumes of the matrice, and against the biting of venomous beasts.

As touching Rocket, the seed cureth as well the venomous sting of Scorpions, as the biting of the hardy thiew. The same chafeth all vermin that be apt to ingender in mans body. A liniment made with it and hony together, taketh away all the spots that blemish the skinned of the face: and with vinegre represseth the red pimples whatsoeuer. The black or swart skars remaining after wound or sore, it reduceth to the former fair white, if it be applied with a beards gal. It is said moreover, that a potion thereof made with wine, and giuen to those who are to receiue punishment by the whip, will harden them in such sort, that they shall feele little or no smart at all by any scourging. And for seasoning of all kinde of viands, it hath such a pleasant grace in any sauce, that the Greekes thereupon haue giuen it the name of Euromos. It is thought

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moreouer, that a fomentation of Rocket, bruised and stamped somewhat before, quickeneth and clarifieth the eye-sight: it easeeth little children of the chin-cough. The root boiled in water, and so applied, draweth forth spils of broken bones. As touching the vertue that Rocket hath to procure the heat of lust, I haue spoken already: yet thus much more in particular I haue to say, that if one do gather three leaues of wild Rocket with his left hand, stamp them afterward, and so giue them to drinke in honied water, this drinke mightily prouoketh that way.

* *Spanders.*

As for Cresses they haue a contrary operation, for they coole and dull the heat of the flesh, howsoeuer otherwife they giue an edge to the wit and understanding, as heretofore we haue declared. Of these Cresses there be two kinds. The white is purgatiue, and the * weight of a Roman denier taken in water doth euacuate cholerick humors. A liniment thereof together with bean flower applied vnto the hard kernils called the Kings euill, is a soueraigne remedie therefore, so that a Colewort leafe be laid thereupon. The other kinde is more blackish, and purgeth the head of ill humors. It clenseth the eyes and cleareth the sight. Taken in vinegar it stayeth their brains that be troubled in mind: and drunk in wine, or eaten with a fig, it is singular good for the spleen. If a man take it fasting every morning with hony, it cureth the cough. The seed drunke in wine expelleth all the wormes in the guts: which it doth more effectually if wilde Mints be ioyned withall. With Originum and sweet wine it helpeth those that be short winded and troubled with the cough. The decoction thereof when it is foddren in goats milk, easeeth the pains of the chest or breast. Laid to as a Cerot with pitch, it resolueth puthes and biles, yea and draweth forth prickles and thorns out of the body. A liniment applied with vineger taketh off all spots and speckles of the visage: and if the white of an egg be put thereto, it cureth cankerous fores. Also being applied in forme of a soft vnguent to the spleen, it cureth the infirmities thereof: but if they be little infants that are troubled therewith, there must be hony also put thereto, and then is it excellent good. *Sextus* addeth moreouer and faith, that a perfume thereof burnt drieth away serpents, & berefteth the poison of scorpions: as also that being bruised and applied with Senie, it is a singular remedie for the head-ache, and to make haire grow againe where it was fallen off: also, being stamped into a cataplasme with a fig, and laid to the eares, it cureth the hardnesse of hearing. Likewise, if the iuice thereof be infused or poured into the eares, it easeeth the tooth-ach. Moreouer, a liniment made with it and goose-grease, scoures away the scales and dandrif, as also the scalls of the head. A cataplasme made of it and leuain, ripeneth fellons, bringeth carbuncles to suppuration, and breaketh them. With hony it mundifieth filthy corrosiue and cankerous vlcers that eat deepe into the flesh. A liniment thereof with barley gouts and vineger is good for the Sciatica and the pains of the loins: in like manner it cureth ring-worms and tetter: it mundifieth the roughnesse about the nailes, for it is of a caustick nature. The best Cresses are the Babylonian, and yet the wild are more effectfull than it in cases aboue named.

But Rue is an herb as medicinable as the best. That of the garden hath a broader leafe, and brancheth more than the wilde, which is more hot, vehement, and rigorous in all operations. There is a iuice usually pressed out of it, being first stamped and sprinkled a little with water in the stamping, and then put vp into a box of copper or brass, and then referred for to be vsed as occasion serueth: this iuice taken in a great quantity is a very poison and no better, especially that which is drawne out of the Rue which groweth in Macedony about the riuer Aliacon. But wil you heare a strange and wonderful thing? the iuice of Hemlock killeth this venomous qualitie of it. See how one poison is a countre-poison to another, in so much as if they annoint their hands with the iuice of hemlock, who are to gather Rue, they shall not be inuened with it. And yet as venomous otherwife as Rue is, it goeth into the composition of those Antidotes which are giuen against poison, especially that Rue of Galatia. And to speake in general, there are none of these Rues, but the leaues both bruised alone and also taken in wine, serue for preternatiues: and principally against the herb Aconite or Libard-bane, and the viscous gum of the herbe Chamaeleon, which they call Ixias: likewise against deadly and venomous Mithromes taken at the mouth, whether it be by way of meat or drinke. In like manner it is singular good against the stinging of Serpents: for the very VVaeals when they prepare themselves to combat with them, vse to eat this hearbe before-hand for to be secured from their venome. Available it is also against the prickles of Scorpions and Hardi-shrewes, against the stings of Bees, hornets, and wasps, against the poison of the Cantharides and Salamanders, yea and the

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A biting of a mad dogge, if it be vsed in this wise, namely, to take a saucer full or acetable of the iuice and so drinke it with wine: also to stamp or champ in the mouth the leaues thereof, and so lay them vpon the grieued place with hony and salt: or else to seeth them with vinegre and pitch. Folke say moreouer, that who soeuer is wel rubbed with the iuice of Rue, or otherwife do but cary it about him, that be sure ynough for being either pricked, stung, or bitten with any of those hurtfull and venomous creatures aboue named: furthermore, that Serpents naturally doe flie from the smoke or fume of Rue when it burnes, and will not come neer vnto it: but the most ioueraigne of all other, and surest in operation is the root of the wild Rue, if it be drunke with wine. And the common speech goeth of it, that the greater and speedier effect will be seene, in case forsooth one drinke it without the house, in the open aire abroad. *Pythagoras* was of opinion. B That there is a distinction of sexe in this hearbe, and namely, that the male hath smaller leaues, and those of a more darke and grasse green color than the female, whose leaues are both fuller and tatter fed, and also of a more pleasant and gaier hew. He was perswaded also that Rue is hurtfull to the eyes, but therein he was deceived. For well it is known, that engrauers, caruers and painters, doe ordinarily eat Rue alone for to preclude their eye-sight, they take it also with bread or Cresses, without any regard whether it be the wild or the gentle Rue of the garden: by report also, many haue vsed anunction thereof to their eyes, with the best hony of Athens, and thereby cleared them quite of that muddiness and mist which dimmed their sight, or else in stead of hony they haue taken breast-milke of a woman that lately bare a maiden-child: or no more but with the very pure iuice of rue and nothing els they haue gently touched the corners of the eyes: others haue cured the waterie humor that hath taken a running thither, only by applying the iuice of Rue together with Barley groats. If a man drinke Rue with his wine, he shall find ease of his head-ach: or if he doe but annoint his temples and forehead therewith, being incorporat with vinegre and oile of Roses into the forme of a liniment. But if it be an old and inueterat pain of the head, then would there a frontale be made of the said iuice, tempered with Barly floure and vinegre. Rue hath this vertue, to disperse and resolve all crudities and ventosities proceeding thereof, yea, and cureth the ferted old paines of the stomach. It is of power to dissipate or open the matrice: to settle the Mother into the right place when it is loose & out of frame, in case a liniment be made thereof, and laid al ouer the region both of the womb and the breast. If Rue be eaten with figs, or foddren to the consumption of the one half-deale, & the decoction thereof taken in wine, it is good for the dropsie. And in that manner they vse to drinke it for the paines of the breast, sides, and loines: for coughs also, and shortnesse of breath and generally for all griefes and maladies incident to the lights, liuer, and kidneies: and last of all, for the shaking cold fits in an intermittent ague. Is a man disposed to drinke freely, and to sit square at it: let him before he beginne take a draught of the decoction of Rue leaues, he shall bear his drinke well, and withstand the fumes that might trouble and intoxicate his brains. In one word, vsed ordinarily at meat, either raw, foddren, or preserved and condite any way, it is singular good for the purposes aforesaid. Boiled with Hyssope and taken in wine, it is singular for to assuage the torments of the belly: and being so prepared, it restraineth the flux of blood within the bodie like as it stancheth bleeding at the nose, if it be stamped and put vp into the nosethrils: and otherwise a collution thereof to wash the mouth withall, doth much good to the teeth. Specially, the iuice distilled into the eares, allaieth their pain, provided alwaies (as I haue often said already) that a mean and measure be kept. As for the iuice of the wild Rue, if it be tempered either with oile of roses or of baies, or els mingled with Cumin & Honie, it helpeth those that are hard of hearing, & disceuseth the ringing found in the eares. Moreouer, the iuice of rue stamped and drawne with vinegre, is excellent good to be infused or let drop from on high by way of Embrocation vpon the region of the brain and temples of the head, for the phrensie. Some put thereto wild running Thyme also and baies, therewith annointing the head and neck of the patient. Others haue prescribed it in case of Lerhargie to those that can do no other but sleepe continually, for to smel vnto. And those haue giuen counsell also to them that be subiect to the falling sicknesse, for to drinke the iuice thereof foddren in foure Cyaths of water, before the fit came on them: for to prevent and auoid the intolerable cold which they should endure: as also to those that be apt to * chill for cold, to be eaten with meat, raw. Rue sends out euen the bloudie vine, which is gathered into the bladder. And as *Hippocrates* is of opinion, if it be drunke with sweet thicke, and grosse wine, it causeth womens floures to come downe, it expelleth the after-birth,

* Also. Some read Alphidia, [out of Disfida] that is, so them that are subiect to the white Mor-phew, which is a kind of Leprosie, or S. Magaw euil

alliaeth the swelling of womens breasts. In case of head-ach, a liniment thereof doth well to be G
applied to the temples. Inwardly it is taken with very good effect against the venomous Scolo-
pendres, the sea Scorpions, and other serpents. A liniment thereof liaeth the waterish humors
that haue taken a course to the eies, cures the skulls and breakings out of the head, and all acci-
dents offensive to the twiill or fundament. If one doe hold Mints in his hand, he shall not need
to feare either chafing or galling in any part, vpon trauell. Being dropped into the eares with
honed wine, it is very comfortable to that part. It is said moreover, that if a man come into a
garden where Mints groweth, and bite the leaues vpon the very plant, without plucking or crop-
ping it off, and continue this course 9 daies together, iterating euermore these words [*I doe this*
to cure this fleane] he shall find remedy indeed for the infirmity of that part: moreover, let one take H
as much powdered mints dried as he can wel contain with his 3 fingers ends, and drink the same
with water, it will cure the head-ach or grievous paine of the stomack. Likewise if this drink be
spiced with the said powder, it will drive out of the belly the wormes there engendered.
It hath also a great use in ouri and allfe viols with vinegre, for

[illegible]

A chance that either sheepe or goats do taſt thereof, it prouoketh them preſently to blea: whereupon certain authors, changing one letter for another in Greeke, call it * *Asafet*. This herb is ſo hor and ardent, that if any part of the body be rubbed or annointed therewith, it will fire into a bliſter. If one haue taken a thorough-cold, and thereby gotten a cough, Phyſicians haue preſcribed to vie friſtions therewith before the Patient go into the bain for to ſweat. Alſo their direction is to do the like before the cold fits of agues: as alſo in caſe of the crampe and torments of the guts. Wonderful good it is in all kinds of gout. If it be taken in drinke with honey and ſalt, it is ſingular for thoſe who be diſeaſed in the liuer, as alſo for the lights: for it opens their pipes, and diſchargeſt them of the flegme that ſtuffed them, ſo as they may reach up and voyd the ſame with eaſe. The decoction thereof with ſome ſalt is excellent good for the ſpleene and the bladder, yea and for all ventofities and ſhortneſſe of breath. Semblably, the iuice prepared and drefſed in manner aforeſaid, bringeth the mother into the natural place; and ſerueth as a countre-poſſion againſt the Scolopendre both of the ſea and the land: as alſo for the pricke of the ſcorpion, & eſpecially againſt the biting of man or woman. The root thereof being applied freſh and green, is marvellous good to reſſeſſe rank vicers, & to conſume the proud fleſh about them. The ſame being dry and ſo applied, reduceth ſcars to their freſh colour and beaurie of the faire and whole ſkin. Thus much of Penroyall of the garden and the field.

C Great conformity there is in operation between Peny-royal and * Nep, for being both boiled in water vnto the composition of a third part, they discusse and shake off the cold in Ague fits which causeth the Patient to shake ; and besides are of validitie to bring downe womens monethly sicknesse. In summer time they allwaie the extremitie of heat. Nep also is powerfull against serpents, for the smoke and perfume of this herbe they cannot abide, but will fly from it: which is the cause that such as be afraid of serpents, strew Nep vnder them in the place where they mean to repose and sleepe. Being bruised and applied to the running fistulous vlcers between the nose and the greater corner of the eye, it is counted a soveraign remedic. Also being fresh gathered, and mixed with a third part of bread, and so temperat and incorporat with vinegre to the form of a liniment, it cureth the head-ach. The iuice thereof being infilled into the nostrills whiles the Patient lieth vpon his back, stancheth bleeding at the nose. The root also, together with Myrtle seed, in warm wine cut, and so gargarised, helpeth the Squinnace. As touching wild Cummin, it is an herb exceeding small, putting forth four or five leaues, and not above, and those indented like a saw : but the garden Cummin is of singular vse in physike, but principally for the pain in the stomack. It dispatcheth the grosse vapors arising from flegme; it dissolueth alvorsities, if it be either bruised and eaten with bread, or drunk with water and wine; in which sort it allwaie the wringing torments and other pains of the guts: howbeit it maketh folke look pale, as many as drink of it. Certes by that deuise, namely by ordinary drinking of Cummin (as it is reported) the schollers and followers of *Porcus Larro* (that famous and great Rhetorician) procured themselves pale faces, because they would look like their master, who indeed came to that colour by continuall study and plying his booke. Thus likewise not long since, *Julius Vindex*, being desirous to be affianched by *Nero*, pretending by his pale visage and poore look, that he had not many daies to liue, made faire semblance vnto *Nero* by his will and testament, that he should shortly be his heire (which chee the said *Nero* gaped after), and so by that means *Vindex* entred so far within him, as hee obtained what he would at his hands. Cummin reduced into the form of trochisks or * nose-tents, put vp into the nostrills, stancheth blood. The like effect it hath, being fresh gathered and applied with vinegre. Being layd it selfe alone to watering and weeping eyes, it restraineth that humour : and in case the coods be bolne or swelled, it is good to mix money withall in manner of an emplastre. But it sufficeth to make a cataplasme thereof and lay it to the belly alone of little babes and infants so troubled. Finally, to cure the jaunifie it is singular, giuen in white wine when the Patient hath sweat, and is come out of the Baine.

CHAP. XV.

¶ *Of Cumin Ethyoppick, which restraineth the flux of urine : of Capres : of Lovach or Panax : and of a kind of Marjerom named Cunila-bubula.

BVt for the purpose aforesaid, namely to cure the jaunise, the Ethiopian Cumin is the best, being taken after a bath with vinegre and water: also licked in maner of a Loch with hony.

* It seemeth
that this Title

As for the Cumin of Africk, it is thought to haue a singular proprietie by it selfe for to helpe those who canot contain and hold their vrin. The garden Cumin, if it be parched drie, brought into powder, and giuen in vinegre, helpeth the defects and infirmities of the liuer: also it cureth the dizzinesse of the head. But in case the acrimonie or sharpnesse of the vrin be such, as that it fret and moue smart in the passage, the powder hereof would be tempered in sweet wine * cuit. For the impediments of the matrice it ought to be drunk in pure wine of the grape, and withal there must be applied to the place offended, a cataplasme of the leaves vpon a lock of wool. Dried against the fire, bruised and beaten into powder, and so incorporat with oile of roses & wax, and wrought in the end to the form of a Cerot, and then applied, it abateth the swelling of the coods. But the wild Cumin is more effectual in all the cases aboue mentioned, than that of the garden.ouer and besides, it hath a speciall vertue together with oile, against serpents, scorpions, and Scolopendres. Take as much of Cumin seed as you may comprehend within three fingers, drink it in wine, it will stay immoderat vomit, yea and the sick heauing of the stomacke, as if it would cast and canot. A drinke made therewith is giuen also for the colique: and to that purpose a liniment thereof is very commendable, or if it be applied hot in quilted bags, so that the same be kept swaddled down vnto the region of the gut Colon. For a woman that is giuen to the rising and suffocation of the mother, let her drink it in wine after this proportion, Three drams of Cumin to three cyaths of wine, she shall find that it will resolute those vapors and fumosities which caused the foresaid maladie. With calues tallow or seuer, or with honey, if it be let drop into the eares, it cureth the founding and tingling therein. Being applied as a liniment, with hony, raisons, and vinegre, it resolueth the blacke and blew marks remaining after stripes. Also with vinegre alone it cureth the black spots and speckles appearing in any part of the body, if the place be bathed therewith.

An herb there is resembling Cumin for all the world, which the Greeks call Ammi: although some there are who thinke it to be all one with the Cumin of Ethiopia. *Hippocrate* calleth it, the roial Cumin [of Egypt,] the reason was, no doubt, for that he deemed that of Egypt to exceed all the rest in goodness. But most writers besides him do thinke it * an herb altogether of another nature, because it is smaller and whiter: and yet it serueth to the like vse: for at Alexandria in Egypt they put it commonly vnder their loaves of bread in the bottom crust, when they go to the oven, and ordinarily it is occupied in the kitchen about sauces. Be it what it will, it dissolueth ventosities, it pacifieth the wringing torment of the guts, it prouokes vrin, and bringeth down womens moneths. Being taken in wine, together with Linseed, to the quantitie of two drams, it cureth the venomous stings of scorpions: but put thereto an equall quantitie of myrrh, it hath a singular vertue against the horned serpent Cerafles. And, like to the other Cumin before named, it altereth the colour of as many as drink of it, and makes them looke pale. A suffumigation made thereof, with raisons and rosin, mundifieth the matrice & natural parts of women. Finally, it is commonly said, That if a woman smell thereto in the very act of generation, she shall conceiue the rather by that means.

As for Capres, we haue sufficiently written thereof amongst other shrubs that be strangers: and yet it will not be amisse to reiterate thus much, That a man must be well aduised how he taketh any outlandish Capres that come from beyond-sea: but if he wil go safely to work, let him hardly keep him to those of Italy, for they are lesse harmefulle than the other: for if all be true that is commonly reported, who focuser daily eat Capres, shall not be in danger either of palsey or pain of spleene. The root of capres is singular good to take away the white spotted morpue (cousin german to the leprosie) in case it be stamped, and the place affected rubbed therewith. Take the rind of the root, the quantitie of two drams, and drink it in wine, it helpeth, the swelled spleene; provided alwaies, that the Patient forebare the vse of baines and hot houses: for, by report, this course continued 35 daies, will cause the said spleene to purge away, partly by vrine, and partly by seege. The same if it be taken in drinke alsaith pain in the loins, & cureth the palsey. The seed of Capres sodden in vinegre, bruised & applied to the teeth, or otherwise the root thereof chewed only, assuageth the tooth-ach. A decoction of Capres in oile infused into the eares, mitigateth their pains. The leaues and the root newly gathered, and so applied as a Cataplasme with hony, healeth the corrosiue vlcers that eat to the very bone. Likewise the root resolueth all those glandulous swellings which we name the Kings euil: and if the same be sodden in water, it dissolueth the tumors behind the eares, and riddeth away the worms breeding within.

It

A It cureth also the infirmities of the liuer. The manner is to giue the same in vinegre and honey for to chase away the vermin engendred within the guts. Boiled in vinegre, it is singular for the cankers or exulcerations within the mouth: howbeit, all authors doe accord, that they be not good for the stomacke.

Touching Louage, which some call Panax, it is * holefome for the stomack. Likewise a proper medicine it is for convulsions and ventosities. To conclude, there are some who name it Cunila Bubula, as I haue before noted, but they be deceived.

CHAP. XVI.

B ¶ Of the wilde Origan Cunila Bubula: of the Bassard *Atarjoram*, named *Gallinacea* Cunila, or *Heracleoticum* Origanum: of the tender *Cunilago*: of *Rosemarie*: of *Garden Saurie* or *Cunila*, and that of the mountains.

O Ver and besides the garden Saurie, there be many kinds of Cunila known in Physicke: and first that which is called Bubula, and hath seed like to Peniroiall, being either chewed in the mouth or applied outwardly, it is a good wound-hearb, so that it be not remoued but euery fise daies. Taken in wine, it is singular against the poisonous sting of serpents, in case the hearbe it selfe be stamped, and laid withall vpon the sore place: and verily it is an ordinarie thing to rub therewith well and thoroughly, the wounds that they make. Semblably, the C Tortoisie, against the time that they should fight with Serpents, vse this hearbe in manner of a defenatiue, & take themselves well armed against their enemie: which is the reason, that some giue it the name of Panax. Being dried, it assuageth the pain of tumors, and cures the accidents that befall to the priuie members of men: if the leaues be but stamped, they haue the like effect. And in one word, the operation thereof is excellent and wonderfull, if it be used in wine.

Another Cunila or Saurie there is, which our countrey men call in Latine Gallinacea: the Greeks name it Origanum Heracleoticum. If it be braied and salt joined thereto, it is soueraigne for the eyes: it helpeth the cough also, and correcteth all faults of the liuer. If a thicke grewell or few be made thereof, together with flour, oile, and vinegre, so tempered as it may be supped, it cureth the pleurisie or paines of the sides: but aboue all, it is singular for the stinging of Serpents.

D A third kind there is, which the Greeks tearme the male, but we in Latin * Cunilago: a stinking smell it hath with it, a woodie hard root and a rough leafe: but it is generally said, that the operations thereof be more effectual, than of any other kind. It is verily thought, that if a man cast an handfull thereof from him into any part of the house, al the moths and such like vermin will gather about it. But to come to particulars, It hath a singular power against Scorpions if it be taken with water vinegre. Also if a man or woman take 3 leaues thereof, and rub his bodie thoroughly with it and oile together, there is not a Serpent so hardie as dare approach neare such a bodie so perfumed. Contrariwise the Cunila, which is named Mollis, [i.e. Soft] hath leaues and branches more haire than the former, and those sharpe pointed like prickes. This hearbe if a man rub betwene his fingers, resembleth honey in smell, and will sticke fast too in manner of honey. Another sort there is of Cunila, which we, for the smell that it hath of Frankincense, call Libanotis. But both these, the one as well as the other, taken in wine or vinegre, cureth the biting and sting of Serpents. If they be bruised or stamped into powder, and so put into water, they kill all the fleas in the place where the said water is cast or sprinkled. As for the garden Saurie, it also hath many good properties: The iuice thereof with oyle of roses distilled into the eares, is very comfortable vnto them. The hearb it selfe taken in drinke, helpeth those who are stung with venomous Serpents. This Saurie oftentimes doth degenerate into a bassard kind named Mountain Saurie. Like it is to wild running Thyme, and is effectual also against the poyson of serpents. It prouoketh vrin, and purgeth women newly deliuered, if haply they haue not sufficient voidance. Singular it is for to help digestion, and stirreth vp appetite to meat wonderfully. In summe, as well the gentle Saurie as the wild, is passing wholefome for crudities in the stomacke, if one spice his morning draught therewith fasting. It is vsed also for very good purpose in dislocations and members out of joynt: with barley meale, water, and vinegre, it is excellent for the stinging of waspes, and such like prickes. As touching the other kinds of Libanotis or Rosemarie, write I will more fully in due place.

G 2

CHAP.

* In doli: hec
n. canch. paf-
fum.

Rue Sine takes
it for Basil
gentle.

* Pile: nam
concordium
leuor. Ex
Dioscor.

* Fica-basi

CHAP. XVII.

¶ Of *Piperitis* and *Origanum*: of *Onitis*: *Prafrum*: of *Tragoriganum*, and *Heracleum*: of *Lepidium* and *Gith* or *Melanthium*: of *Annise*.

* Ginney pep.
pers.

Canile.

Piperitis or Catecut Pepper-wort (which before we called * *Siliquastrum*) beeing taken in drinke, is very good for the falling sicknesse. *Cattor* hath described it after another manner, namely, to be an herb rising vp with a long red stem, thicke set with joynts or little knees; bearing leaues resembling those of Lawrell, with white seed and the same smal, carying with it the taste of Pepper. The vertues of which heare be these; To help the gumbs and teeth, to make a sweet breath, and withstand foure and stinking belches.

Organ or Organum, which in tall (as we haue said) resembleth * *Sauery*, hath many kinds, & all medicinable, for there is one sort thereof firmated *Onitis* or *Prasium*, not vnlike to hyssope; a peculiar propertie this heare hath being drunke in warme water, to quiet the gnawings in the stomacke, and to concoct the crudities there: but taken in white wine, to cure the venemous pricks of Spiders and Scorpions. The same applied outwardly with oile and vinegre vpon wooll, is singular good for dislocations, disjoints, spraines, contusions, and bruises.

As for *Tragoriganum*, it is more like vnto wild creeping Thyme: it hath vertue to prouoke vrin, to discusse and resolue all tumors or swellings. And more particularly, most effectuall it is for them that haue drunke the gum of *Chamelæon*, called *Ixia*: also against the *Vipers* sting; besides, for the stomacke that belcheth foure, and for the midriffe and precordiall parts. It is an approved medicine for the cough, the phrenie, and inflammation of the lungs, being with honey reduced into the forme of a Lohoch, for to be sucked downe leisurely.

Touching the *Origan* named *Heracleum* or *Heracleoticum*, the same also is diuided into three sorts: For the first is of a blacker & more dusky green, with broader leaues; also than the rest; and besides is glutinous and will cleaue to ones fingers. A second sort hath smaller leaues, softer it is & more tender in hand, not vnlike to *Majoram*; and this kind some would rather call *Prafrum*. The third hath leaues of a mean bignes between the other two, nor so large as the one nor so slender as the other, but not so forcible in operation as either of them both; but to return againe to our former *Origanum*: the best is that which groweth in Candy; for the same hath a pleasant and sweet sent besides: the next in goodnes is that which cometh from *Smyrna*; then **K** after it, is the *Origan* that is brought from *Heraclea*; but that which is firmated * *Onitis* is simply the best of all others to be taken in drinke. Howbeit, the vse generally of them all in common, is to chase away serpents: by way of decoction or portage made thereof; to cure them that be alreadye stung or wounded by them: beeing taken in drinke, to moue vrine: and, together with the root of *Panace*, to helpe ruptures, convulsions, and spasmes: sodden in certaine *Acetables* with figs or hyssope, to the consumption of a fixt part, to cure the dropsie. At the entrance into the stoue or hot-house if it be taken good it is against the scab, the iteh, & the wild skurf. The iuce with milk, is dropped into the ears, and that with very good successe. It helpeth also the mumps or inflammation of the *Amygdals* and *Vvula*; likewise the vlcers in the head. The decoction thereof taken with lye ashes in wine, is a counterpoison to kill the venom of *Opium* **L** and *Plastre*. The measure of one *Acetab*, looseth the belly. A liniment made thereof, recovereth the native colour of the blacke and blew marks remaining after stripes. *Vvith* honey and nitre, it assuageth the paine of the teeth if they be rubbed therewith; and besides maketh them looke faire and white. It stauncheth bleeding at the nose. A decoction made therewith and barley meale, resolue the swelling kernells and inflammations behind the eares. The powder being incorporat in honey and gall-nuts, doth smooth and cleare the rustinesse of the windpipes, occasioned by a rheume. The leaues applied in manner of a cataplasme with honey and salt, mollifieth the spleen. If the hearbe be sodden with honey and salt, and so taken by little and little, it doth cure, extenuate and make subtil, grosse fleagme, especially if blacke melancholy be bedded therein. Stamped, and inflilld into the nostrills with oile, it cureth the jaundie. Such **M** as be ouerwearyed and tired with extreme trauell, find much alleviation and ease by being rubbed and anointed all ouer with a liniment made thereof, with this caveat. That they come not so neer as to touch the belly with it. A plastre made with it & pitch & applied, healeth the angry bloody-falls & chilblanes, Bruised with figs, it ripeneth felons. A pulues made with it, with oile,

* Bugle, or
Sivchar dra-
bille.

A oile, vinegre, and barley meale, softneth and resolue the Kings euill. A liniment made therewith and figs together, assuageth the paine of the sides. Being bruised and reduced into a liniment with vinegre, and so laid to the priuy parts, it restraineth the flux of bloud thither; and yet it hath a propertie to euacuate the reliques of bloud in women newly brought to bed, who ought to be purged.

As touching *Lepidium* [*i. Passiflora*] it is to be ranged among the burning and causticke medicines: by which faculty that it hath, and by blistering the skin, it taketh away any spot or blemish in the face; yet so, as the exulceration which it causeth, may be soone helped and skinned again with a salve of wax and oile of *Roses*. By the same means it serueth to cleanse the leprous and wild scabs, which it doth alwaies with ease and expedition, as also to smooth the cicatrices or scars after vlcers. Moreover, it is commonly said, that if it be tied fast vnto the arme on that side where the teeth do ache, it taketh the pain quite away.

B Gith or *Nigella*, the Greeke writers foote name *Melanthion*, others *Melaspermon*: the best is that which is blackest, and besides of quickest sent. A speciall remedie it is for the sores and wounds occasioned by venomous serpents and scorpions especially, if a liniment be made of it, vinegre and hony mingled together. I find also, that if it be burnt, the very smoke and fume of it will chase away serpents: but particularly against the poison of venomous spiders, a dramme thereof is sufficient to be taken in drinke. Being bruised and knit in a linnen cloath, and so smelted vnto, it resolue the poise, or breaketh the cold which stuffeth the nostrills. Applied as a liniment with vinegre to the forehead, or infused into the nostrills, it easeeth the head-ache. And if it be soaked with the oile of the floure de-lis root, it staith the waterish humors that fall into the eies, and abateth their swellings. The decoction thereof in Vinegre cureth the tooth-ache, if a collusion thereof be made and the mouth washed therewith. Being stamped and so applied, or but chewed in the mouth, it healeth the cankers or exulcerations within. Likewise a liniment made of it and vinegre cleanse the leprous, and the hot red pimples breaking out in the skin. If it be taken in drinke, with some addition of nitre, it easeeth the difficulty of breathing in such as blow short. It helpeth all hard swellings, and old festred impostumes or biles, if they be anointed therewith. If a woman be desirous to haue store of milk, let her eat and drinke thereof continually every day. As touching the iuce of Gith, it is drawn & gathered after the like manner as *Henbane* iuce. And sensibly taken in any great quantitie, it is a very poison: which is a thing to be maruelled at, considering that the seed thereof seasoneth loaves of bread, & giueth a most pleasant relish to them. Moreover, the seed of *Nigella* cleanse the eies, prouoketh vrin and the monthly terms in women: yea and more than so, I reade, that thirty grains thereof tied in a linnen cloth, and applied to a woman newly deliuered, will draw down the after-birth. They say also, that if it be stamped in vrin and laid to the agnells or comes of the feet, it cureth them: as also that the smoke killeth gnats or any other flies.

As for the herb *Annise*, if it be drunke with wine it is a counterpoison against scorpions. And *Pythagoras* hath given a speciall praise and commendation to it both raw and boiled, as to few other herbs the like: for be it green or dry, it serues as well for seasoning of all viands, as making all fauces, in whom as the kitchen cannot be without it.ouer and besides, when bakers fet into the oven, they put *Annise* between the bottom of their loaves and the peece. And for to commend wine, *Vvinters* vse to put it into their *Hippocras* bag, through which they strain *Hippocras* and other aromaticall wines: and indeed with bitter almonds, it giueth a pleasant and delicate tast vnto any wine whatsoeuer. If one chew it euery morning vpon an empty stomack fasting, together with the seed of *Smynum* and a little hony, it maketh the breath sweeter, and taketh away all stinking fauours about one; provided alwaies, that the mouth be presently washed with a collusion of wine. It causeth one to look fresh and young, if it be hanged about the bed vpon trauers or curtain, or otherwise stuck to the pillow or bolster, so as folks may haue the sent thereof in their nostrills while they lie asleep; it ridderth them of troublesome dreams and fantasticall visions. It procureth a good stomack to meat: for so our idle, nice, and delicate **F** wantons, euer since they haue giuen ouer exercise and trauell (which should get them an appetite & stomack to their vituals) & betaken themselves to sit still and do nothing, haue deuised this artificiall means among others, & haue recourse to *Annise*: in which regards and for these causes, some haue giuen it the name of *Anicetum*. The best of all cometh from *Candie*: the next to it is that of *Agypt*; and indeed this serueth in stead of *Loveach* in all sauces. If a per-

* To wit, by
raising a blister,
and drawing
the iuce.

fume

G 3

funie thereof be drawn vp into the nose, it appeaseth the head-ache. *Jellus* saith, that the Anise root bruised and stamped together with Wine, and so applied, itayeth the flux of waterie and weeping eies. The herb it self, with an equall quantitie of saffron and wine, yea, or braied alone with barley grots, restraineth all great fluxions and distillations: and the same composition applied to the eyes, drieth out any thing that hath fallen into them. A liniment made therewith and water together, consumeth and cureth the Polypes or cancerous vlcers within the nose-thrills. A collution of it in vinegre, with honey and hyssop, vsed as a gargarisme, asswageth the squinancie. Tempered with oile of roses it is soueraigne for the eares to be infilled into them. Being taken dried and parched at the fire, it clenseth the brest of the viscous and tough flegme there gathered; but if it be incorporat with honey it doth the deed the better. But would you learn for the cough a soueraigne lohoch or confection? Take one Acebale of Annise, and fifty *H* * bitter nuts wel clenched and blanched: stamp these all together in a mortar, and with hony reduce them into the consistence of an Electuarie. And yet there is one Composition more for this purpose, and of all other the easiest and soonest made. *Recipe*, of Annise three drammes, of Poppy seed two drams, temper these with hony, & for three mornings together take the quantitie of a bean fasting. And this confection is singular besides against foure ristsings or belching: and therefore it cureth the ventosities which puffe vp the stomacke: it asswageth the torment and wrings of the guts, and represseth the continual flux proceeding from the weaknesse of the retentive facultie in the stomacke. But to return againe to simple Annise seed, a drinke made with the decoction thereof, or the very finell taken vp into the nose, itayeth the trouble some yxe or hocquet. The decoction of Anise leaves doth digest and resole all crudities. *I* The iuyce drawne from it when it is sodden with parsley, if it be smelled vnto, stineth immoderate sneezing. Moreouer, Annise taken in drinke, procureth sleep, expelleth the stone and gravel, itaith vomits, and resolueth the tumors in the precordial parts, caused of windinesse. Further, it is a most soueraigne medicine for the discaies in the brest: comfortable also to the neruous parts, membranes, and ligaments, wherein the muscles of the body be either inclosed or drit and vnited together. The iuyce of it being boiled with oile, and dropped or infilled into the head, is good for the pains thereof. It is thought that there is not a better thing for the belly and the guts than Annise: and therefore it is giuen ordinarily (if it be first parched and roasted against the fire) in case of the bloody flux and exulceration of the guts: also for the inordinate profers to the siege, & rising from it without effect or any thing discharged. Some put thereto Opium *K* also, and prescribe to make three pills thereof to the bignesse of a Lupine seed, and to take them every day dissolued in a cyath of wine. *Diaches* vsed commonly the iuyce of Anise, to mitigate the pain of the loins: to giue also the feed beaten to powder with mints in wine, for the droplicy and the defluxion stomachicall: but the root he thought to be passing good for the kidneyes, vsed and taken in that maner. *Dalio* that famous Herbarist was wont to apply Annise and Parsley together in forme of a cataplasme, to women in labour, for better speed in child-birth: also for the pain of the Mother, yea, he would giue it also to drinke with Dill, vnto women when they cried out in trauell. He applied it also green, with barley grotes in manner of a liniment, to the head, for to stay and settle the brains of phreneticke persons. And being so prepared, he found it singular good for young infants subiect to the Falling-sickenesse, or troubled with *L* crampes and contractions of sinewes. As for *Pythagora* verely, he saith confidently, That who-focuer doe but hold this hearbe in his hand, hee shall not be surprised with a fit of the Falling-euill: and therefore he aduise men to sow good store of it in their gardens about their houses, to be ready euer at hand. He affirmeth moreouer, that women in labour, if they smel thereto, shall haue more speedy and easie deliuerance. Hee giueth counsell besides, That immediately after the child is borne, the mother should drinke a grewell made with it and some barley grotes strewed among. *Sosimenes* the Physitian was wont to mollifie and resole all hard swellings with Annise & Vinegre: he vsed also to giue the decoction thereof in oile, with some sprinkling of Nitre among, to those that felt wearinesse in their lims. Moreouer, he assured travellers and wayfaring men, that if they drinke the feed thereof, they should find present help if they were tired. *Heracides* gaue ordinarily of the feed as much as might be taken vp with three fingers, together with two oboles of Castoreum, in honied wine, for the hoving & inflation of the stomack: semblably, for the puffing vp and swelling of belly and guts. Also, to those that were streit winded, & could not take their breath but sitting vpright, he ministred the like

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A proportion; to wit, as much as three fingers would contain, with equall quantitie of Henbane seed, in Asles milke. Many Physitians giue counsell to those that would vomit lustily, for to drinke in water as they sit at supper, an acebale thereof and ten leaues of Baies, bruised and bea-ten into powder. If Annise seed be chewed, or applied hot in forme of a liniment, yea, or taken as a drinke in vineger and hony, together with Castoreum, it helpeth the rising of the mother and the danger of suffocation thereby. If a woman in child-bed presently vpon her deliuey, drinke it with cucumber feed & line-feed together, of equall quantitie, namely, as much as may be held between 3 fingers, in three Cyaths of white wine; it will settle the lightnesse of the braine, and stay the dizziness of her head. *Theoplenus* prescribed for feuers quartane, as much Annise seed as three fingers might comprehend, with the like quantity of Fennell seed to be taken in vineger and one Cyath of Honey. A liniment made with Annise and bitter nuts, allaitheth the grievous pains of the gout. There be who are of opinion, That it hath a speciall vertue and property to resist the poison of the Aspis. Certain it is that it prouoketh vrine, allaitheth thirst and the appetite to drinke, yea, and solliciteth to carnal lust. Taken in wine, it gently putteth forth a kind sweat. Moreouer, it keepeth cloths and apparel from the Moth. Generally, the fresher and new-er alwaies that it is, and the blacker that it looketh, the more effectuall it is found to be. Howbeit, this one discommodity it hath, That it is an enemy to the stomacke, vnlesse haply it bee peppered with ventosities.

C H A P. XVIII.

¶ Of Dill: of *Sacopenium*, and *Sagapenum*, of Poppy both white and black. The manner of gathering and drawing iuyce out of herbes, also of Opium.

Dill also hath a property to dissolue ventosities, to break wind and cause risting; also to assuage any wrings or torments of the belly; & yet it stiaeth the flux. The roots being reduced into a liniment with water or wine, restraineth the flux of watering eies. A perfume made of the feed as it boileth, receiued vp into the nostrills, stiaeth the yxe. Taken as a drinke in water, it concocteth crudities, and appeaseth the pain of windinesse proceeding from thence. The ashes of it burned, raise vp the Vvula in the throat that is fallen. Howbeit, Dill dimmeth the cie-sight, and dulseth the vigor of genitall feed.

D As for our *Sacopenium* here in Italy, it differeth altogether from that which grows beyond sea. For the outlandish kind, resembling gum Ammoniack, is called *Sagapen*. Good it is for the pleurisie and pain of the brest, Convulsions or Spasmes, and old settled Coughes; for those that reach vp filthy and rotten matter, for the tumors of the midriffe and precordial parts. It cureth the swimming and giddinesse of the head, the shaking and trembling of the joints, the crampe or convulsion that draweth the neck backward, the great swelled spleens, the pain of the bones, and all shaking and quivering colds. A perfume made therewith in vineger, if a woman smell vnto, it helpeth the Mother that is ready to stop her wind. As for the other accidents, it is both giuen in drinke, and also rubbed into griued parts with oile. It is thought to be soueraigne also against paysoned drinckes giuen by Witches and Sorcerers.

E Touching garden Poppie and the fewall kinds thereof, I haue written already: but besides them there be other sorts also of the seedall kind, whereof I promised to treat. Meane while, the heads of the foresaid garden white poppy, if they be bruised whole as they grow with feed & all, and so drunk in wine, do procure sleep. The feed it selfe alone cureth the Leprosie. *Diagoras* giueth counsell to cut the stem or stalk of the blacke Poppy when it beginneth to strout and swell toward the flourishing time, out of which therewith issue a certaine iuyce called Opium: *Jellus* aduise to make that incision when it hath bloomed, and to chuse a faire cleare day for it, & that houre of the day when as the dew thereon is dried vp. Now would they haue them to be cut vnder the head before the bloom; but in the very head, after it hath don flourishing, and verily, there is no other kind of herb wherein the head is cut, but this only. The said iuyce of this herbe as well as of all other is receiued in woooll: or else if it run but in small quantitie, they gather it with the thumbe naile, as the manner is in Leccuses: but the morrow after the incision, so much the more vigilant they must be to fauce & gather that which is dried: and in very deed the iuyce of Poppy commonly runneth out in great abundance, & gathereth into a thicknesse: which afterward is stamped and reduced into little trofches, and dried in the shade. Which iuyce thus drawne

drawne and thus prepared, hath power not only to prouoke sleep but if it be taken in any great quantity, to make men dye in their sleep: and this our Physitians call Opium. Certes, I haue knowne many come to their death by this meanes; and namely, the father of *Litinius Cecina* late deceased, a man by calling a Pretor, who not able to indure the intolerable pains and torments of a certain disease, and being weary of his life, at Bilbil in Spaine, thorowd his owne daies by taking Opium. By reason whereof, Physitians are growne to great variance, and be of contrary opinions as touching the vse of the foresaid Opium. *Diagoras* and *Erastistratus* condemned it altogether as a most deadly thing, & would not allow that it should be so much as injected or infused into the body by way of clyster, for they held it no better than poison: and otherwise hurtfull also to the eyes. *Andreas* saith moreover, That if Opium doth not presently put out a maus eyes & make him blind, it is because they of Alexandria in Egypt do sophistricat it. But in proceffe of time the later & modern Physitians did not vtterly reject it, but found a good vse therof, as may appeare by that noble and famous Opiat confection called *Diacodium*. Moreover, there be certain ordinary troches made of Poppy seed beaten into powder, which with milk are commonly vsed by way of a liniment to bring sicke patients to sleepe. Likewise with oile Rosat, for the head-ach, and with the same oile they vse to drop it into the eares for to mitigate their pain. Also a liniment made therewith with breest-milk is singular good for the gout. In which fort there is a great vse of the leaves also of the same purpose. And being applied as a cataplasme with vinegar, they help *S. Antonies* fire, and all sorts of wounds. For mine own part I would not haue it in any case to enter into. Collyries, much lesse vnto those medicines which be ordained to driue away ague fits, or into maturatives, no nor to go among other ingredients into those remedies which are deuised to stay the flux that cometh from the stomack. Howbeit, in this case last specified, many giue the black Poppy with wine. Al garden Poppies grow rounder in the head than the wild: for these beare a head longer & smaller, howbeit (for any vse) of greater operation than those of the garden. For the decoction therof taken as a drink, procureth sleep to such as be ouer watchfull: so doth a fomentation thereof, if either the visage bee sprinkled, or the mouth washed therewith. The best Poppies be they that grow in dry places and where it raineth feldome. When the heads and leaves both be sodden & stamped, the iuice that is pressed from them, Physitians call *Mercurium*: and it is far weaker and duller in operation than Opium. Now to know which is good Opium indeed, the first and principal trial is by the nose, for the true Opium is so strong, that a man may not indure to smel it: the second proof is by fire, for the right Opium will burn cleare like a candle, and when it is put forth yeeldeth a stinking sent from it in the end: which signes are neuer to be found in that which is falsified and sophistricat, for this that is not right, will not so soon take a light fire, and besides, is readie oftentimes to go out. There is another experiment by water: for the good and pure Opium being put into water, sendeth forth a certaine mist from it like a cloud, which stoth euen aloft: whereas the corrupt and depraued Opium gathereth into blisters and bladders, and so bubbleth vpon the water. And yet there is one way more admirable than the rest to try good Opium euen by the Sun-shine in a Summers day: for if it be such as it ought, it will sweat and resolute into a thin liquor, like as when it came first out of the plant. To conclude, *Mnesicles* is of opinion, that the best means to keep and preserve Opium, is to lay it in Henbane seed: but others thinke it better to let it lie among beanes.

CHAP. XIX.

Of the wandering Poppy, and the horned Poppy. Of Glaucium or Paralum. Of Heraclium or Aphanum. Of the composition named Diacodium, and of the Tithymal.

IN a middle nature betwene the garden Poppy and the wild, is to be ranged a third kinde: which because it cometh vp in corne fields, but yet vnsworn and of the own accord, we haue called *Rheas*, and wandering Poppy. Some there be, who so soon as it is gathered, chew both heare and head all whole as it grew, and so eat it. Fine heads of this Poppy being sodden in three hemines of wine, and so taken in drinke, do both purge the belly, and also bring the patient to sleepe.

Of these wild Poppies there is one kind called in Greek *Ceratitis*, of a dark or dusky green, growing vp with a stalk a cubit high; with a grosse root, covered with a thicke rinde, the heads

A heads or cups wherein the seed lieth, bend like vnto a little horn. The leaves are lesse and slenderer of this Poppy than of any other wild. The seed also is smal, ripe and ready to be gathered in corne harvest, which being taken in drinke, to the quantity of half an Acteable in honied wine worketh downwards and scoureth the belly. The leaves being stamped with oyle, and so applied, heale the haw in horse eyes. The root taken to the quantity of an Acteable, and sodden in two sextars of honied wine, vntill halfe be consumed, is giuen in drinke for the infirmities of the loins and liner. The leaves applied as a cataplasme with hony, healeth Carbuncles. Some call this kind, *Glaucium*, others *Paralum*; for it grows within the aire of the sea, or els in some brackish place standing much vpon Nitte.

Another kind of these wild Poppies is called of some *Heraclium*, or of others, *Aphron*, with B leaves resembling * Sparrows, if a man look a far off. The root runneth very ebbe and superficially vnder the green food, and the seed seemeth charged with a certaine froth or some. Herewith linnen cloths in summer time vse to be bleached, and to get a bright white colour. This herbe beaten in a mortar to the quantity of one Acteable, and taken in white wine, helpeth the falling sicknesse, for it causeth the patient to vomit. This kinde of Poppy is the principall ingredient or Basis to the confection named *Diacodium* or *Arteriacum*. The composition or making whereof ensueth in this manner: Take of this Poppy heads, or of any other of the wilde sort, 120: let them lie in luke or infused two daies together in three sextaries or halfe a gallon of water and in the same water boyle them well. When this decoction hath passed through a strainer or jelly bag, seeth it a second time with hony vp to the height or confidence of a Syrrupt (that is to say, vntill halfe be consumed away) ouer a soft and gentle fire. Herunto the modern Physicians which came after, put too of Saffron, of Hypocistis, Frankincense, Acacia, of each six drams, and in the end, of grosse cut of Candy one sextar. But this later composition serued only for a shew and vaine ostentation; for the simple and plain making of it in old time with Hony and Poppy, and no other addition besides, was as wholesome and profitable as this.

But to come again to our wild Poppies: there is a third kind therof named *Tithymalos* (which some call *Mecon*, others *Paralion* (carrying a smooth leafe and a white, with a head of the bignesse of a Bean. The time of gathering these Poppies, is when the grape is in the floure: & then the manner is to dry them in the shade. The seed if it be taken in drinke, the quantitie of halfe an Acteable in mead or honied wine, purgeth the belly. But what Poppy seuer it be, the head either green and fresh, or dry, if it be applied as a liniment to the eyes, repelleth the flux of watery humors falling to them, and mitigateth their inflammations. If Opium be giuen in pure wine somewhat allaied, presently after the Scorpion hath stung, it is a counterpoison. Howbeit, some there be who attribute this vertue only to the blacke Poppy, namely, if either the heads or leaves be bruised and reduced into powder.

CHAP. XX.

Of the wild Purcellane or Peplum. Of Coriander and Orach.

There is a wild Purcellane also, which they call *Peplum*: more effectual, though not much, than the garden Purcellane; for there be strong and wonderful properties reported thereof for sundry vses. First it is holden for certain, that this herb if it be eaten as meat, dulleth the poison of venomous arrows, of Serpents also called * Hemorrhoids and * Presters, and being laid to the hurt place, draw forth the said poison. The iuice also of this herb pressed forth and drunk in wine curit, is a remedy for those that be poysoned with Henbane. Now if the herb it selfe is not to be gotten, the seed hath the like effect. Moreover, it is thought to be singular good for the aquosities gathered within the body, and the diseases caused thereby, as dropsies, &c. for the head-ach, for rheumatick vlcers also, if it be bruised and applied with wine. Al other sores likewise it healeth, if it be chewed and laid too with hony. After the same manner prepared, it is good to be applied to childrens heads for to temper the heat of the brain, as also to their navils when they beare out more than they should. For al vehement distillations of watery humors into the eyes, as well of old folke as small infants, it is counted singular; for to be applied to the forehead & temples, together with Barly groats; but if it be laid vnto the very eyes, then would the same be tempered with milk and hony. Now if it chance that the eyes be ready to fall out of the head, the leaves stamped with the shales of Beane cods, and applied thereto,

* *Struthio similis* is *Dioscor.* like to *Struthio*, which is *Pliny* a fowlely outcast to translate it *passer* *serpens* *tribulus* because that species of the herb *Struthio*, (as *Plinius* weeld) and the bird called a sparrow: vpon which one abundance more follow still to maintain the same, as commonly it is scene, For that which followeth of bleaching agreeeth to the foresaid herbe in some sort.

* So called for that they cause flux of Blood. * Otherwise named *Dioscor.* *tribulus*, because they beat one into a burning fire as it were, and as a quenquable shirt whereupon they rooke both their names.

is an excellent remedy. A cataplasme made of it, with Barly groats, salt, and vinegar, cureth angry wheales and blisters that break out in the skin. The same being chewed raw, repelleth the cankers in the mouth, and the smelling of the gums: likewise, it assuageth the tooth-ache. The juice of it being well foddren, cureth the fores of the Amygdals, if the mouth & throat be washed therewith. And some put to this collution a little powder of the stone Murra. And no marvell, for the very chewing only thereof doth fasten the teeth that be loose in the head. It doth mitigate the inconvenience of crudity and indigestion, it strengtheneth the voyce, and putteth by thirst. A cataplasme made therewith, hauing gal-nuts and line-seed among of equal quantity, allayeth the pains and cricks in the nape or chine of the neck. Tempered with hony & white fullers clay, it is singular for the accidents that befall to womens breasts. The feed taken with honey, is very wholesome for such as be short winded. Eaten in sallds, it strengtheneth the stomach. If it be laid as a cataplasme [to the belly and Hypochondrial region] it allaieth the heat of ardent and burning feauers; yea, & in other cases the very chewing of it cooleth the heat of the guts and entrails. It staith vomits, eaten in vinegar or taken in drink with cumin, it is good for the bloody flux and other inward imposthumes and filthy fores. Being first foddren and then eaten, it is singular for those that strain hard vpon the stoole, and notwithstanding many propositions and profers, deliuer nothing. And whether it be taken in meat or drinke, it is a fourraigne thing for the falling sicknesse. For a shitt or immoderat course of womens termes, it is giuen with great successe, the quantity of one acetable measure in wine cuit. A liniment made with it and salt, is good for the hot gout & S. *Antonies* fire. The juice if it be drunken, helpeth the reins and the bladder. It expelleth worms and such like vermine out of the belly. A good mitigative, it is of pain, if it be applied as a cataplasme to wounds with oile and Barly groats. It mollifieth the stiffnesse and hardnes of the sinews. *Cutvadorus* in his book intituled the **Abridgement* or Breuiary of those roots that are to be cut vp or gathered; gaue counsell to giue this herb to women, newly laid vpon child-birth, for the immoderate and excesseue purgation that many times followeth them. It cooleth the heat of lust, and repelleth dreames of wantonnesse. I know my selfe a grand signior in Spain, father vnto a great personage, and one who had bin aduanced to the dignity of a Pretour, who carried euer about him a root of this Peplum hanging at his neck by a lace or smal thred, & that for the intollerable pains of the Vvula, wher-to he was subiect; and neuer would he leaue it off, but when he went into the stoue or bayne: whereby he found such ease, that he was neuer troubled afterward with the said discaise. Moreover, I haue read in some writers, That if the head be annointed or well rubbed therewith, a man shall not for a yeare together find any inconvenience of a rheum distilling from the brain: howbeit, it is thought that the vice thereof wil make the eyes dim.

Concerning Coriander, there is none found growing wild of it selfe without sowing by the hand. But certaine it is, that the very best cometh out of Egyptia speciall and peculiar vertue it hath against one kind of serpent or venomous worm, which they call *Amphisbæna* [for that it seemeth to haue an head at both ends] whether it be inwardly taken in drinke, or outwardly applied. It healeth also other wounds. It cureth the night-foces or chilblans, the red angry pimples also, if it be but only stamped and layd too. There is not a swelling or apostemation gathering to an head, but a cataplasme made with it, with hony and Raisins, either resolueth them, or quickly bringeth to maturation. If it be no more but stamped with vinegar, it easeeth the puthes and biles that breed commonly in the ordinary emundities. Three graines of C. Coriander seed some prescribe to be eaten before the access or fit of a tertian ague: or more than three to be rubbed vpon the forehead. Others there are who thinke, that to the same effect they are to be laid vnder the bolster and pillow where the patient lieth, before the Sun riseth, and then shall he be sure to misse his fit and be warished for that feuer. Indeed, Coriander whiles it is green, is of great force to coole the heat of agues. A cataplasme thereof made with Honey or Raisins, healeth vlcers also that be corrosiue and eat deep into the flesh. In like manner fo prepared, it is very good for the priuy members; for burns and scaldings, for carbuncles and for the eares. With womens milk it helps the eyes that water continually. The feed drunk in water, staith the flux of the belly & guts; yea, and in case of those violent euacuations vpward & downward, through the rage of cholerick humors, being taken in drinke with Rue, it setteth and knitteth the body againe. If the feed of it be drunke with faller oile and the juice of a Pomgranat, it chafeth forth worms out of the entrails. *Xenocrates* telleth a strange thing, if it be true, namely, That if a wo-

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A man drinke one onely grain or seed of Coriander, her mensuall flux will stay one day; if twain, they will hold vp two daies: and proportionably, Smyke how many seeds she drinke, so many daies shall she go cleare and see no token of them. *M. Varro* was of opinion, That if flesh meat were powdered or corned with Coriander grosse beaten together with vinegar, it would keepe sweet, and it were all the Summer long.

As for Orach, there is a wild kind of it growing of the owne accord: a very weed it is and no better, vtterly condemned by *Pythagoras*; as if he bred the Dropsie, ingendered the laundise, brought folk to look ill and pale, and were exceeding hard of digestion: and so far hee was out of conceit with it, that he thought nothing would like wel & prosper, no not in a garden, where this grew neere, but that it would sensibly decay and fade. *Dionysius* and *Diodes* approve this judgement of *Pythagoras*, and say moreover, that most diseases are bred thereby. Nay, they would not haue it to be put into the pot to be foddren, vnlesse it had bin washed before in many waters. These Physitians hold that it is a very enemy to the stomach, ingendering pimples, freckles, and whelks. But I musc and maruell much why *Solon* of Smyrna should write, that it hath much ado to grow and come vp in Italy. As for *Hippocrates*, he is not so far fallen out with it; for with it and Beets he maketh a decoction (to be injected by the Metrenchye) to assuage the inflammation in the matrice & the natural parts of women. *Lycus* of Naples was wont to giue it to drinke as a counterpoylon against the green flies Cantharides. And he thought that a very good liniment might be made thereof, either raw or foddren, to lay vnto biles, puthes, fellons a breeding, and all hard tumors whatsoeuer. Semblably, that if S. *Antonies* fire were annointed therewith, being incorporated with hony, vinegar, and nitre, or if it were applied vnto the gouty parts, there would ensue great easement. Moreover, in case the nails be grown crooked, vneuen, & rugged, it is said that it wil cause one to cast them without any vicer and fore at all. Some there be who prescribe an eleuatory, made with the seed of Orach and hony, to be giuen for the laundise also if the windpipes be hoarse with some fell or sharp theume falling downe vpon them, or if the Amygdals on either side of the throat be amisse, it is very good to rub those parts therewith. They ascribe moreover, That a simple decoction of it alone, moueth the body downward: but with Mallows or Lentils, prouoketh vpward and causeth vomit. Finally, to conclude with the wild Orach; it is vsed much to colour the haire black, and for the other aboue named purposes, as well as that of the gardens.

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CHAP. XXI.

Of the common Mallow. Of the Mallow **Malope*. Of the Marsh Mallow or *Aithea*. Of the common Docke: the soure Docke or Sorrell: of the water Docke: of the tall Docke called Patience: and lastly of that Docke with the long root, called *Bulapathum*.

Oraches were not so much discommended, but on the contrary side Mallows be as highly praised, as wel that of the garden as the wild. Two kinds there be of the garden mallows; distinguished both by the largenesse of their leaues. The greater of those that grow in gardens, the Greeks call *Malopum*; the other is supposed to be named *Malachum*; for that it doth mollifie and soften the belly. Of the wild sort, that which carrieth a broad leafe and white roots is called **Althæa*, and offsome, *Aristalthea*, for the excellent vertues that it hath in Physick. This property haue Mallows, To enrich and fatten any ground, wher soeuer they be sown or set. But this marsh Mallow *Althæa*, is more effectual than the rest against all wounds by sharp pricks or thornes, and principally against the sting of Scorpions, Vvases, and such like, as also the biting of the Hardishrow mouse. Nay, whosoever be thoroughly rubbed or annointed before hand with any Mallow whatsoeuer, stamped with oyle, or do but carry it about them, they shall not be stung or bitten at all. As for the leafe of Mallows, if it be laid vpon a Scorpion, it will be straightwaies benumbed. Moreover, good counterpoisons they be all: a liniment made of them being raw, together with nitre, draweth forth all pricks or stings remaining within the flesh: but if leafe and root be foddren together and so drunk, it repelleth the poison of the venomous fish called the sea-Hare; but some say it must be cast vp and vomited againe, or else it doth no good. Certes, strange and wonderfull things be spoken as touching the operation of Mallows, ouer and aboue those already rehearsed. But this passeth all the rest. That if a man or woman

**Maris althæa*
To cure of
heale.

woman sup of a smal draught (though it were no more but half a cyath) every day of the juice of any mallow, it skills not which, he shall be free from all diseases and live in perfect health. True it is, that if they be putrified and resolved in chamber-lie, they will heale all the scurfe & running (falls) in the head, but if they be tempered with hony, a collium made thereof cureth the cankers of the mouth; and a lauterie represseth all tertars, ringwormes, & any such wild fire running upon the skin. A decoction of the root, cleneth the head of dandruffe, if it be washed therewith, & setteth the teeth fast that were loose. Take the root of that mallow which riseth vp with one only stem, prick the gums therewith about the tooth pained; do this (I say) till the ach be gone. The same root reduced into a liniment, with the fasting spittle of man or woman, and applied accordingly, resolues the Kings euil, dispatcheth the swelling kernels behind the ears, and discesseth biles and pusshes, without any breaking of the skin or making vicer. The feed of mallows if it be taken in thick wine, deliuereth the patient from phlegmatic humors, from the rheume, and the heauing of the stomack making offer to cast and cannot. The root wrapped fast and tied within a lock of blacke wooll, preventeth the euill accidents that may befall unto womens breasts. The same foddren in milk & taken after a supping forth (in manner of a supping) for five daies together, cureth the cough. And yet *Sextus Niger* saith, they be hurtfull to the stomack. And * *Olympus* of Thebes affirmeth, That if women vse it with goose greafe, they shall not gether their full time with childe. Others do write, that if women take an handfull of Mallow leaues in oyle and wine, they shall be thoroughly purged in their due times. This is known for a truth and resolued by all that write or make profession of Physicke, That a woman in labour, if she sit vpon Mallows strewed vnder her fooles, that be deliuered with greater speed and expedition; but then must they be taken away presently after that she is laied, for feare that the very matrice follow after the child. An ordinary practice it is of sage and discreet midwives, to giue vnto women in trauell fasting, a small pint of the juice of Mallows foddren in wine; & yet those that cannot contain but shed their naturall feed, are inioined to take mallow seed bruised, and so to bind it to their arme. Moreover, so good and fauorable naturally be mallows to the game of loue, as if they grew for nothing els: in so much as *Xenocrates* doth asseme, That if the seed of that Mallow which runneth vp in one stalk, be reduced into powder and strewed vpon that part of a woman which Nature hath hidden, she will be foood after the company of a man, as she will neuer be satisfied nor contented with embracing. The like effect (saith he) there will ensue, if three roots thereof be bound neere to the place of Nature. Also, that a decoction of Mallows ministred by way of clyster, is a singular ijection to cure the bloody fixe, or exulceration of the guts; as also the extraordinary and bootlesse desire to the sege. In like manner, a fomentation thereof is very good for other accidents befalling to the seat or tuil. The juice of Mallows is giuen warm, the quantity of three cyaths, to melancholick persons that be troubled in mind, and of foure, to those that be stark mad indeed and besides themselves. A whole hemina of the juice drawne and pressed from mallows boyled, is giuen at one time to those that be subiect to the falling sicknesse. The same being reduced into a liniment, is to good purpose applied warm vnto those, who are troubled with the stone and grauell, with windie cholique and ventosities, with the cramp also or crick that doth draw their necks backward. The leaues being foddren in oyle, are layd with good successe in manner of a cataplasme, vpon the hot fretting humor called *S. anthonis* fire: also to places scorched, burnt, or scalded: but for the accidents and Symptomes concurrent with wounds, they be rather laid raw with crums of bread. The juice of mallows boiled, is comfortable to the sinewes, the bladder, and the fretting or grinding of the guts. Mallows being either eaten, or their decoction ministred by way of ijection with a metrenchyte, mollifieth the said tumors in the matrice. The juice of mallows well foddren, either taken in drinke or applied by way of fomentation, enlargeth the Vreter conduits, and giueth good and easie passage for the vrine. The root of Althæa is more effectual to all these infirmities and purposes about named, than of any other Mallow; but especially in case of convulsions, cramps, and ruptures. If it be foddren in water, it bindeth the belly. Boyled in white wine and applied as a cataplasme, it resolueh the swelling kernels, commonly called the Kings euil; those also that appear behind the ears, yea, and the inflammations of the paps and breasts. As for the byles or risings called Pani, the leaues of Althæa or the Marsh Mallow foddren in wine and brought to the forme of a liniment, doe disceuse and rid away. The same, after they be drie, and foddren in milke, cure the Cough, how tough and shrewd fouer it were, and that most speedily.

Hippocrates

- A *Hippocrates* gaue counsell to them that were wounded, & for losse of blood exceeding thirthe, for to drinke the juice of Althæa roots foddren. He saith moreover, That the root it selfe emplasted with hony and rosin, is good for wounds, bruises, dislocations, and swellings: comfortable also to muscles, sinewes, or joints. He gaue it likewise to those that were troubled with difficulty of taking wind, and with wheezing, for the dysentery also or bloody flux, to be drunken in wine. A wonderful thing of this root, that if it be put into water, and the same let to stand abroad in the open aire, the water will gather to a thicknesse and cruddle, yea turne white it will like milke. To conclude, the newer and fresher Althæa is, the more effectual you shall haue it in operation.
- Touching the Docke, the properties thereof are not vnlike to those of the marsh Mallow: there is a wild kind thereof, which some call Oxalis in Greek, i. wild Sorrell or Soure-dock; this herb resembleth very neere that of the garden, in regard of the sharpe pointed leaues; in colour like the white Beet, hauing a very small root: our countrymen name it in Latine Rumer; other Latine Cathenium: this herb being incorporated with hogs greafe, is singular to mollifie all the swelled kernels, which some call the Kings euil. A second sort there is, which commonly is called Oxylapathum, i. Sharp pointed Docke; this cometh yet neerer to the garden Docke than the former: for it hath leaues sharper at the point and redder, and groweth not but in marsh grounds. There is another kind of Docke comung vp in the very water (as some say) Hydropathum. Yet is there one more called * Hippolapathum, bigger than the garden Docke or Sorrell, white also, and of a more fast and pulpos substance. As for all the wild Dockes or Sorrells, they be bolden medicinable to cure the sting of Scorpions; and whoseuer hath any of them about him, is secure from the sting or prick of Scorpions. The root, if it be foddren in vineger and strained, the juice thereof if the mouth be washed therewith, helpeth the teeth: ach: and if the same be taken in drinke, it cureth the jaundie. The feed of this hearbe remoueth the rough humors bedded in the stomack, how hard impacted fouer they be: the roots of Patience haue this peculiar property, To caufe the nailes to fall off that grow rugged and vneuen. The feed taken to the weight of two drams in wine, rideth away the bloody flux. The feed of the sharp Docke being washed in rain water, is singular good for those that reach and cast vp blood, if there be added thereto as much Acacia as the bignesse of a Lentill. There be most excellent Trochisques made of the leaues and root thereof, with the addition of nitre and some little quantity of * conuenient liquor, to incorporat and vnite them: and these must bee infused and dissolved in vineger, at the time that they are to be vsed. As touching the garden Sorrell, there is a liniment made thereof, which being applied in manner of a frontall to the forehead, cureth the distillation of the watery humours to the cies. The root is singular for the wens or imposthumes called Melecerides, and likewise of the Lepry. The decoction in wine is as good for the stone and grauell, as also to resolue the Kings euil, and the swelling kernels behind the ears. If the seed be drunk in wine, it helpeth the spleen and the tumors thereof: the bloody flux likewise, the stomachicall flux, and the vaine desire to the fooles without effect. But for all these purposes, the juice of the Docke is more effectual.ouer and aboue, it breaketh wind vpward, it prouoketh vrine, and disceuseth the cloud and Mist that troubleth the cies. If this herbe be put vp vnder the bathing tub within the baine, or otherwise if the body be annoiued with a liniment thereof without oyle, before one enter into the bath, it taketh away the itch. If the root be but chewed only, it fasteneth the teeth that shake in the head. The same root foddren in wine, staith the flux of the belly, and bindeth it; and yet the leaues make the body soluble. Finally (because I would willingly omit nothing) *Solon* hath made mention of another Docke, called Bulapathum, nothing different from other Dockes; but that the root runneth deeper into the ground, which, if it be taken in wine, cureth the bloody flux.

CHAP. XXII.

¶ Of three kinds of Senvey: of Horehound, and wilde running Thyme: of water Cresses: of water Mints, otherwise called Thymbram: of Linsced, and Bleets.

- F The herbe Senvey, whereof there be three kinds (as I haue already obserued in my treatise of garden plants) *Pythagoras* hath placed in the highest ranke of those simples that sume vp aloft: for there is not a thing that sooner bitheth one by the nose, & pierceth and moun-
teth

* Patience of Monks Blous herbs

* here, likely for Thyme, Frankincense, according to Cornucopia

teth more quickly into the brains than doth Senvey. The seed thereof [commonly called mustard seed] being stamped, & with vinegar reduced into a liniment, cureth the sting of serpents, and namely the prick with the Scorpion. It hath besides, a singular vertue to mortifie & kill the venomous quality of mushrooms. If it be but held in the mouth vntill it melt and resolve, or otherwise be gargarized with honied water, it draweth waterie fleame out of the head. Being chewed, it easeeth the toothach. For the falling down of the Vvula, a gargarisme made of it with vinegar and honey, is excellent. There is not a medicaine so singular for the stomack and all the infirmities thereof, as yet for the lungs. Being eaten at meat, it doth loosen superfluous fleame, and causeth a man to reach and fetch it vp with ease; yea and to take his wind and breath at liberty. In like manner, being taken warm with the juice of Cucumber, it cureth the falling sickness: it purifieth the senses; it purgeth the head by smelling; it keepeth the body soluble; it purvoketh womens monethly fleures, and vrine. A cataplasme made therewith and applied accordingly, helpeth them that be in a dropisie: so it doth those that be subiect to the falling sickness, but then must it be stamped with three parts of Cumin and figs. If it be tempered with vinegar and held to the nose of such women as with the rising of the mother seeme to be strangled and to lie in a trance, it raiseth them vp again; in like sort, it awakens those who be in a fit of the lethargy; howbeit, in this case it is good to put thereto the seed of Sefeli of Candy, which they call Tordilion. But say that the Patients be in so deep a sleep in this dropisie disease, that by such means they will not start vp and be raised; then take mustard-seed and figgs, temper them with vinegar into a cataplasme, apply the same to the * legs or the * forehead or region of the brain rather. It hath a cautick or burning quality, and being applied in form of a liniment to any part, it raiseth pimples; by which means it cureth the old inveterat pains of the brest, the ach of the loins, the haunch, and hucklebone, the shoulders or any part of the body where need is that the offensive humors settled deep within, should transpire and be drawn outwardly to an issue. Now for that the nature thereof is to blister, in case the patient be timorous, & fear some extreme operation of that burning quality that it hath, it may be applied to the part affected between a doubled linnen cloth: otherwise, if the place be very thick and hard, it would be laid too without any figs at all. Moreover, there is a good vsey of Senvey with red earth, for to make the haire come again which is fallen, for scabs and scurfe, for soule morpew or the leprosie, the lowlie disease, the vniuersall cramp that causeth the body to stand stiffe and stark, as it were all of one piece without joint; also the particular cricke which setteth the neck backward, that it cannot stir. An humction made with it and honey, cureth the eye-lids that be not smooth, but rugged and chapped; yea and clarifieth the eyes which be overcast with a muddy mist.

As touching the juice of Scenvie, it is after three sorts drawne, the first being pressed forth, it is let to take a heat in the Sun gently by little and little, within an earthen pot. Secondly, there issueth forth of the small stems or branches that it hath, a white milky liquor, which after it is dried and hardened in that manner, is a singular remedy for the tooth-ach. Where note by the way, that the seed & root both, after they haue bin well steeped and soaked in new wine, are stamped or brayed together: now if one do take in a sipping as much of this iuce thus drawne, as may be held in the ball of the hand; it is very good to strengthen the throat and chaws, to fortifie the stomack, to corroborate the eyes, to confirm the head, and generally to preferue all the senses in their entire. And verily I know not the like whollome medicine againe, to shake off and cure the lazy and lister feuers that come by fits many times vpon women. Senvey also being taken in drinke with vinegar, breaketh the stone and expelleth it by grauell. There is an oyle also made of mustard-seed, infused and steeped in oyle, and so pressed out; which is much vfed to heat and comfort the stiffness of sinewes occasioned by cold; to warme also and bring into temper the thorough cold lying in the loins, hanches and hucklebones, whereof cometh the Sciatica. Of the same nature and operation that Senueie is, Adarea is thought to be (according as I haue touched in the discourses of plants and trees growing wild in the woods,) which is a certain fomy substance arising and sticking in the bark of certain Canes, vnder their very leaues and tufts that they beare in the head.

Concerning Horehound, which the Greekes call Prafion, others Linostrophon, some Phyllopes or Philochares, an herbe so well knowne and so common, that it needs no description; many Physicians haue commended to be as medicinale as the best. And in truth, the leaues and seed both, being beaten into powder, are excellent good for the stinging of serpents, for the

A paine of the brest and fides, & singular for an old cough. Moreover, the juice is right soveraign for those who haue their lungs perished and do reach vp blond, if the branches thereof gathered and bound vp into bunches, be sodden first in water with the grain called Panick for to mitigate in some sort the vnpleasant harshnesse of the said juice. A cataplasme of Horehound applied vnto the Kings euill with some conuenient fat or greafe, resolue the hard kernels. Some prescribe a receit for the cough in this manner. Take the seed of green Horehound, as much as a man may comprehend with two fingers, seeth it with a final handful of the wheat called Far, putting thereto a little oile and salt, and so sup off the decoction fasting. Others hold, That without all comparison there is not a medicine in the world like to the juice of Horehound and Fennel together, first drawn by way of expression to the quantity of 3 sextars, & afterwards boiled to the consumption of a third part vntill there remaine but two sextars; then to this decoction there must be put one sextar of hony, & all sodden again to the consumption of one third part more, vnto the height of a fyrup; whereof one spoonfull every day taken in a cyath of water, is a drinke that in this case hath no fellow. Horehound stamped and mixed with hony, is of wonderful effect being applied to the priuy parts of a man, for any grieues incident thereto. Laid with vinegar, vnto ring-worms, tetters, and any such running wildfires, it purgeth and riddeeth them clean away. A whollome medicine it is to be applied as a cataplasme, to ruptures, convulsions, spafmes, and cramps of the sinews. Taken in drinke with salt and vinegar, it easeeth the belly and maketh it laxatiue. It prouoketh womens terms, and sendeth out the after-birth. The powder of it dried, mixed with honey, is of exceeding great efficacy to ripen a dry cough, to cure gangrenes, white-flaws, and werts all about the root of the nails. The juice dropped into the ears with honey, or snuffed vp into the nose, cureth their infirmities; it cureth away the laundie also and purgeth cholerick humors. And for all kinds of poisons, few herbs are so effectual as Horehound, for it selfe alone without any addition, cleanseeth the stomack and brest, by reaching and fetching vp the filthy and rotten steam there ingendred. If it be taken with hony and the Houre-de-lis root, it prouoketh vrine. Howbeit, where there is danger of any exulceration in kidneys or bladder, it must be vfed with great warinesse, if it be vfed at all. Moreover, the juice of Horehound is said to clarifie the eye-sight. Castor putteth downe two sorts of Horehound, to wit, the black and the white; but he setteth greater store by the white than the other. He prescribeth to take an empty egge-shel, and to put into it the juice of Horehound and hony, by euen portions; & when the said egge is warm, to minister the same by way of clyster or syringe, promising vs that the said injection will breake all inward imposthumes; and when they be broken, cleanse and heale them thoroughly. Also a liniment (saith hee) made of Horehound stamped together with old swines greafe, cureth all wounds occasioned by the biting of mad dogs.

Touching running Thyme, some think it is called Serpyllum in Latine, a *serpendo* [i. of creeping] because it runneth and creepeth by the ground; a property indeed of the wild kind, and especially among rocks and stony grounds. The garden Serpyllum, which cometh of seed, creepeth not, but groweth to the height of four-fingers breadth. The wilde Thyme which cometh vp of the own accord, liketh and thriveth better, hauing whiter leaues and branches than the other; this (I say) is thought to haue a speciall vertue against serpents, and namely the Cenchris, the Scolopendres also as well of the sea as the land; likewise the Scorpions, in case the frigs and leaues thereof be sodden in wine, and so taken inwardly; if the same be burned, it yeeldeth a perfume, which with the very sent chaseth them all away. A singular power it hath against all venomous creatures of the sea. Boiled in vinegar, & reduced into a liniment with oile of roses, it cureth the head-ach, if it be applied as a frontal to the forehead and temples. In like manner it helpeth the phrensie and lethargy: but if it be given to drinke, the weight only of four drams, it easeeth the wrings & torments of the belly, it giueth free passage with ease to the vrine, it resolue the squinancy or bringeth them to maturity, and staith vomits. And if one drinke it with water, it is excellent good for the opilation, heat, inflammations, and other accidents of the liuer. The leaues, to the weight of four oboli, are giuen in vinegar, for the inflation and hardness of the spleen. If it be beaten to powder and giuen in 2 cyaths of vinegar and hony, it is thought a good medicine for them that spit and reach vp blood.

The wild Sisymbrium or Cresses, called of some Thymbræum, groweth to a foot in height and no higher. That which cometh vp in watery places, is like vnto garden Cresses; but both sorts are effectual against all pricks and stings of Hornets, and such like creatures. That which

Some take it
for water
Minor
Horse-mint

springeth vp in dry ground, hath the narrower leafe of the twain, and carrieth a sweet smel with it; whereupon it is commonly plaited amongst other odoriferous herbes in chaplets and guirlands. But both the one and the other allaie the head-ach: likewise they doe stay the flux of waterish humors which distill into the eyes. Some put crums of bread thereto; others seeth them alone in wine, and vs the decoction. Being reduced into a cataplasme, and so applied euery night and taken off in the day time, it heals within foure times laying on, the angry chilblanes and bloody-fals that trouble the feet in the night season; yea and taketh away the spots & pimples arising in womens faces, which marreth their beauty, whether it be eaten with meat in substance, or the iuice only taken in drink; it staith vomits, yexes, wringings, gnawings, and the dissolution or feebleness of the stomack, which causeth inordinat flux. Women going with child must take heed how they eat Silybrium, vnlesse the fruit of their bodies be dead within them; for if it be but applied outwardly, it will send it forth. If one drinke it with wine, he shall find that it prouoketh vrine, and the wild kind ouer and besides, expelleth the stone and the grauell. Such as had need to wake and watch, namely, those that be giuen to drowse and lethargie, will be raised from their sleep and throughly wakened, if it be distilled aloft vpon their heads with vineger.

Line-feed is employed with other matters in diuers medicines to many vses, but of it selfe alone it cleareth the skin of womens faces, taketh out spots, freckles, pimples, wems, and molls that be eye-fores, if it be applied as a liniment thereto. The iuice therof quickneth and helpeth the eye-sight. With Frankincense and water, or els with Myrrhe and wine, it reprefeth the violent flux of humors to the eyes. Reduced into a cataplasme, with honey, greafe, or waxe, and so applied, it resoluth the swelling kernels behind the ears. The meale thereof in manner of drie barley groats, if it be strewed vpon the stomack, helpeth the weaknesse and queasinesse thereof, which maketh it ready to ouerturn. If it be foddren in water and oile, and so reduced into a liniment with Annise-feed, and applied, it cureth the squinancie. It must be wel dried and parched at the fire, in case it be giuen to stay the running out of the belly. As for those that be troubled with the stomackiall flux, or the exulceration of the guts; a cataplasme thereof with vineger and so applied, bringeth them present ease. For the griefe of the liuer, it ought to be eaten with raisons. This feed is passing good for liochies or eleauiaries to be made thereof, in the cure of the Phthisick, and consumption of the lungs. Linefeed growing into floure and mingled with nitre or salt, or els with ashes put thereto, is of great operation to mollifie the hardnesse of muscles, sinewes, joints, and the nape or chine of the neck; yea and to mitigate the inflammations of the membrans or pellicles of the brain. The same applied with figs, is an excellent maturatiue, and ripeneth all impostumes. But if it be laid too with the root of the wild Cucumber, it draweth forth any thing that sticketh within the body, euen the very spils & shuiers of broken bones. The said powder or floure made of Line-feed foddren in wine, and applied as a cataplasme, stayeth cancerous vlcers that they run no further; the same also with hony ripeneth apostemations of flegmatick humors, and the breaking forth of the small pox. Being mingled with an equall portion of garden Cresses, it cureth the rough nailes that grow vtowardly, and fetcheth them off without any inconuenience. Incorporat with rosin and * Myrrhe, and so laid to the cods, it helpeth their swelling and inflammations: it is good also for ruptures of all sorts; & with water it healeth the gangrene. Take of Line-feed & Fenigreek leed, of each one sextar, seeth them in bonied water, and make a liniment thereof, it easeth the paine of the stomack. Line-feed mixed in a clystire with oile and hony, cureth the deadly maladies of the guts and breast parris.

Bleets seeme to be dull, insauorie, and foolish Woorts, hauing no tast nor quicknesse at all: whereupon Menander the comicall Poet, bringeth in a husband vpon the stage, who to reproch his wife for her fortifnesse and want of sense, giueth her the terme of Bleet. And in very truth, good it is for little or nothing, and altogether hurtfull vnto the stomacke. It troubleth and disquieteth the belly, inasmuch as it driueth some that vse to eat it, into the dangerous disease Cholera, working both vpward and downward without any stay. And yet some say, that if it be drunk in wine, it is good against Scorpions, and serueth for a pretty liniment to be applied vnto the agnells or corners of the feet; yea and maketh a reasonable good cataplasme with oile, for the spleen, and pain of the temples. Finally, Hippocrates is of opinion, that much feeding of Bleets, staith the monethly course of womens teames.

CHAP.

CHAP. XXIII.

¶ Of *Meu*, and *Fennell*, as well *Gentle*, named *Feniculum*; as *Wild*, which is called *Hippomarathrum*, or *Myrsineum*: of *Hempe*, and *Fennell-giant*: and of *Thistles* and *Artichokes*.

Meu or Spicknell is not found in Italy, vnlesse it be in some Physitians garden, and those are very few that sow or set it. Howbeit, there be two kinds thereof; the one, which is the better, is commonly called Athamanticum, of Prince *Athamas* the first inuenter of this herbe, as some thinke; but according to other, because the best Meu is found vpon *Athamas*, a mountaine in Theffaly. Leased it is like to * Annise, rising vp with a stem otherwise two cubits high, putting forth many roots, and those blackish, whereof some run very deepe into the ground, neither is this Meu so red altogether as the other. If the root thereof be beaten into powder, or otherwise foddren and so drunk in water, it causeth vrine to passe abundantly: in that order also it doth resolue wonderfully the ventosities gathered in the stomack. It assuageth mightily the wrings and torments of the guts; it openeth the obstructions, and cureth other infirmities of the bladder and the matrice. Applied with honey, it is very good for the joints. Being laid as a cataplasme with Parsley to the bottome of the belly of little children, it causeth them to make water.

As for Fennell, the Serpents haue woon it much credit, and brought it into name, in this regard, That by tasting thereof (as I haue already noted) they cast their old skin, and by the iuice that it yeeldeth do cleare their eyes: whereby we also are come to know, that this herbe hath a singular * property to mundifie our sight, and take away the filme or web that ouercasteth and dimmeth our eyes. Now the only time to gather and draw the said iuice out of Fennell, is when the stalks beginneth to swell and wax big: which after it is receiued, they vse to dry in the Sun, and as need requireth, make an iniunction with it and hony together. There is of this iuice to be had in all places: howbeit, the best is made in Iberia, partly of the gum that issueth or drieth (rather) out of the stalk (being brought neere to the fire); or els drawn from the seed whiles it is fresh and green. There is another making thereof out of the roots, by way of incision, presently after that Fennell beginneth to spring and put forth out of the ground, when Winter is done.

D There is another kind of wild Fennell, named by some Hippomarathrum, by others Myrsineum. Larger leaues this hath than that other of the Garden, and those more sharpe and biting at the tongues end: it groweth taller also, and ariseth with a maine stem as big as a mans arm, & hath a white root. It groweth in hot grounds and those that be stony. *Diodes* maketh mention of another kind yet of wild Fennell, with a long & narrow leafe, bearing seed resembling Coriander. As touching the garden Fennell, and the medicinable vertues that it hath, it is holden, That the seed, if it be taken inwardly in wine, is a foueraigne drinke for the prick of Scorpions or sting of other Serpents. The iuice thereof, if it be intilled by drops into the eares, killeth the wormes therin. The herb it selfe carrieth such sway in the kitchen, that lightly there is no meat seasoned nor any vineger sauce serued vp without it. Moreouer, for to giue a commendable and pleasant tast vnto bread, it is ordinarily put vnder the bottome crust of our loaves, when they be set into the oven. The seed doth bind and corroborate a weak and feeble stomack, yea if it be taken in a very aque. Being beaten into powder & drunk in cold water, it staith the inordinat heauing of the stomack, and the vaine proffers to vomit, for the lights and the liuer, it is the most foueraigne medicine of all other. Being taken moderately, it staith the loosenesse of the belly, and yet prouoketh vrine. The decoction thereof appeaseth the wrings of the guts: and taken in drink, it stilleth womens brests, and maketh them to strow again with milk, when it is gone vpon some occasion. The root taken in a Prinsane of husked barley, purgeth the reins; so doth the syrre made with the iuice or decoction therof, yea and the seed. The root foddren in wine, is singular good

G for the drop sicke and the cramp. A liniment made with the leaues and vineger, and so applied, assuageth hot swellings and inflammations: and the said leaues haue vertue to expel the stone of the bladder. Fennell taken inwardly any way, increaseth sperme or natural seed. A most friendly and comfortable herb it is to the * priuie parts, whether it be by fomenting them with a decoction of the roots boyled in wine, or by applying a liniment to them made with the said roots stamped & incorporate with oile. Many do make a cerote thereof with wax, for to lay vnto tumors;

H 3

* Annise, rather
drier, Dill,
after Diage,
whereupon it
is called of
some, wilde
Dill.

* Such med-
icines be called
* Hippomarathrum.

* either Swell-
ing, or
itching.

mors;

mours to places bruised & made black and blew with stripes. Also they vse the root either prepared with the iuice of the herb, or otherwise incorporat with hony, against the biting of dogs, and taken in wine, against the worm called Milpeed. But for all these purposes before said, the wild Fennell is of greater operation than the garden Fennell: but this principal vertue it hath, mightily to expell the stone and grauell. If it be taken with any mild and small wine, it is very good for the bladder, and namely the Strangury, also it prouoketh womens teermes that be either suppressed or come not kindly away: to which purpose the seed is more effectuell than the root. But whether it be root or seed, it would be vsed in a mean & measure: for it is thought sufficient to put into drink at once, as much as two fingers will take vp. *Petrus*, who wrote the booke intitled * Ophiacca, and *Mytion* likewise in his Treatise named * Rhizotomum, were of opinion, That there is not a better counterpoyson against the venome of Serpents, than, wild Fennell. And certes, *Nicander* himselfe hath raunged it, not in the lowest place of such medicines.

Concerning Hemp, at first it came vp without fowing euen in the very woods, and carried a more duskyish green leafe and the same rougher. It is said, that if men eat the seed, it will extinguish utterly their own seed. The iuice of green Hemp-seed, being dropped into the eares, driueth out any wormes or vermin there ingendred, yea, and what ear-wigs or such like creatures that are gotten into them: but it will cause head-ach withall. So forcible is this plant, that (by report) if it be put into water, it will make it to gather and coagulat. Which is the reason, that if horses haue the gurry, they shall find help by drinking the said water. The root if it be boiled in water, doth mollifie and soften ioints that be shrunk vp: it assuageth the pains likewise of the Gout, and such likewise humors that fall down vpon any part. Being yet green and reduced into a liniment and so applied, it is good for burnes or scaldings, but it must be often removed and changed before it be drie.

As for Ferula or Fennel-geant, it carrieth a seed like to Dill. That kind which riseth vp in one stem, and then diuideth it self and brancheth forth in the head, is supposed to be the female. The stalks are good to be eaten boyled: and the right sauce wherein they be serued vp, to giue them a more commendable tast, is new wine and hony tempered accordingly; and so prepared, they be good for the stomack. Howbeit, if one eat ouer-liberally of them, they cause head-ach. Take the weight of one denier Roman of the root, beat it to powder and drinke it in two cyaths of wine, you shall find it a soveraigne medicine against the stinging of serpents: but you must not forget mean while to apply the root it self (stamped into a cataplasme) vnto the hurt place. After this manner it helpeth the wringing tormentes of the guts. Make a liniment or vnguent thereof and vineger together, annoint the body therewith; it restraineth the immoderate sweats that burst out, although the Patient be sick of a feuer. The iuice of Ferula, if it be eaten (to the quantity of a Beane) doth loosen the belly. The small tendrils or branches of greene Ferula, is good for all the infirmities abouenamed. Take ten grains of Ferula seed in powder with wine, or so much of the pith within the stalk, it stancheth blood. Some hold it good to giue a spoonfull thereof euery fourth, sixth, and seventh day after the change of the Moon, to prevent the fits of the falling sicknes. The nature of all these Fennel-geants is most aduersive to Lampricks, for if they be touched neuer so little therewith, they will die vpon it. *Cassor* was of opinion, That the iuice is excellent good to cleare the eye-sight.

And so much as I haue spoken somewhat of Thistles and Artichoux (how they should be ordered) in my treatise of other garden plants, I will put off no longer to discourse also of their properties and vertues in Physick. Of the wild Thistles there be two kinds: the one more full of branches, shooting out immediately from the root; the other riseth vp in one intire stem, and the same is thicker withall. Both of them haue but few leaues, and those beset with prickles: they beare heads pointed with sharp prickles round about in manner of caltrops. Howbeit, there is one kind, which is the Artichoke, which putteth forth a purple floure amidst those sharpe pointed prickles, which very quickly turns into an hoarie downe, ready to flie away with euery puffe of wind: and this thistle the Greeks call Scolymos. The iuice of the Artichoke stamped & pressed out before it be in bloome, bringeth haire again thicke, if the naked place be annointed therewith. The root either of Thistle or Artichoke, sodden in water and so eaten, is as good as a shooing-horne to draw on pot after pot, for these great bibbers that desire nothing more than to be thirsty and to make quarrell to the cup. It strengtheneth the stomacke, and (if we may beleue it) is

A so appropriate vnto the matrice of women, that it disposeth and prepareth it to conceiue men children. In good faith, *Chereas* the Athenian, and *Glaucias* especially, whose seemeth to be most curious in describing the nature and properties of these Thistles or Artichokes, giue out no lesse. To conclude, if one chew them in his mouth, hee shall finde that they will cause a sweet breath.

CHAP. XXIV.

¶ The composition of a Treacle which was the ordinarie and familiar medicine of King Antiochus.

B Vt before that we go out of the garden, and leaue the herbes there growing, I think it good to set down one confectiō made of them, thought to be a most excellent and soveraigne antidote or preseruatiue against the poison of all venomous beasts whatsoever, and which for the excellency thereof was ingrauen in stone vpon the forefront of the temple dedicated to *Asculapius*, in this manner following: Take of wild running Thyme the weight of two deniers, of Opopanax and * Meu of each the like quantitie; the seed of Dil, Fennel, Amcos, and Parsly, of each the weight of six deniers; of Ervil floure twelve deniers or drams. Let these be beaten into powder and finely seared; and when they be incorporat in the best wine that may be had, they ought to be reduced into the form of Troches, euery one weighing a victoriat or half denier. When occasion is to vse this composition, dissolve one of these Troches in three cyaths of wine, and drinke it. This is that famous Treacle or counterpoyson which great *Antiochus* the King was wont (by report) to take against all venoms or poysons whatsoever.



THE TWENTY FIRST BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS
SECVNDVS.

The nature of Floures, and namely those of Chaplets and Guirlands.

CHAP. I.

¶ The wonderfull varietie of Floures.



F Atto in his Treatise of Gardens ordained as a necessary point, That they should be planted and enriched with such herbes as might bring forth floures for Coronets and Garlands. And in very truth, their diuersitie is such, that vnpossible it is to decipher and expresse them accordingly. Whereby wee may see, that more easie it was for dame Nature to depaint & adorn the earth with sundrie pictures, to beautifie the fields (I say) with all manner of colours, by her handiwork (especially where she hath met with a ground to her minde, and when she is in a merrie humour and disposed to play and disport her selfe) than for any man in the world to vtter the same by word of mouth. Wherin certes her admirable prouidence she hath shewed principally

by a generall expence, that he should be honourably enterr'd: and as his corpes was carried in the streets to his funeral fire, they flung floures vpon his bere out of euery window all the way. In those daies the manner was to honor the gods with chaplets of floures, and namely those that were counted patrones and protectours, as well of cities and countries, as of priuat families: to adorne and beautifie therewith the tombs and sepulchres of those that were departed, as also to pacifie their ghosts, and other infernall spirits: farther than thus, there was no vse of such Guirlands allowed. Now of all those Chaplets, most account was made of them wherein the floures were planted. We find moreover, that the Sacrificers or Priests of *Mars* called *Saleis*, were wont in their solemnities & feasts (which were very sumptuous) to wear Coroneets of sundry floures fowed together. But afterwards, Chaplets of Roses were only in credit and reputation: untill that in proceesse of time, the world grew to such superfluitie and sumptuous expence, that Guirlands would please men, but of the meer precious and aromaticall leaf *Malabathrum* and not content therewith, soone after there must be Chaplets for as far as from India, yea, and beyond the Indians, & those wrought with needelwork: and the richest coronet was that thought to be, which consisted of the leaues of *Nardus*: els made of fine silke out of the *Seres* country, and those of sundry colors, perfumed besides & al wet with costly and odoriferous ointments. Further than this they could not proceed, & so our dainty wanton dames rest contented hitherto, and vse no other Chaplets at this day. As for the Greekes verily, they haue written also seuerall Treatises concerning floures and Garlands: and namely, *Muesheum* and *Callimachus*, two renowned Physicians, haue compiled bookes of those Chaplets that be hurtfull to the braine and cause head-ach. For euen herin also lieth some part of the preservation of our health, considering that perfumes do refresh our spirits, especially when we are set at table to drinke liberally and to make merrie, whiles the subtil odour of flours pierceeth to the braine secretly ere we be aware. Whereby the way, I cannot chuse but remember the deuise of *Quene Cleopatra*, full of fine wit, and as wickid and mischieuous withall: For at what time as *Antonie* prepared the expedition and journey of *Aetium* against *Augustus*, and stood in some doubt of jealousy of the said *Queen*, for al the fair shew that she made of gratifying him and doing him all pleasure, he was at his tast, & would neither eat nor drink at her table without assay made. *Cleopatra* seeing how timorous he was, and minding yet to make good sport and game at his needlesse feare and foolish curiositie, caused a Chapter to be made for *M. Antonius*, hauing before dipped all the tips and edges of the floures that went to it in a strong and rank poison, and being thus prepared, set it vpon the head of the said *Antonie*. Now, when they had sitten at meat a good while, and drunk themselves merrie, the *Queen* began to make a motion and challenge to *Antonie*, for to drink each of them their chaplets, and withall began vnto him in a cup of wine seasoned and spiced (as it were) with those floures which she ware her owne self. Oh the shrewd & vnhappy wit of a woman when she is so disposed! who would euer haue misdoubted any danger of hidden mischiefe herein? Well, *M. Antonie* yeelded to pledge her: off goeth his owne Guirland, and with the floures minced small, dresth his own cup. Now when he was about to set it to his head, *Cleopatra* presently put her hand betwene, and staied him from drinking, and withall vttered these words, My deare heart and best beloued *Antonie*, now see what he is whom I much thou dost dread and stand in feare of, that for thy security there must wait at thy cup and trencher extraordinarie tasters; a strange and new fashion ywis, and a curiositie more nice than needfull: lo, how I am not to seek of means and opportunities to compass thy death, if I could find in my heart to liue without thee. Which said, she called for a prisoner immediately out of the goal, whom she caused to drink off the wine which *Antonie* had prepared for himselfe. No sooner was the goblet from his lips againe, but the poor wretch died presently in the place: but to come again to the Physicians who haue written of floures besides those abouenamed, *Theophrastus* among the Greekes hath taken this argument in hand. As for our countrymen, *Themphrastus* haue entituled their bookes * Anthologicon: but none of them all, so farre as euer I could find, wrote any Treatise concerning floures. Neither is it any part of my meaning at this present to make Nosegayes, or plat any Chaplets, for that were a fruitles and vaine peece of work: but as touching floures themselves, I purpose to discourse so much as I think and find to be memorable and worth the penning. But before I enter into this Treatise, I am to aduertise the Reader, that we Romanes are acquainted with very few garden floures for Guirlands, and know in manner none but Violets and roses.

C H A P.

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C H A P. IV.

Of the Rose employed in Coronets. The diuers kinds thereof: and where it is set and groweth.

The plant whereupon the Rose doth grow is more like a thorn or bush, than a shrub or any thing else. For it will come of a very Brier or Eglantine also, where it will cast a sweet and pleasant smell, although it reach not far off. All Roses at their first knitting seeme to be inclosed within a certain coat or huske full of graines: which soon after beginneth to swell and grow sharp pointed into certain green indented or cut buds: then by little and little as they wax red, they open and spread themselves abroad, containing in the midst of their cup as it were certain small tufts or yellow threds standing out in the top. * Vsed they are exceeding much in Chaplets and Guirlands. As touching the oile Rosat, made by way of infusion, it was in request before the destruction of Troy, as may appear by the poet *Homer*. Moreover, Roses enter into the composition of sweet ointments and perfumes.ouer and besides, the Rose of it selfe alone as it is, hath medicinable vertues, and serueth to many purposes in physick. It goeth into emplastres and collyries or eye-salues, by reason of a certain subtil mordacitie and penetratiue qualitie that it hath. Furthermore, many delicate and dainty dishes are serued vpon the table, either couered and betwreth with Rose leaues, or bedewed and smeared all ouer with their iuice; which doth no harme to those viands, but giue a commendable tast therto. We at Rome make most account of two kinds of Roses about the rest, to wit, those of *Præneste*, and of *Capua*. And yet some haue ranged with these principal Roses, those of *Mileum*, which are of a most liuely and deep red colour, and haue but twelve leaues in a flower at the most. The next to them are the *Trachinian* Roses, not so red all out. Then those of *Alabanda*, which be of a baser reckoning, with a weak colour inclining to white. Howbeit the meanest and worst of all, is the Rose * *Spineola*. Most leaues in number it hath of all others, and those in quantity smaller. For this would be knowne, that Roses differ one from another either in number of leaues, more or lesse, or els that some be smooth, others rough and prickly: also in colour and smell. The fewest leaues that a Rose hath be five: and so forward they grow euer still more and more, untill they come to those that haue an hundred, namely about *Campain* in Italy, and neere to *Philippi* in Greece, whereupon the Rose is called in *Larine* *Centifolia*. Howbeit, the territorie of *Philippi* hath no such soile as to bring forth these hundred-leafe Roses: for it is the mountain *Pangæus* near adioyning, vpon which they naturally doe grow, with a number of leaues I say, but the same fall: which being remoued & transplanted by the neighbor borderers, do mightily thrive in another ground, namely about *Philippi* aforesaid, & proue much fairer than those of *Pangæus*. Yet are not such Roses of the sweetest kind, that are so double and double againe: no more than those which are furnished with the largest and greatest leaues. But in one word, if you would know a sweet smelling rose indeed, chuse that which hath the cup or knob under the floure, rough & prickly. *Cepio*, who liued in the time of *Tiberius* the Emperour, was of opinion, That the hundred-leafe Rose had no grace at all in a garland, either for smell or beauty; & therefore should not be put into chaplets, vlesse it were last in manner of a tuft, to make a fur-croiff, or about the edges as a border: no more than the Rose *Campion*, which our men call the Greek Rose, and the Greekes name *Lychnis*, which lightly groweth not but in moist grounds, and neuer hath more than five leaues. The floure exceeds not the bignes of a certain violet, and carrieth no scent or fauor at all. Yet is there another Rose called *Græcula*, the floures & leaues whereof are folded and lapped one within another, neither will they open of themselves, vlesse they be forced with ones fingers, but looke alwaies as if they were in the bud, notwithstanding that the leaues when they be out are of all others largest. Moreover, there be Roses growing from a bush that hath a stalk like a Mallow, and beareth leaues resembling those of the olive: and this kind is named in Greek *Moscheuton*. Of a middle size between these abouenamed, is the Rose of *Autumne*, commonly called *Coroneola*. And to say a truth, all the said Roses, except this *Coroneola*, and that which groweth vpon the brier or Eglantine before-named, haue no smell with them in the whole world naturally, but are brought to it by many deuises & sophistication: yea, & the very Rose it selfe, which of the own nature is odoriferous, carrieth a fowle smell in some soile than in another. For at *Cyrene* they passe all other for sweetnes and pleasant sauer:

* *Ysaieus* *prophet* *ad* *minius* *et** *Our* *white* *Rose*.* Of floure
the ing.

Fole-foot;] a plant far different from Bacchar, as may appear by the description thereof, which I have set down among the sundrie kinds of Nardus. And verily I do find, that this plant is named * Afarum, because it is neuer used in making of guirlands and chaplets.

Concerning Saffron, the wild is the best. To plant it within any garden in Italie, is held no good husbandry, for it will not quit cost, considering there is neuer a quarter set therewith, but it asketh a * scruple more in expence, than the fruit or increase commeth to, when all the cards are told. For to haue Saffron grow, you must set the cloues or bulbous heads of the root; and being thus planted, it proueth larger, bigger, and fairer than the other: howbeit sooner far it doth degenerate and become a bastard kind: neither is it fruitful and beareth chiuies in euerie place, no not about Cyrene, where the goodliest floures of Saffron in the world are to be seen at all times: The principal Saffron groweth in Cilicia, and especially vpon the mountain Corycus therenext to it, is that of Lycia, and namely vpon the hill Olympus: and then in a third degree of goodnesse, is reckoned the Saffron Centuripinum in Sicily: although some there bee, who attribute the second place vnto the saffron of the mount * Phlegra. Nothing is so subject to sophistication as Saffron, and therefore the only triall of true Saffron indeed, is this. If a man lay his hands vpon it, he shall heare it to cracke as if it were brittle and readie to burst: for that which is moist (a qualitie comming by some indirect means and cunning cast) yeeldeth to the hand and makes no words. Yet is there another prooof of good Saffron. If a man after hee haue handled it, reach his hand vp presently to his mouth, & perceiue that the aire and breath thereof smiteth to his face and eyes, and therewith fretteth and tingeth them a little, for then he may be sure that the saffron is right: there is a kind of garden saffron by it self, and this commonly is thought best, and pleasest most, when there appeareth some white in the mids of the floure, and thereupon they name it Dialeucon; whereas contrariwise this is thought to be a fault and imperfection in the Corysian Saffron, which is chiefe: and indeed the floure of it is blacker than any other, & soonest fadeth. But the best simply in any place wherefoever, is that which is thickest and seemes to like best, hauing besides short chiuies like hairs: the worst is that which smelleth of mustines. *Mutianus* writeth, that in Lycia the practise is to take it vp euery 7 or 8 yere, and remove it to a plot of ground wel digged and delued to a fine mould; where, if it be replanted, it will become fresh again and young, whereas it was ready before to decay and degenerate.

Now the reise in (any place) of Saffron floures in garlands; for the leaues are small and narrow, in manner almost of threads. Howbeit with wine it accordeth passing well, especially if it be of any sweet kind: and being reduced into powder and tempered therewith, it is commonly sprinkled ouer all the theatres, and filleth the place with a perfume. It bloometh at the setting or occultation of the star Vergilia; and continueth in floure but few daies; and the leaf drieth out the floure. In the mids of winter, it is in the verdure and all green, and then would it be taken vp and gathered: which done, it ought to be dried in the shadow, and the colder that the shade is, so much the better. For the root of Saffron is pulposus and full of carnosities; and no root lieth so long aboue ground as it doth. Saffron loueth a life to be trampled and trod vnder foot: and in truth, the more iniurie is done vnto it for to mar it, the better it thrieth: and therefore neare to beaten paths, and wells much frequented, it commeth forward and prospereth most.

CHAP. VII.

¶ Of the floures used in oldtime about coronets and guirlands: the great diuersitie in aromaticall and sweet smelling simples. Of *Salsuicca* and *Polium*.

Saffron was (no doubt) in great credit and estimation, during the flourishing estate of Troy; for certes, the Poet *Homer* highly commendeth these three floures, to wit, Melilot, Saffron, and Hyacinth. Of all odoriferous and sweet senting simples, nay of all hearbes and floures whatsoeuer, the difference consisteth in the colour, the smell, and the iuice. And note this to begin withall, that seldome or neuer you shall meet with any thing sweet in sent, but it is bitter in taste; and contrariwise, sweet things in the mouth, be few or none odoriferous to the nose: And this is the reason that wine refined, smelleth better than new in the lees; and simples growing wild, haue a better fauor far than those of the garden. Some floures, the further they beoff, the more pleasant is their smell: come nearer vnto them, their sent is more dull and weaker than it

A was, as namely Violets. A fresh and new gathered rose casteth a better smell afar off than neere at hand; let it be somewhat withered and dry, you shall sent it better at the nose than farther off. Generally all floures be more odoriferous and pleasant in the Spring, than at any other season of the year: and in the morning they haue a quicker and more piercing sent, than at any hour of the day besides: the neerer to noon, the weaker is the smell of any herb or floure. Moreover, the floures of new plants are nothing so sweet as those of an old stock: and yet I must needs say that floures smell strongest in the mids of Summer. As for Roses and Saffron floures they cast the pleasantest smell if they be gathered in cleare weather, when it is faire and dry about head: and in one word, such as grow in hot countries be euier sweeter to smell vnto, than in cold Climates. Howbeit in Egypt the floures haue no good sent at all, by reason that the aire is foggie and mistie, with the dewes rising from the riuer Nilus. Moreover, certain floures there be that are sweet and pleasant enough, yet they stiffe and fill the head. Others, so long as they be fresh and green, haue no smell at all, for the excessive abundance of moisture within them; as we may perceiue in Fenigreek, which the Grecians call Buceros. Many floures cast a quick and lively smell, and yet are not without good store of iuice, but moist enough, as violets, roses, and saffron: but such as are destitute of such moisture, and yet their sent is piercing and penetrant, they all of them be of a strong fauor also, as for example the Lilly of both kinds. Sothernwood & Marjeram haue a hot and strong fauor. Some herbs there be which yeeld no smell nor goodnes at all but in their floure only, for all their other parts be dull and good for nothing, as violets and roses. Of garden herbes, the strongest of smell be alwaies dry, as Rue, Mints, and Ach or Parsley: C likewise are all such as grow in dry places. Some fruits, the elder they be and the longer kept, the sweeter is their fauor, as Quinces: and the same Quinces degard and smell better when they be gathered, than if they hung still vpon the tree and so preferred. Others there are, that vnles they be broken, bruised, rubbed, and crushed, haue no smell: and ye shall haue those that cast no sent at all, vnlesse their rind or bark be taken off: as also such as except they be cast into the fire and burnt, yeeld no fauor, as Frankincense and Myrrhe. Furthermore, all floures being bruised, are more bitter than they were untouched and vnhanded. Some after they be dry retain their odor longest, as the Melilot. There are that make the place sweeter where they grow, as the floure de lis, inso much as it perfumeeth the whole tree (whatsoeuer it is) the roots whereof it toucheth. The herb Hesperis smells more by night than day, whereupon that name was deuised. * There are no liuing creatures which yeeld from their bodies a sweet fauor, vnlesse we giue credit to that which hath bin reported of the Panthers.

Furthermore this would not be passed ouer as touching the difference of odoriferous plants and their floures, in this respect, that many of them are neuer employed to the making of Guirlands and chaplets, as namely the Floure de lis and Nard Celticke, Salsuicca, which although they yeeld both of them an excellent fauor, yet are not used that way. But as for the * Floure de lis, it is the root only thereof that is comfortable for the odor: as if Nature had made the plant it selfe to serue only for physick vses, and compositions of sweet perfumes. The best Floure de lis is that which groweth in Illyricum or Scлаuonia; and not in all parts thereof, not (I say) in the maritime coasts, but farther vp into the main, among the mountains and foreests of Drilo and Narona. The next to it in goodnes commeth out of Macedon, and it hath the longest root of all others, but slender withall and whitish. In the third place is to be ranged the floure de lis of Africk or Barbary, which as it is the biggest in hand, so is it also the bitterest in taste. As touching the Illyrian Ireos, there be two sorts of it, namely, Rhaphanitis, which is the better of the twain, so called for the resemblance that it hath to the Radish root. The second they name Rhizotomos, and it is somewhat reddish. In sum, the best Ireos, if a man do but touch it will provoke sneezing. The stem of the Floure de lis groweth streight and vpright to the height of a cubit. The floure is of diuers colours, like as we see in the rainebow, whereupon it took the name Iris. The Ireos of Pifidia is not rejected, but held to be very good. Moreover, they vse in Scлаuonia to be very ceremonious in digging vp the root of floure de lis; for 3 months before they purpose to take it forth of the ground, the manner is to poure mede or honied water round about the root in the place where it groweth, hauing before-hand drawne a threefold circle with 3 swords point, as it were to curry fauor with the Earth, & make some satisfaction for breaking it up and robbing her of so noble a plant: and no sooner is it forth of the ground, but presently they hold it vp aloft toward heauen. This root is of a feruent & caustick nature, for in the very

* *Phlegra*, a mountain in Sicily, where the best Saffron is said to grow.

* *Phlegra*, a mountain in Sicily, where the best Saffron is said to grow.

* *Plinius* neuer heard of the *Musk-rose* nor *Citrus* dates in these daies.

* Commonly called *Iris*.

handling it raifeth pimples and blifters in maner of a burn, vpon their hands that gather it. A. G
 nother ceremonie alfo they haue in gathering thereof: for none muft come about this worke, but fuch as haue liued chafte and not touched a woman: this (I fay) at oue all is obferued moft precifely. This root aboue all others is moft fubiect to the worrne, for not onely when it is dry, but alfo while it is within the earth, it quickly commeth to be worrne-eaten. In old time the beft Irinum or oile of Ireos was brought from the cape of Leucas and the city of Elis in Bœotia; for planted it hath bin in thofe parts many a yeare. But now there is excellent good commeth out of Pamphylia: howbeit that of Silicia, and namely from the Septentrional parts is moft highly commended.

As for the plant Saliunca or Nard Celtick, ful of leaues verily it is, yet they be fo fhort, that handfomly they cannot be knit and twifted for garlands: a number of roots it putteth forth, to which the floure or herbe groweth clofe: for furely a man would iudge it all herbe rather than floure, as if it were platted and preffed flat to the root with ones hand: and in one word, refembling a very thick tuft of grafie by it felfe. This herb groweth in Auitria and Hungarie; alfo among the Morici, and the Alps on the Sun fide. As for that which commeth vp about the citie Eporhedia, it is fo pleafant and odoriferous, that there is as much feeking after it as if it were fome precious mettall; and it yeeldeth a reuenue to the City no leffe than fome mettall mine. And in very truth, a fingular herbe it is in a wardrobe to lie among good clothes, for to get them a moft pleafant and commendable fmell.

Another plant there is which the Greekes vfe likewife in their Wardrobes, called Polium. This herbe *Mufans* and *Hefiodus* the Poets extoll and fet out to the higheft degree; for they report that it is good for all things that it fhall be employed about; but principally, that it auail much to win men fame, renown, promotions, and dignities.ouer and aboue which vertues, miraculous it is (if it be true which they fay) * that the leaues thereof in the morning feeme white, about noon purple, and at the Sun-fetting blew. Two kinds there be of it, one groweth in the plains & champain grounds, and is the greater; another in the woods, and is the leffe. Some call it Teuthrion. The leaues refemble the gray haire of an old man, fpringing direfly from the root, and neuer paffe in height a hand breadth. Thus much may fuffice concerning odoriferous floures.

CHAP. VIII.

¶ The colours of Cloth refembling thofe of floures, and ftriving with them for the better. Of *Amarantus* or *Paffe-colours*: of *Chryfocome* or *Chryftis*.

THE exceffive ryot and prodigall fuperfluitie of men is grown to this paffe, that hauing taken no fmall pleafure in furmounting the natural fauor of fimple floures, by their artificial odors and compound perfumes; they cannot reft fo, but muft proceed alfo in the craft and myfterie of dying cloth, to challenge the faireft floures in the garden, and to match, if not to furpaffe, the liuely colours of Natures fetting. Of thefe tindures I finde that there be three principal: the one in grain, which ftriueth with that bright orient colour in Rofes; and there is not a more pleafant thing to the eye, than to fee the Scarlet or purple of Tyros, or to behold the double died Dibapha, or the Laconian purple. The fecond rich dy ftands vpon the Amethyft colour, and refembleth the March violet: this alfo beareth much vpon that purple, which of the faid violet is called Ianthinus: for now I handle dies and colors in general terms, which neuertheleffe may be fubdiuided into many other fpeciall forts: The third is ordinarily made of the purple & porcellaine fhel-fifhes, and that in diuers & fundry maners; for of this tindure there are cloathes which incline much to the colour of Turnfoll; and of thefe fome be many rimes of a deeper and fuller dy than others. Alfo there is another fort which ftandeth much on the Mallow floure, inclining to a purple; and a third fort which refembleth the violet that commeth late in the yere [called the purple stock-gilloffe] and indeed this is the firmeft & richeft color that can be died out of thofe fifhes aforefaid. Certes, the tindures & dies now adies are fo liuely, as well for fimple colors as mixt and compound (fuch artificial means are deuifed by our fumptuous gallants) than in this ftrife of Nature and art together, a man fhall hardly iudge whether of them haue the better hand. As touching yellow, I finde that it is a moft ancient colour, and highly reputed of in old time: for the wedding vaile which the Bride ware on her marrying day, was all of yellow, and women onely were permitted to vfe them: which might wel be

the

A the caufe that this color is not reckoned among thofe that be principall, that is to fay, common as well to men as women: for the wearing and vſing of colours indifferently by the one and the other, is that which hath giuen them their name and fpeciall credit. Howbeit, doe what we can for all our skill and indutry we muſt giue place without all doubt to the purple floure gentle, for we cannot reach poſſibly to the color thereof. Now to fay a truth, a purple Spike rather than this is: it is a floure, and the fame altogether without any ſmell. Of a ſtrange and wonderful nature this is: it loſes of all things to be cropped, and the more it is plucked, the better it commeth againe: it beſieth to ſpike or put out the floure in the month of Auguſt, and continueth vntill Autumne. The beſt is that of Alexandria, for after it is gathered, it will keep the freſh and liuely colour ſtill. This marvellous propertie it hath by it ſelfe. That when all other floures doe faile and are gone, if it be wet in water it looketh freſh againe, and for want of others, ſerues all winter long to make chaplets & guirlands. The chiefe and principall vertue that it hath, is ſhewed in the very name *Amarantus*, for ſo it is called in Greeke, becauſe it neuer doth fade or wither.

B But to come again to our artificiall colours, we haue one that anſwereth to the floure named *Cyanos*, & blew bottell: likewiſe to the yellow golden floure *Elichryſon*. Verily none of all theſe floures or colors were in requeſt in the daies of *K. Alexander the Great*, for the Greeke authors who wrote next after his deceaſe, haue made no mention at al of them, whereby it is plaine, that they grew into a name & liking ſince their time: howbeit no man needs to make doubt or queſtion, that found out they were firſt by the Greekes: for how els ſhould it be, that their names which be meere Greekiſh, are current here in Italy? Howbeit this cannot be denied, that Italie hath giuen name to the hearb *Petillum*, which flouriſh in Autumne, groweth about briars and brambles, and is onely commendable for the colour ſake, which is much like to the wild Roſe or *Eglantine*: the leaues of which floure be ſmall, and no more than fine. A wonderful thing to be noted in this floure, that the head ſhould bend and nod downward ſo, as vneſſe it bee thus (as it were) wreathed and bowed, the ſaid leaues will not ſhew out of a ſmall cup or veſſell of ſundrie colours, and enclosing within it a yellow feed.

C As touching a daſe, a yellow cup it hath alſo, and the ſame is crowned as it were with a garland conſiſting of ſixe and fifty little leaues, for ſound about in manner of fine pales. Theſe be floures of the meadow, and moſt of ſuch are of no vſe at all; no maruell therefore if they be nameleſſe: howbeit ſome giue them one name, and ſome another. As for *Chryſocome* or *Chryſitis*, no Latine denomination it hath at all: an hearme it is, growing an hand-breadth high, putting forth certaine buttons (as it were) in the head, glittering as bright as gold, with a black root, taſting harſh and yet ſweetiſh withall: it groweth commonly in places full of ſtones & ſhadowy.

CHAP. IX.

¶ The excellencie of Chaplets and Guirlands: of *Cyclaminus*, and *Melilot*: of *Trifolie* or *Clauere*, and three kinds thereof.

NOW that we haue gone through in manner the principall dies and richeſt colours that be it remaineth that we paſſe to the treatiſe of thoſe Guirlands, which being made of diuers colored floures, in regard onely of that varietie, are delectable & pleaſing to the eye. And E conſidering that ſome of them ſtand vpon floures, others of leaf, they may be all reduced to two principall heads. Among floures, I take to be all kinds of broom (for from them there be gathered yellow floures) and the *Oleander*. Item, the bloſſoms of the Iuſube tree, which alſo is called *Cappadocia*, for they reſemble much the odor of the oliue blooſs: as for *Cyclaminus*, & *Sorbreed*, it groweth among buſhes, whereof more ſhall be ſaid in another place: a purple *Colofian* floure it caries, which is vſed to beautifie & ſet out game-coronets. To come now to chaplets made of leaues, the faireſt that goe vnto them be * *Smilax* and *Iuy*; and therein alſo their berries interlaced among, doe make a goodly ſhew aboue al of which we haue ſpoken at large in the treatiſe of ſhrubs and trees. Many kinds there are beſides of plants proper for this purpoſe, which we muſt be ſaine to expreſſe by Greeke names, for as much as our countrey men haue not beene ſtudioſ in this behalfe, to giue any Latine names to the greateſt part of them: beſides, moſt of them are meere ſtrangers in Italy, and grow in forraign parts: howbeit, looked for it will be at our hands that we ſhould enter into the diſcourſe of them alſo, for that our purpoſe & deſigne reacheth to all the workes of Nature, and is not limited & confined within the bounds of

* Birdwee.

* *Vitis alba*, of
some *Glycy-
rrhiza*, of others,
* *Viburnum*
* *Mastiholi*.

Italy. Well then, to begin withall, * *Melothron*, *Spirceon*, *Trigonon*, * *Cncoron*, which *Hygicus* calleth *Casia* (afford leaues very meet to make chaplets: so doth *Conyza*, called otherwise *cunillago*, * *Melythophyllon* named also *Apiastrum*, *Bawme*, and *Melilot*, which wee commonly terme *Sertula Campana*; & good reason, for the best in Italy is that of *Campain*: & in Greece, that which groweth in the promontory *Sunium*. Next to these the *Melilot* of *Chalcis* & *Candide* is wel accepted of: but grow it in what country it will, rough thickets and woods it delighteth most in. And that of this hearb they were wont vually in old time to make garlands, may appeare by the very name *Sertula*, which it took therupon, and retaineth still. In fauor & floure both, it commeth neare to *Saffron*: the hearbe otherwise of it selfe is hoary and gray. The best *Melilot* is counted that which hath short & leaues, and those most plump and fatter withall. Semblably, the hearbe *Trifoile* or *Clauer*, hath leaues which go to the making of coronets and gurlands. And herof there be three kinds: the first is that which the Greeks call *Mynianthes*, others *Aphalation*, hauing a bigger leafe than the rest: an hearbe that garden-makers commonly vse the second with a sharpe leafe, called thereupon *Oxytriphylon*: the third, which is least of al other. Among these *Trifoiles*, I cannot but aduertise the reader, that some there be which haue strong and firme items: as nervous as those of garden *Fennell* and *Fennell wild*, yea and as stiff as those of *Myrophonos*. But to returne againe to our chaplets, there bee employed about them, both the maine stalkes of *Ferula*, as also the berries and purple floures of the *Luie*. There is besides a kind of them, like vnto the wild roses: and in them verily the colour only is delectable, for odour they haue just none. To conclude, of *Cncoron* there be two kinds, the blacke and the white: both well branched and full of leaues, but the white is most odoriferous: and as well the one as the other, doe flourish after the *Æquinox* in Autumne.

CHAP. X.

¶ Of *Orygnum*, and *Thyme*: of the *Athenien* honey: of *Conyza*, and *Iupiters*.
floure, of *Southernwood* and *Camomile*.

AS many sorts also there be of *Origanum*, serving to make gurlands: as for one of them, it hath no seed; but the other which is sweet, is called *Origan* of *Candy*. In like manner, two kinds there be of *Thyme*, to wit, the white and the blacke: this hearb doth flourish about the Summer Solstice, at what time as Bees also begin to gather honey from it: and according K to the flourishing of it more or lesse, a man may guesse full well what season there will be for honey: for honey-masters and such as keep Bees, hope to haue a good yere of honey when they see the *Thyme* to blosme abundantly. *Thyme* cannot well away with rain, and therefore it taketh harme by shoures and sheddeth the floure. *Thyme* feed lyeth so close, that vnneath or hardly it can be found; whereas the seed of *Origan*, notwithstanding it be exceeding smal, is euident enough and may soone be seene. But what matter maketh it, that Nature hath so hidden the seed, considering it is wel known, that it lyeth in the very floure, which if it be sowne, commeth vp as well as any other seed? See the industrie of men, and how there is nothing but they haue made trial of and put in practise! The honey of Athens carrieth the name for the best honey in the world, by reason of the *Thyme* growing thereabout. Men therefore haue brought our into other countries, *Thyme* out of *Attica*, although hardly and with much ado: being sown thus in the floure as I haue said: it commeth vp. But there is another reason in Nature, why it should thrive so badly in Italy, or elsewhere, considering that the *Atticke* *Thyme* will not continue & liue, but within the aire and breath of the sea. Certes this was an opinion receiued generally of our ancient fore-fathers, That no *Thyme* would doe well and prosper, but neere vnto the Sea; which should be the cause, that in *Arcadia* there is none of it to be found. And in those daies also, men were verily perswaded, that the *Oliue* would not grow but in the compass of three hundred stadia from the Sea side: howbeit, in this our age verily we are aduertised and know for certain, That in *Languedoc* and the province of *Narbon*, the very stonie places are all ouergrowne and couered with *Thyme*, vpon which there are fed thousand of sheepe and other cattails: in such M sort, as this kind of herbage and pasturage, yeeldeth a great reuenue to the inhabitants and passengers of that country, by ioynting and laying in of the said beasts brought thither out of farremote parts for to feed vpon *Thyme*.

Concerning the hearbe *Conyza*, which goeth also to the making of Chaplets, there be two kinds

A kinds likewise of it, namely, the male & the female. And these differ onely in leaues: for those of the female *Conyza* be thinner, smaller, narrower, and growing closer together than the other of the male, which indeed branch and spread abroad more, lapping one ouer another in manner of crest tiles. The floures also of the male *Conyza* is more bright and liuely: howbeit, both the one and the other floure late, and not before the rising or apparition of the star *Arcturus*. The male carrieth a strong sent: but that of the female is more penetrant; in which regard the female is better for the bite and sting of venomous beasts. The leaues of the female, smell of *Hony*. The root of the male, is by some called *Libanotis*, whereof we haue already written.

As touching these herbes following, * *Dios Anthos*, *Majoran*, the day *Lillie* *Hemerocallis*, *Sothernwood*, *Ellecampane*, water *Mints*, and wild running *Thyme*, as also all which do branch and put forth roots as *Roses* do, such serue only in case for garlands. As for the said *Iupiters* floure or *Dios Anthos*, particularly, there is nothing in it but the colour to commend it, for fauor it hath none, no more than another herb which the Greeks call *Phlox*. As for the rest, their floures and branches both be odoriferous, except the running wild *Thyme*.

Ellecampane, named in Greeke *Helenium*, sprang first (as men say) from the teares of *Ladie Helena*: and therefore the best *Ellecampane* is that which groweth in the Island of *Helena*. The plant is lysed like vnto wild *Thyme*, spreading & running low by the ground with little branches, nine inches or a span long.

Sothernwood doth flourish in Summer, and carrieth a sweet and pleasant fauor, howbeit, the head it somewhat stuffeth and offendeth. The floure is of a golden colour. And say, that it carrieth neither seed nor floure, yet commeth it vp of it selfe in void and vacant places altogether neglected and without any culture, for it doth propagate and increafe by the tops and tips of the branches lying vpon the ground, and so taking root. And therefore it groweth the better if it be set froot or slip, than sowed of seed. For of seed, much ado there is to make it come vp and when it is above ground, the yong plants are removed and set, as it were in *Adonis* gardens, within pots of earth; and that in Summer time, after the manner of the herb and floure *Adonion*: for as well the one as the very tender, and can abide no cold: and yet as chill as they be, they may not away with ouer-much heat of the Sun, for taking harme. But when they haue gotten head once and be strong enough, they grow and branch as * *Rue* doth.

Much like vnto *Sothernwood* in sent and smell, is *Camomile*: the floure is white, consisting D of a number of pretty fine leaues set round about the yellow within.

CHAP. XI.

¶ Of *Mariorum*, the greater and the lesse, called in Latine *Amaracus* or *Sampuchum*. Of *Nyctygetum*, *Melilot*, the white *Violet* of *Codaminum*, and wild *Bulbes*: of *Helechryssum*, and *Lycelis* or *Rose* *Campain*. And of many other herbes growing on this side the sea.

DIOCLET the Physitian, and the whole nation in manner of the Sicilians, haue called that herb *Amaracus*, which in Egypt and Syria is commonly named *Sampuchum*. It commeth vp both waies, as well of seed as of a slip and branch. It liueth and continueth longer than the herbes before named, and hath a more pleasant and odoriferous sent. *Mariorum* is as plentiful in seed, as *Sothernwood*: but whereas *Sothernwood* hath but one tap root and the same running deep into the ground, the rest haue their roots creeping lightly aloft and ab within the earth. As for all the other herbes, they are for the most part set and sowne in the beginning of the Autumne; some of them also in the spring, and namely in places which stand much in the shade, which loue to be well watered also and enriched with dung.

As touching *Nyctygetum* [or *Lunaria*] *Democritus* held it to be a wonderfull herb, and few like vnto it, saying that it resembleth the colour of fire, that the leaues be prickly like a thorne, that it creeps along the ground: he reporteth moreover, That the best kind thereof grows in the Iad *Gedrosia*. That if it be plucked out of the ground root and all after the Spring *Æquinox*, and be laid to drie in the Moonshine for 3 daies together, it will giue light and shine all night long, also, That the Magi or Sages of *Persia*, as also the *Parthian* kings vse this herb ordinarily in their solemn vovs that they make to their gods: last of all, That some call it *Chenomychos*, because Geese are afraid of it when they see it first; others name it *Nyctilops*, because in the night

* or *Isab Flis*, which some take to be the *Columbina*.

* *Helenium* here described agreeth not with our *Ellecampane*.

* *Ruta vicia*.

night season it shineth and glittereth afaire off. As for Meliote, it cometh vpon euery where : howbeit, the best simply & whereof is made the greatest account, is in Arctica: but in what place fouer it growes, that is most accepted which is fresh & new gathered, not inclining to white, but as like vnto Saffron as is possible. And yet in Italie the white Meliote is the sweeter and more odoriferous.

The first floure bringing tidings of the springs approach, is the white bulbous stock-Gilloflee. And in some warmer climates they put forth and shew euen in Winter. Next vnto it their timely appearance is the purple March Violet: and then after them the Panfle, called in Latine Flammea, and in Greeke Phlox, I meane the wild kind only.

Codiamion bloweth twice in the yeare, namely, in the Spring and the Autumne: for it cannot abide either Winter or Summer. Somewhat later than those before rehearsed, are the Daffodil and Lilly are they floure, especially in countries beyond sea. [in Italy verily (as I haue said before)] they bloom not till after Roses: for in Greeke the Paffie-floure* Anemone* is yet more lateward. Now is this Anemone the floure of certain wild Bulbes, different from that other Anemone whereof I will speake in the Treatise of Physick-herbs. Then followeth * Oenanthe, and Melanion, and of the wild sort Heliochryfos. After them, a second kind of Paffie-floure or Anemone, called also Leimonia, beginneth to blow. And immediately vpon it the petty Gladen or sword-grasse, accompanied with the Hyacinth: & last of all the Rose sheweth in her likenes. But quickly hath the Rose done, and none so soone, and yet I must except the garden Rose. Of all the rest, the Hyacinths or Harebells, the * stock-Gillo-floure, and Oenanthe or Filippendula, beare floures longest. But of this Oenanthe, this regard must be had, that the floures bee often picked and plucked off, and not suffered to run to seed. This groweth in warme places. It hath the very same sent that Grapes when they first bud and put out blossom, whereupon it took the name Oenanthe. But before I leaue the Hyacinth, I cannot chuse but report the fable or tale that goeth thereof, and which is told 2 manner of waies, by reason that the floure hath certaine veines to be seen running in and out, resembling these two letters in Greeke A I, plaine and easie to be read: which as some say, betoken the lamentable mone [*] that Apollo made for his wanton minion *Hyacinthus* whome he loued, or as others make report, sprung vpon the blood of *Atias* who slew himselfe, and represented the two first letters of his name A I.

Helyachryfos beareth a yellow floure like to gold, a small and fine leafe, a little stalk also & a slender, but hard and stiffe withall. The Magi or Sages of Persia vse to wear this heare and floure in their Guirlands: and they be fully persuaded, that by this meanes they shall win grace and fauour in this life, yea, and attaine to much honour in glorie; provided alwaies, that their sweet compositions wherewith they annoint and perfume themselves, be kept in a vessel or box of gold, not yet fined nor purified in the fire; which gold they call Apyron. And thus much for the floures of the Spring.

Now succeed and come after in their rank, the summer floures, to wit, *Lychnis*, *Iupiters* flower or Columbine and a second kind of * Lilly: likewise *Ipheon*, and that *Amaracus* or *Marjoram*, which they call the Phrygian. But of all others, the flower *Pathos* is most louely & beautiful: whereof there be two kinds, the one with a purple flower like vnto the Hyacinth, the other is whiter, and groweth commonly in churchyards among graues and tombs, and the same holdeth on flourishing better, and liueth longer. The flower de-luce also is a Summer flower. These haue their time, fade, and are soone gone. And then come other flowers for them in their place in Autumne, to wit, a third kind of Lillie, and Saffron: But of both these, the one is of a dull or not so at all: the other is very odoriferous, but all of them break out and shew abroad with the first shower of rain in Autumne. Our chapter makers vse the floures also of *Bedegnar* or white Thistle in their Guirlands: and no maruell, since that our Cookes dresse the young tendrells and crops thereof, for to make a daintie dish for to content our tast and goe pleasantly downe the throat. Thus you see the order and manner of beyond-sea floures, how and when they come abroad. In Italy it is somewhat otherwise: for the Rose followeth immediately after the violets: and when the Rose is in the mids of his ruffe, in comes the Lilly to bear him company. No sooner hath the Rose plaied his part, but the blew-blaw entereth the stage: and after him the Paffieveluer or floure-gentle. As for the Pervincle, it continueth fresh and greene all the yeare long: this hearbe windeth and runneth too and fro with her fine and slender twiggies in manner of threads or laces, and those beset with leaues twoby two in order, at euery knot or joint.

Passing

A Passing good and proper indeed for vine and stony worke in borders, arbors or knots, and meet for fine and curious Gardeners: howbeit, for default of other floures, the Garland-makers borrow a little of the law, and make vp their defects with a supply from it. The Greeks call it *Chamaedaphne*.

The life of the white Violet or bulbous stock-Gilloflee, is three yeares at most, and so long it holdeth the owne well, after that terme it doth degenerat and wax worier. The Rose-bush will continue five yeares, without cutting downe or burning (which are the meanes to maintain it in youth (still.) But as we haue already obserued, there lieth very much in the soile, which would be considered especially in floures: for in Egypt, none of all these aboue rehearsed, haue any odor or sent at all; and yet the Myrtle trees there, they alone carry a most sweet and pleasant flavor. Moreover, in some tracts all these herbes and floures be forenamed, do preuent in budding and blowing (two months) those of other places. As for Rose-rewes, the earth ought to be digged and opened about the roots; first presently vpon the coming of the Western wind *Fauonius* in February, and then a second time about the Summer Solstice: to conclude, these would be looked vnto aboue all things, that before and between those times, they be kept well pruned and cleansed from all superfluities.

CHAP. XII.

The order of nourishing and maintaining Bees. What meat is to be giuen them. Their diseases, and the remedies to them belonging.

C IN this discourse of ours concerning gardens and gay floures appertaining to Garlands, requisite it is to speake of bees and bee-hiues, which become the garden very wel: considering the gain that cometh in so easily by them, especially when they stand and dwell. In regard therefore of these bees, so beneficiall as they be, and kept with so small charges, a garden ought to be well plaated and stored with Thyme, Baulme, Roses, Violets of all kinds, Lillies, sweet Trefoile, Beanes, Erulse, Cunila or Sauerie, Poppies, Conyza, Casia, towir, Lauander and Rosemary, Melilote, Melissophyllum, and Cerinthe. This Cerinthe is an herb bearing white leaues, and those bending downward: it groweth a cubit high, and carrieth an hollow head, containing within it a certaine sweet liquor resembling honey: bees are most eager and greedy after the floure of this herbe, as also of Sennie; whereat we may well make a wonder, seeing that for certaine they wil not touch nor come neere to the blossome of the Oliue trees. And therefore good it is to set bee-hiues far enough from this tree. And yet of necessity some there would be planted neere vnto them, that when the bees do swarme or cast, they might haue a convenient place at hand to settle vpon, for feare they should flie too far from the hieue. The Cornell tree also is not good for bees, for if they chance to tast the floure thereof, they fall presently into a vehement lask, whereof the poore wretches (if they haue not help the sooner) die: and therefore it would not stand in their way. Howbeit, there is a remedy to cure them of this flux, namely, to take sorfises and stamp them together with honey, and so to giue it them: to set vnto them either mans urine or beastes stale or els last of all to serue them with graines of the Pomgranate, besprinkled and drenched in wine of the Ammeinean grape: but if you set broome all about their hiues, you do them an high pleasure.

As touching their food and nourishment, I will tell you a wonderfull and memorable thing vpon mine own knowledge. There is a towne or Burgade called *Hosilia*, situate vpon the riuer Po, the inhabitants of this village, when they see that their bees meare goeth low therabout, and is like to faile, take me their hiues with bees and al, and set them in certain boats or barges, and in the night row vp the said riuer Po against the streame five miles forward. The morrow morning out go the bees to seeke food and reliefe. Now when they haue met with meat, and fedde themselves, they returne againe to the vessels aforesaid: and thus they continue daily, although they change their place and haunt, vntill such time as their masters perceiue that the hiues bee full, by the feeling of their boats low within the water with their weight, and then they returne home againe downe the streame, and discharge the hiues of the honey within.

CHAP.

* Puffball or of Wind-floure.

* Filippendula Ruyssed of some.

* or rather the Wall flower.

* Some read Cerynthus rather.

CHAP. XIII.

¶ Of a certaine venomous and poisonfull honey. The remedies as well against the said Honey, as another kind that maketh folke besides themselves.

SEmblably in Spain they deale with their Bees & hives vpon Mules backs in the like case, and carry them vp into the country for to be provided of victuals. But here it would be considered by the way, what pasturage it is that they be put into; for that there is some kind of food, which poisoneth all the honey that is gathered from it. At Heraclea in Pontus, in some years, all the honey that the Bees do make, is found to be venomous and no better than poison; and yet the same bees in other yerres gather good and wholesome honey. Howbeit, those authors who haue deliuered thus much in writing, haue not set downe what floures they be that yeeld this hurtfull honey: and therefore I thinke it not amisse to write what I haue found and knowne as touching this point. There is an herbe called *Agolethron* in Greek, which killeth horses verily, but Goats most of all, feeding therupon; and therefore it took that name: the floures of this herb, if it chance to be a wet and rainy Spring, do conceiue and ingender within them a certain deadly venom which doth corrupt and rot them. This may be a probable reason, that the foresaid mischief and bane is not alwaies felt alike. This poisonfull honey may be knowne by these signs: first it will neuer thicken but continue liquid still; secondly, the colour is more deep and reddish than ordinary; thirdly, it carrieth a strange sent or smell with it, and will cause one to sneeze presently; last of all, it is more ponderous and heauy than the good and harmlesse honey. The symptoms or accidents that insue vpon the eating of this honey, are these, They that haue tasted thereof, cast themselves vpon the ground and there fall a tumbling: they feek by all means they can to be cooled; and no maruell, for they run all to sweat, that one drop ouertakes the other. Howbeit, there be many remedies for this poison, which I will shew in place convenient. Mean while, because a man would not be without some good thing ready at hand, since the world is so full of villany & set vpon such secret mischief, I must needs put down one good receipt, and that is this: take honied wine that is old, mingle and incorporate it with the best honey you can meet withal, and Rue together: vse this confection at your need. *Item*, Eat much of salt-fish, although it come vp again, and that your stomack do cast it. Moreover, this honey is so pernicious, that the very dogs if they chance to lick vp any excrements that passe from the partie so infected (either by reaching, spitting, vomit, or seage) they are sure to be sped therewith, and to feele the like torments. Howbeit, the honied wine that is made therewith, if it may haue age enough and be stale, is knowne for a certainty to do no creature harm. And there is not a better medicine in the world, either to fetch out spots in womens faces, and make their skin faire and cleare (if it be applied with Cosinus), or to take out the black and blew marks remaining after stripes in eye or elsewhere, so it be tempered with Aloe. Another kind of honey there is in the same region of Pontus, and namely among the Sanni (a people there inhabiting) which because it driueth folke into a fit of rage and madness, they call in Greeke *Manomenon*. Some attribute the occasion hereof to the floure of the Oleander, whereof the woods and forests there be full. This nation selleth no honey at all, because it is so venomous and deadly: notwithstanding they do pay for tribute a huge masse of wax vnto the Romans every yeare. Moreover, in the kingdome of Persis, and in Getulia, which lieth within Mauritania Cæariensis, a country confining and bordering vpon the Massæfuli, there be venomous honey-combs; yea, you shall haue in one hie some honey-combs full of poisoned honey, whereas others be found and good: a dangerous thing no doubt, and than which, there could be no greater deceit to poison a number of people; but that they may be known from the rest by their leaden and haw hue that they haue. What should we thinke was Natures meaning and intent by these secret sleights and hidden mischiefs, That either the same Bees should not every yeare gather venomous honey; or not lay the same vp in all their combs differently? Was it not enough that she had bestowed vpon vs a thing, wherein poison might be soe secret giuen and least perceived? Was the not content thus to indanger our liues, but the must proceed farther, even to incorporate poison her selfe in honey, as it cometh from the Bee, for to empoison so many liuing creatures? Certes, I am of this mind and belife verily, That shee had no other purpose herein, than to make men more wary what they eat, and lesse greedy of sweet meats to content and please the tooth. For the very honey

they indeed she had not generally infected with this hurtfull quality, like as she had armed all Bees with sharp pricks and stings, yea, and the same of a venomous nature; and therefore against these creatures verily she hath not deferred and put off to furnish vs with a present remedy: for the juice of Mallowes or of Yvie leaues serueth to annoint the stinged place, and keep it from rankling; yea, and it is an excellent thing for them that be stung, to take the very Bees in drink; for it is an approued cure. But this I maruell much at, That the Bees themselves, which feed of these venomous herbs, that cary the poison in their mouths, and are the makers of this mischievous honey, do escape and die not thereof? Whereof I can giue no reason at all, vnlesse I dame Nature, that lady and mistresse of the world, hath giuen vnto these poore Bees a certaine Antipathy and vertue contrary vnto poison: like as among vs men to the *Marj* and *Pysli*, these hath imprinted (as it were) a repugnancy in their bodies, to resist the venome of all Serpents whatsoever.

CHAP. XIII.

¶ Of a certaine kind of honey which Flies will not touch. Of Bee-hives. How to order the same, and namely when Bees want meat and are in danger to be famished. The manner also of making Wax.

THEre is in Candy another strange and wonderful thing, as touching honey, gathered about the mountaine Carina, which taketh nine miles in compass: within which space, and circuit of ground, there is not a Flie to be had; and the honey there made, Flies will not touch in any place wherefoeuer. By which experiment, this honey is thought to be singular for medicines, and therefore choise is made thereof before any other.

As touching Bee-hives, they ought to stand on the open side vpon the *Æquinoctiall* Sunne rising, that is to say, when the daies and nights be equall. And in any wise, regard was to be had, that they open not in the Northeast, and much lesse the full West. The best Bee-hives be made of barks and rinds of trees: the second in goodnesse be those of Ferula or Fenell-gear. In the third place are such as be wrought of oster twigs. Many haue made them of Tale, which is a kind of transparent glassie flane, because they would see through them how the Bees do worke and labor within. Daubed they should be if they were well serued, both without & within with Oxedung. The couer and lidde thereof ought to be moueable and haue liberty to play vp and down behind, that it may be let down far within-forth, in case either the hie be too large & of greater receipt in proportion than the Bees are in number; for feare they should slack their work and giue ouer their trauell, dispaireing euer to fill the same, seeing it so big and of so great capacity, and being thus let downe (to make their hie seem the lesse) it must be gently drawn vp again by little & little, that the Bees may be deceiued thereby, & not perceiue how their worke grows vpon them. In Winter time Bee-hives should be couered with straw: oftentimes perfumed with beasts dung especially,* for this is agreeable to their nature.ouer and besides, it killeth the wicked vermin that breed in them, Spiders, Butterflies, and Wood-worms; yea, and this property it hath moreover, to stir vp and quicken the Bees, and make them more liuely and nimble about their businesse. As for the Spiders aforesaid, they verily are not so harmful, & be soon destroyed: but the Butterflies do the more mischief, & are not so easily rid away. Howbeit there is a way to chase them also, namely, to wait the time when the Mallow doth begin to blossom, to take the change of the Moone, and chuse a faire and cleare night, and then to set vp certaine burning lights just before the Bee-hives: for these Butterflies will couer to flie into the flame. But what is to be done, when you perceiue that the bees do want victuals; then it will be good to take dry Raisins of the Sun and Figs, to stamp them together into a masse, and lay it at the entry of the hie, *item*, It were not amisse to haue certain locks of wool well touzed and carded, and those wet & drenched in cuir either sodden to the thirds, or to two thirds, or els soaked in honied wine, for them to settle vpon and suck. Also to set before them in their way the raw carcases of Hens, naked and pulled to the bare flesh. Moreover, there be certain Summers so dry and continually without raine, that the fields want floures to yeeld them food, and then must they be serued with the foresaid viands, as well as in Winter season. When honey is to be taken forth of the hives, the holes and passages for the ingresse and egress of the bees ought to be well rubbed and besmeared with the herb *Melissophyllon* and *Genista* brused and stamped: or else the hives must be compassed about in the midst with branches of the V^hite Vine,

* Considering, that of a beast carcase they will be engendered.

for feare left the Bees depart and flie away. The vessels whereout hony hath been imployed, yea, and honey combs, would be well rinced and washed in water; which being thoroughly foddren, maketh a most wholesome and excellent vineger.

As touching wax, it is made of the combs after the hony is pressed and wrong out of them. But first they must be purified and clesned with water, and for three daies dried in some darke place: vpon the fourth day they are to be dissolved and melted vpon the fire in a new earthen pot neuer occupied before, with so much water as will couer the combs: and then it should be strained through a panier of reeds or rushes, which done, the wax is to be set ouer the fire a second time in the said pot, and with the selfe same water, and foddren again; and then it ought to run out of it into other vessels of cold water, but those first should be al about within annoited and befeamed with hony. The best wax is that which is called Punica, i. of Barbary, and is white. The next in goodnesse is the yellowest, and smelleth of hony, pure and clean without sophistication; such cometh from the country of Pontus; and verily I wonder much how this wax should hold good, considering the venomous hony whereof it is made. In the third place is to be ranged the wax of Candy: for this standeth much vpon that matter which they cal Propolis, wherof I haue already spoken in the Treatise of Bees and their nature. After all these, the wax of the Isle Coryca may be reckoned in the fourth rank; which because it is made much of the Box tree, is thought to haue a vertue medicinable. Now the making & working of the first and best Punick white wax, is after this manner: They take yellow wax, and turne it often in the wind without the house in the open aire; then they let it seeth in sea-water, and namely, such as hath bin far from the shore out of the very deep, putting thereto Niter, this done, they scum off the floure (that is to say, the whitest of it) with spoons; & this cream (as it wer) they change into another vessell, which hath a little cold water in it. Then once againe they boyle it in sea-water by it selfe alone, and set the vessel by for to coole. After they haue done this three times, they let it dry in the open aire vpon an hurdle of rushes, in the Sun and Moon, both night and day; and this ordering bringeth it to be faire and white. Now in the drying, for feare that it should melt, they couer it all ouer with a fine Linnen cloth. But if they would haue it to be exceeding white indeed, they seeth it yet once more, after it hath bin thus sunned and mooned. In truth, this Punick white wax, is simply the best to be vsed about medicines. If one be disposed to make wax black, let him put thereto the ashes of paper: like as with an addition or Orchanet it will be red. Moreover, wax may be brought into all manner of colours, for painters, limners, and enamellers, and such curious artificers, to represent the forme and similitude of any thing they list. And for a thousand other purposes men haue vse thereof, but principally to preferre their walls and armors withall. All other things as touching Hony and Bees, haue bin handled already in the peculiar Treatise to them and their nature belonging. Here an end therefore of Gardens and Gardinge.

CHAP. XV.

¶ Of hearbs which come vp of themselves, and such especially as are armed with prickles.

IT remaineth now to speake of certain wild herbs growing of their own accord, which in many nations serue for the kitchen, and principally in Ægypt; for this country, although it be most plentiful in corne, yet may seem to haue least need thereof, and of all nations vnder heauen best able to liue without the same: so well stored it is with hearbs, wherof the people doth ordinarily feed: whereas in Italy here, we know as few of that kind good to be eaten, namely, Strawberries, *Tanus, Rufcus, Crestemarine or Sampire, as also Batis Hortensiana, which some call French Sperage: we haue also the wild Parthes of the medowes, and the Hop, but wee vse them rather for pleasure and delight, and to giue contentment to our tast, than for any necessary food to maintain life. But to come againe to Ægypt, there is to be found the noblest plant of all others, Colocasia, which some name Cymos, [i. the Egyptian beane:] this herbe they gather and cut downe out of the riuer Nilus; it putteth forth a main stem, which being foddren, yeeldeth in the eating and chewing, a certaine threddy matter or woolly substance, drawing out in manner of a cob-web; but the stalk as it groweth vp amid the leaues, maketh a faire and goodly shew: for indeed the said leaues be exceeding large, and comparable to the broadest that any tree beareth, resembling those for all the world of the Clote or great Burthe growing in our ri-

vers

A vers, which we cal Personata. A wonderful thing it is to see, what store they in Ægypt set by the commodities that their riuer Nilus doth afford: for of the leaues of this Colocasia (plaited & infolded naturally one within another) they make them cups of diuers forms and fashions, out of which they take no small pleasure to drink. And now adides this herbe is planted here in Italy. Next to Colocasia, the Ægyptians make most account of that Cichory, which I named before, the wild and wandring Endiue, which herbe cometh vp in that country after the rising of the Brood. hen starit floureth not all at once, but bloweth by branches one after another: supple and pliable root it hath, and therefore the Ægyptians vse it in stead of cords to binde withall. As for Anthallium, it groweth not in Nilus, but not far from the riuer: it beareth a fruit in bigneffe and roundnesse resembling a Medlar, hauing neither kernell within, nor husk without:

B and the seale of this plant is like to Cyperus, or English Galangale. This herbe they vse to eat, being first dressed and prepared in the kitchen. They feed likewise vpon Oetum, a plant that hath long leaues and those very small, howbeit a great root. Touching Aracida and Aracos, they haue many roots verily branching and spreading from them, but neither lease nor herbage ne yet any thing els appearing aboue ground. And thus much of the chiefest and greatest herbs of Ægypt serued vp to the table: the rest are common or vulgar, and eury mans meat, by name, Condrylla, Hypocheris, Canalis, Astriscum, Scandix (called by some Tragopogon, which beareth leaues like to Saffron;) Parthenium, Strychnum, Corchorus, and *Apac, which sheweth his head about the Æquinox: also Acinos, and that which they name Eppitron, and it neuer beareth floure; whereas Apace contrariwise neuer giueth ouer flourishing, but when one floure is faded and shed, another cometh vp, and this course it holdeth all Winter long, throughout the Spring also, euen to the heat of Summer. Many other hearbs they haue of base reckoning; but alone all, they make greatest account of *Cnicus (an herbe not knowne in Italy) not for any good meat they find in it, but for the oyle drawne out of the seed thereof. Of this herbe there be two principall kinds; to wit, the Wild, and the Tame: the Wild is subdivided into two speciall sorts, the one of a more mild and gentle nature than the other, although the stalks of both be alike, that is to say, stiffe and freight vpright: and therefore women in old time vsed the stens thereof for rocks and *distaffes; whereupon some do call the herb Attracta: the seed is white, big, and bitter. The second is more rough and hairy, creeping long on the ground, with stalks more muscular and fleshy, and carrieth a small seed. The herb may be ranged among those that be prickly: for so must herbs be diuided into such general heads; namely,

C that some be full of prickles, others cleane without and smooth. As for those which stand vpon prickles, they be subdivided into many members and branches. And to begin with a kind of Sperege, called also Scorpio, it hath no leafe at all, but instead thereof, prickles and nothing els: some there be leaved indeed, but those are beset with prickles, as the Thistle, Sea-holly, *Liquorice, and Nettle: for the leaues of all these herbs be prickly & stinging withall. Others, besides their leaues, haue prickles also, as the *bramble, & Rest harrow or whin. Some be provided of prickles both in leafe and stalk, as Phleus, which others haue called Stoebe. As for Hippophaer, it hath a prick or thorne in every joint: but the bramble Tribulus asoreid, hath this property by it selfe, that the fruit also which it beareth, is set with prickles. Of all these sorts, the Nettle is best knowne, which carrieth certain goblets and concavities, and the same yeelding a purple kind of downe in the floure, and it riseth vp sometimes about two cubits high. Many kinds there be of these Nettles; namely, the wild Nettle, which fomerwould haue to be the female, and this is more milde than the rest. In this wilde kinde is to be reckoned also, that which they cal Cania, and is of the twain more agre, for the very stalk will sting, and the leaues be purled as it were and jagged. But that Nettle which carrieth a stinking fauor with it, called is Herculeana. All the sort of them are full of seed, and the same blacke. A strange quality in these Nettles, that the very hairy downe of them (hauing no euidnt prickles sticking out) should be so shrewd as it is, that if one touch it neuer so little, presently there followeth a smarting kind of itch, and anon the skin riseth vp in pimples and blisters, as if it had been skat or burnt: but well knowne

D is the remedie of this smart, namely, to annoint the place with oyle. Howbeit this biting property that it hath, cometh not to it at the beginning when it is new come vp, but it is the heat of the Sun that fortiffeth this mordacitie. And verily in the Spring when the Nettle is young and perpeeth first out of the ground, they vse to eat the crops thereof for a pleasant kind of meat, and many be persuaded besides that it is medicinable, & therefore precisely & religiously feed therewith.

E F

K

*as Theophrastus saith, Colocasia est cichorium.

*Thought to be Drac de liot.

*Ceratium, or ballard safron; but Turnebus supposes it to be pastor cici, whereof cometh Oleum Cicerum.

*Glycericum, but this agreeeth not with our Liquorice.

*Celastrum, though some read Celsus.

*Tribulus, Accabulus.

*The fruit or berry whereof is Poutanisia.

thereupon, as a preservative to put by all diseases for that present year. Also the root of the wild Nettle, if it be foddren with any flesh, maketh it roe car more tender. The dead nettle, which singeth not at all, is called Lamium. As touching the herb Scorpio, I will write in the treatise of herbs medicinale.

CHAP. XVI.

¶ Of Carduus, and Ixine: of Tribulus and Anchusa.

The common Thistle is full of prickly hairs, both in leafe & stalk: likewise * Acorna, * Leucacanthos, Chalcicos, Cnicios, Polyacanthos, Onopysos, Ixine, & Scolymus. As touching the Thistle Chamelion, it hath no prickles in the leafe. Moreover, these prickly hearbes are distinguished & different one from another in this, that some of them be furnished with many stems, and spread into diuers branches, as the Thistle: others againe rise vp with one maine stalk, and branch not as Cnecios. Also there be of them that be prickly only in the head, as the Eryngium or Sea-holly. Some floure in Summer, as Tetralix and Ixine. As for Scolymus, late it is also ere it blow, but it continueth long in the floure. Acorna differeth from it onely in the red colour and fatter juice that commeth from it. Atracylisallo might go for Scolymus, but that it is whiter and yeeldeth a liquor like bloud: whereupon there be some who call it Phonos, Murderer: this quality it hath besides that it sciteth strong: the seed also ripeneth late, & not before Autumne: and yet this is a property common to all plants of this prickly and thistly kind. But all these herbs will come of seed and root both. As for Scolymus, it differeth from the rest of these Thistles herein, that the root, if it be foddren, is good to be eaten: besides, it hath a strange nature, for all the fort of them during the Summer throughout, neuer rest and giue ouer, but either they floure, or they apple, or els be ready to bring forth fruit: and look when the leaues begin to wither, their prickles lose their force and will not pierce.

Ixine * is a rare herb and season to be seen, and not found growing in all countries alike. Immediately from the root it putteth forth leaues plenty, out of the mids of which root there sweleth out a bunch like an apple, but the same is covered with the foresaid leaues: in the very top of which fruit there is contained a gum of a pleasant tast, called the thistle Mastick. Touching the herb Caicos, which groweth also in Sicily and no where els, it hath a property by it self, the stalks whereof shooting from the root, creep along the ground, and it carrieth a broad leafe full of prickles and thorns, and indeed these stalks thus running vpon the earth, the Sicilians call Caicos, which they vse to keep and preserve; and being thus condited also, they commonly eat as a very good meat. One stem it hath growing vpright, which they terme Premix, as sweet & pleasant as the other, but it will not abide to be kept long. The seed thereof is covered with a certain soft down, which they call Pappos, which being taken off with the husk, there remaineth a tender kernell within, which they eat, & find it as delicat as the very heart of the Date tree top, which is called the Brain: and this pith also foresaid, the Sicilians name Acalia.

The Caltrop thistle Tribulus, groweth not but in moory grounds and standing dead waters. Surely in other places, folke curle it as they passe by, the prickles and spurs tick out so dangerously: but about the riuers Nilus and Strymon, the inhabitants do gather it for their meat: the nature of this plant is to lean and bend downward in the head to the water. The leafe resembles in form those of the Elme, and they hang by a long stele or taile. But in other parts of the world there be two other kinds of Tribulus: the one is leaved like unto the Cicling pease; the other hath leaues sharp pointed; this second kind is later ere it floure, and commonly groweth about the mounds of cloes lying by villages and town sides: the seed lieth in a cood rounder than the other, and black withall; whereas the former hath a sandy feed. Of these thorny and prickly plants, there is yet one kind more, namely Ononis. Rest harrow, for it carrieth prickles close to the very branches; the leafe is like to Rue: the whole stalk throughout is set with leaues disposed in manner of a garland. This plant commonly groweth after corn, it * plagueth the plough, and yet there is much adoto rid it out of a ground, so loth it is to die. Of plants that be prickie, some haue their stalkes and branches trailing by the ground, as namely that hearbe which they call Coronopus, Harts horn, or Buck-horne Plantaine: contrariwise, there stand vpright, Orchanet, the root whereof is so good to colour wax and wood red. And of such as be more gentle in handling * Camomile, Phyllanthus, Anemone, and Aphace. As for Crepis & * Apathe, their stalkes

A stalks be all leafe. Moreover, this would be noted, that the leaues of herbs differ one from another, as well as in trees: some in the length or shortnesse of the stele whereto they hang; others in the breadth or narrownesse of the leafe it selfe; in form also, whereby you shall haue some conered, others cut and indented, likewise in sent and floure, for some there be that continue longer in flouing than others, and blow not all at once, but one part after another, as Bassil, Tom-fall, Aphaca, and Onocheile.

CHAP. XVII.

¶ The difference of herbs in their leafe: what hearbes they be that floure all the year long: of the Asphodel, Pissana, and Petie. Gladen or Sword-grasse.

Many hearbes there be as well as some trees, which continue greene and hold their leaues from one end of the year to the other, as Tomfol, and Adiantum or Capillus Veneris. Another sort there is of herbs that floure spike-wise, of which kind are Cynops, Alopecurus [i. Foxtaile] Stelphuros, which some call Ortyx, others Plantaine (of which I will write more at large among Physick herbs) and Thryollis. Of these, Alopecurus carrieth a soft spike, and a thick mossie down, not vnlike to Fox-tails, whereupon it tooke that name in Greeke: and Stelphuros resembleth it very much, but that the Foxtaile bloweth not all together, but beareth floures some at one time & some at another. Cichory and such like, haue their leaues spreading vpon the ground, and those put forth directly from the root, beginning to spring immediately after the apparition of the star Vergilia. As touching Parietary, there be other nations as well as the Egyptians, who feed vpon it: it took the name Perdicium in Latine, of the bird Perdicx, the Partridge, that seeketh after it so much, and plucketh it out of the wals where it groweth: it hath many roots and the same thick. In like maner, the herb Ornithogale, i. Dogs onion, hath a small stem and a white, but a root. * halfe a foot long. the same is full of bulbs like onions, soft also, and accompanied with three or foure other spurs growing out of it. This hearbe they vse to feed among other pot-herbs for potage. I will tell you a strange quality of the herb Lotos and of Egilops; if their seed be cast into the ground, it will not come vp in a year. As wonderfull is the nature also of the Camomile: for it beginneth to floure in the head, whereas all other herbs which blow not all at once, floure at the foot first. Notable is the Bur likewise and worthy to be obserued, I mean that which it ticketh to our clothes as we passe by, the floure lieth close and groweth within the said Bur, and neuer appeareth without: forth it is I say as it were hatched within, much like vnto those liuing creatures that coue and quicken their egges within their belly. Semblably, about the city Opus there is an herb called Opuntia, which men delight to eat: this admirable gift the leafe hath, that if it be laied in the ground, it will take root; and there is no other way to plant this herb, & maintain the kind. As for Iasione, one leafe it hath and no more: but so lapped and infolded, that it seemeth as if they were many. Touching Condrylla, the herb it selfe is bitter; but the juice of the root is hot and biting. Bitter also is Aphaca or Dent de Lion; also that which is called Piciis, which name it took of the exceeding bitternesse that it hath: the same floureth all the year long. As for Squilla and Saffron, they be both of a marvellous nature; for whereas all other hearbes put out leafe first, and then knit round into a stem, in those two a man may euidently see the stalk before the leafe. And in Saffron verily, the said stalk thrusteth out the floure before it; but in the Sea-onion Squilla, first sheweth the stalk, and then afterwards the floure breaketh out of it. The same Squilla floureth thrice in the year, as I haue said heretofore, shewing thereby the three seasons of feednes. In the range of these bulbous and onion-rooted plants, some place the root of * Cyperus, that is to say, of Gladiolus [i. Petie-gladden, Flags, or Sword-wort,] this is a sweet root, and being foddren or baked with bread, it giueth it a more pleasant tast; & besides, it mendeth the weight of bread well if it be wrought & kneaded with it in dough. Not vnlike to it is that herbe which they call Thesion, but that the root is harsh and vnpleasant. All others of the same kind differ in leafe: the Asphodel hath long and narrow leaues; Squilla is broad leaved, and may be handled without offence; whereas the Gladen leafe is like a sword blade indeed, and keen edged according to the name [both in Greeke and Latine.] The Asphodel feed is good to be eaten, if it be parched or fried; so is the bulbous root of it also; but this should be roasted vnder the embers, & then eaten with salt and oile.ouer and besides, if it be stamped with figs, it is an excellent dish; and this

* A kind of thistle: some call it Mans bloud.
* S. Mary thistle.

* Nymphaeae v. sume eff. equum omnibus teris nascitur: Ex Therop. which is cleare contrary to Pliny.

* Aquaticke for many parts, in Therophrasti, like the feed of Scisiana.
* And therefore it is called res-bonni, or res-variis, because it haue the draught of the Oxen: plough.
* Antherut.
* Dicitur fo called, because it is bitter and difficult to eat: many a one shewing like to a kind of Cicchie.

* Stompedell, Dioscor. hath Sesquipedalis, a foot and a halfe.

* Cyperus, or rather Xyphos, de Paganis.

indeed (according to *Hesiodus*) is the only way to dresse it. Moreover, it is said, that *Asphodels* G
planted before the gates of any ferme house in the countrey, preferue the place from all charms
and forceries. *Homer* also the Poet hath made mention of the *Asphodel*. The root resembleth
* *Naveus* of a mean bignesse: and there is not another root with more heads, for oftentimes a
man (hal fee 80 bulbs clustred in a bunch together. *Theophrastus* and all Greeke writers almost,
and namely *Pythagoras* (the chiefe prince of Philosophers) describe this plant to haue a stem of
of one cubit in length, yea and oftentimes of two, with leaues like to wild Porret: and the sayd
stem they called *Anthericon*; but the root, (i.) those bulbs resembling onions, *Asphodels*; but
our countrymen haue named in Latin, the stem *Albuscus*; but the root, *Haftula Regia*. This is
the name also of the stalk, full of grains or berries; and thereof they would make two kinds [the
male and the female.] Well, the stem of the *Asphodel* then, is commonly a cubit long, large
and big, clean and smooth. Of this herb *Mago* hath written, and ordained, that it should be cut
down in the going out of March and entrance of April, namely, after it hath don flourishing, and
before that the seed be felled and grown to any bignesse: then vpon the fourth day after, when
the said stems are slit and clouen, they must be laid abroad to drie in the Sunne: when they be
dried, they ought to be made vp into knitchers or handflus. He saith moreover, that the Greeks
name that herb *Pistana*, which we cal in Latin *Sagitta*, growing in marishes and moores among
other fenny weeds. This also would he haue to be cut downe and gathered, betwene the Ides
of May and the end of the month of October: then, to be pilled, and so to be dried by little and
little with the moderat heat of the Sun. The same author giueth order likewise, that the other
kind of *Gladiolus*, which they call *Cypiros*, which also is an herbe growing about lakes and
meeres, any time within Iuly should be cut downe to the very root; and the third day after,
to be dried in the Sun vntill it looke white; but every day that it lieth abroad, it must be brought
into the house before the Sun go downe, because all herbes growing vpon marish grounds, take
harm by dewes in the night.

CHAP. XVIII.

¶ Of *Rushes*, six kinds; and of *Cyperus*: their medicinall vertues. Of *Cypirus*, and the
sweet *Rush Scammon*.

Mago writing of the *Rush*, commonly called *Marifcon*, saith, That for to twist and weaue K
into mats, it ought to be gathered out of the marish ground where it groweth, in Iune
vntill mid-Iuly. As for the drying of it, the same order must be obserued in all points, as
we haue set downe before in the discourse of other marais weeds. Hee maketh a second kinde
of water *Rushes*, which I find to be called the sea *Rush*, and of the Greekes *Oxylocheon*, the
sharp *Rush*; which also is subdividued into three other sorts; for there is the barren *rush*, called
also the male, & in Greeke *Oxys*; the female *Rush* bearing a black feed, which they call *Melan-*
cranis. This is thicker than the other, fuller also of branches and tufts. And the third more than
it, which is named *Holofcheon*. Of all these, *Melanocranis* commeth vp of the own feed, with-
out any other kinds intermingled with it: but *Oxys* and *Holofcheon*, grow both together out
of one turfe. Of all others, the great *Rush* *Holofcheon* is best for to be wrought in mats, and
such like implements about an house, because it is soft and fleshy; it beareth a fruit hanging &
clustering together in manner of fish spawn. As for that *rush*, which we called the male, it groweth L
of it selfe; by reason that his top fasteneth in the ground, and so taketh root by way of pro-
pagation; but *Melanocranis* soweth her owne selfe, and commeth vp of feed; for otherwise their
race would perish, considering the roots of them all euery yere dodie. These *Rushes* are vied to
make leaps and weels for fishers at sea, & fine & dainty wicker vessels; also candle-wick & mat-
ches; especially the marow or pith within, which is so great (especially about the foot of the
Alps reaching to the sea-side) that when a *Rush* is slit, there is found in the belly a pith almost
an inch broad by the rule. And in Egypt there be found *Rushes* so big, that they will serue to
make sieues, rangers, and vans. In such sort, that the Egyptians can finde no matter for that pur- M
pose, better. Some there be, that would haue the triangled or three square *rush* *Cyperus*, to be a
seuerall kind by it selfe. This *Cyperus*, many there be that cannot distinguish from *Cypirus*,
by reason of the great affinity of their two names; but I mean to put a difference betwene them
both; for *Cypirus* is the *Petie-glader* or *Sword-grasse* (as I haue before shewed) with a bulbous
or

A or onion root: the best of which kind, groweth in the Island of Crete: next to it in goodnesse, is
that of the Isle *Naxos*: and in a third degree, is to placed that of *Phoenice*: and indeed that of
Crete or *Candy*, in * *whitenesse* and odor commeth neere to *Nard*. The *Naxian* *Cypirus* hath
a quicker sent: the *Phenician* *Cypirus* smelleth but a little: as for that in Egypt, it hath no fa-
uor at all, for there also groweth *Cypirus*. But now to come vnto the properties thereof, it hath
vertue to discusse and resolute hard swellings in the body. For now my purpose is to speake of
their medicinable vertues, forasmuch as there is great vse in *Physicke*, as well of such aromati-
call simples, as odoriferous floures. As touching *Cypirus* therefore, I profess well that I will
follow *Apollodorus*, who forbiddeth expressly to take *Cypirus* inwardly in any drink; and yet he
protesteth, that it is most effectfull for them that be troubled with the stone, and full of grauel,
but, by way of fomentation onely. He affirmeth moreover, that without all doubt it causes
women to trauell before their time, & to slip their vntimely fruit. But one miraculous effect ther-
of he reports, namely, that the Barbarians vse to receive the fume of this herb into their mouth,
and thereby waite and consume their swelled Spleens; also, they neuer go forth of dores, before
they haue drunk a pipe therof in that manner: persuaded they are verily (saith he) that by this
means they are more youthful, liuely, and strong. He saith moreover, that if it be applied as a
liniment with oile, it healeth all merry-gals and raw places where the flesh is rubbed off or chafed:
it helpeth the rank rammish smel vnder the arm-holes; and without faile cureth an y chil-
ling, numme, and through cold. Thus much of *Cypirus*.

As for *Cyperus*, *Rush* it is (as I haue said) growing square and cornered: neere the ground
it is white; toward the top, of a dark blackish green, and fattish: the vnder leaues that be lowest,
are slenderer than leek-blades; the vppermost in the head, are smal, among which is the seed: the
root is like vnto a black oliue, which if it grow long-wile, is called *Cyperis*, and is of singular
operation in *Physick*. The best *Cyperus* is that which groweth amongst the lands in Africke,
neere the temple of *Iupiter Ammon*: in a second rank, is that of *Rhodes*: in a third place may be
ranged the *Cyperus* in *Thracia*; and in the lowest degree, that of Egypt. And hereupon came
the confounding of these two plants, *Cyperus* and *Cypirus*, because both the one and the other
grow there. * But the *Cyperus* of Egypt is very hard, and hath no smell at all; whereas in the o-
ther, there is a fauor resembling the very *Spikenard*. There is another herb also coming from
the Indians, called * *Cyperis*, of a seuerall kind by it selfe, in forme like vnto ginger: if a man
chew it in the mouth, it coloureth the spittle yellow, like as *Saffron*.

D But to come again to *Cyperus*, and the medicinable properties thereof, it is counted to haue
a depilatory vertue for to seth off haire. In a liniment it is singular good for the excrescence of
the flesh about the naile roots, or the departure and loosnesse thereof about them; which both
imperfections be called *Prerygia*: it helpeth the vlcers of the secret parts, and generally all ex-
ulcerations proceeding of rheumatick humors, as the cankers in the mouth. The root of *Cyperus*
is a present remedy against the stinging of serpents, and scorpions specially. Taken in drink
it doth desolpat & open the obstructions of the matrice; but if a woman drinke too much ther-
of it is so forcible that it will drie the matrice out of the body. It prouoketh vrin, so as it ex-
pelleth the stone and grauel withall; in which regard also, it is an excellent medicine for the
dropsie. A liniment thereof is singular for cancerous and eating sores, but especially for those
that be in the stomack, if it be annointed with wine or vinegar tempered with it.

As concerning the *rushes* before said, their root sodden in three hemines of water, vntill one
third part be consumed, cureth the cough. The seed parched against the fire, and so drunk in wa-
ter, stiaeth the flux of the belly, and stoppeth the immoderat course of womens moneths; but it
procureth head-ache. As for the *rush* called *Holofcheon*, take that part of it which is next the
root, and chew it; then lay it to the place that is stung with a venomous spider, it is an appro-
ued remedie. I find one sort more of *Rushes*, which they call *Euripice*; and this property withal,
That it bringeth one to sleepe: but it must be vsed with moderation, for otherwise it breedeth
drownesse, sib to the lethargy. Now seeing I am entred into the treatise of *rushes*, I must needs
set down the medicinable vertues of the sweet *Rush* called *Squinanth*; and the rather, because
(as I haue already shewed) it groweth in Syria surnamed *Coele*. The most excellent *Squinanth*
commeth out of *Nabatea*, and the same is knowne by the addition or syname *Teuchites*. In a
second place is that of *Babylon*. The worst of all is brought out of *Africke*, and it is altogether
without smell. *Squinanth* is round, of an hote and fiery * taste, biting at the tongues end. * *Igne morda*.

* No more
hath *Cypirus* in
Egypt, by his
owne saying.
* This *Cypirus*
is taken to be
Cyperus, or
Trametes,
called therup,
on corruptely,
Tarmetick.

The true Squinant indeed which is not sophisticated, if a man rub it hard, yeeldeth the smel of a Rose, and the fragments broken from it do shew red. As touching the vertues thereof, it reloueth all ventosities, and therefore comfortable it is and good for the wind in the stomack: also it helpeth them that puke vp choler, or reach and spit blood: it stinteth the yex, causeth rifting and breaking wind vpward; it prouoketh vrine, & helpeth the bladder. The decoction thereof is good for womens infirmities, if they sit therein. A cerot made therewith, and dry rosin together, is excellent against spasmes and cricks that for the neck far backward.

As concerning Roses, the temperature thereof is hot: howbeit they knit the matrice by an astrictiue quality that they haue, and coole the naturall parts of women. The vse of Roses is twofold, according to the leafe of the floure, and the floure it selfe (which is the yellow.) The head of the Rose leafe, to wit, the white part thereof, is called in Latine Vnguis, the Naile. In the yellow floure aforesaid, are to be considered severally, the feed, the hairy threds in the top, the husk and pellicle that couereth the Rose in the bud, & the cup within: & euery one of these haue their proper qualities & vertues by themselves. The leaues are dried, or the iuice is drawn and pressed out of them three waies: either all whole as they be, without clipping off the white nailes, for therein lyeth the most moisture: or when the said nailes are taken off, and the rest behind is infused in the sun, lying either in wine or oile within glasses, for oile rosat or wine rosat. Some put thereto salt, others mingle withall either Orchanet or Aspalathus, or els Squinant: and this manner of iuice thus drawne and prepared, is very good for the matrice, and the bloudy flux. The same leaues, with the whites taken away, are stamped, & then pressed through a thicke linnen cloth into a vessell of brasse; and the said iuice is foddenn with a soft fire vnto the consistence of hony: and for this purpose, choise would be made of the most odoriferous leaues.

CHAP. XIX.

The medicinable vertues of Roses: of the Lilly and Daffodill, called Laus ribi, of the Violet, of Bacchar, Combricium, and Arabacca.

How wine of Roses should be made, I haue shewed sufficiently in the treatise of diuers kinds of wines. The vse of the iuice drawn out of Roses, is good for the eares, the cankers, and exulcerations in the mouth, the gums, the Tonils or Amygdales, for gargarismes, for the stomack, the matrice, the infirmities and accidents of the tuil or fundament, and the head-ach. Taken alone, it is singular good for the ague, with vineger, for to procure sleep, & to restrain the heating of the stomack, and the offers to vomit. The ashes of Roses burnt, serue to trim the haire of the ciebrovves. Roses dried and reduced into powder, represseth the sweat betweene the

* legs, if it be strewed vpon the place. Dried Rose leaues do represseth and stay the flux of humors into the eies. The floure [which is the yellow in the mids] procurerth sleepe. The same taken inwardly with vineger & water, stayeth the immoderate flux of women; and the whites especially: also it represseth the reaching and spitting of blood. The pain of the stomack it appeaseth, being taken in three cyaths of wine. The feed or fruit of the Rose (which is of a Saffron colour) is best, so if it be not aboue a year old, and the same dried in the shade. As for the black, it is nought and good for nothing. To rub the teeth with this feed, easeth the toothache: the same prouoketh vrine. Being applied to the stomack, it is comfortable: & so it helps S. Antonies fire, if it hath not run too long. If it be drawn vp by the nostrils, it purgeth and cleneth the head. As for the heads or knobs, if they be taken in drinke, they knit and bind the belly, and withall, do stay the flux of blood vpward. The whites or nailes of the Rose leafe be singular for watercrist eies, so they be applied dry with bread crumbs: the leaues verily if they be brought only into a liniment, and outwardly applied, are reputed soueraigne for the queasinesse and pain of the stomack, for the gnawings and other accidents which the belly and guts be subiect vnto; also for the Midriffe and other precordiall parts. Moreover, they are good to be eaten, if they be condite and preferred in manner of garden Dock or Patience. But in keeping of Rose leaues, an eie would be had to them, for fear least they grow to a mouldinesse, that quickly will settle vpon them. Drie Rose leaues are of good vse in Physick, yea, the very Rose cake after the iuice & moisture is pressed out of the leaues, serueth for some purpose. For of them be made bages and quilts, yea, and drie pouders for to represseth sweat, and to palliat the strong smel thereof: with this charge and caueat, that presently after that one is come out of the floure or baine, the powder be suffered to dry

vpon

A vpon the body, and then afterward washed off with cold water. The wild Rose * leaues reduced into a liniment with Beares greafe, doth wonderfully make haire to grow again, where through some discaise it is fallen away.

Lilly roots through their singular vertues and operations many waies, haue ennobled their own floures: for first and foremost, if they be taken in wine, they be countrepoysons against the sting of serpents, and the venom of Mithroms. Sudden in wine, and applied in manner of a cataplaine, and so bound to the feet, they mollifie and resolute the cornes; but this must not be vndone and removed in three daies. Boiled with greafe or oile, they cause haire to come againe even in places that were burnt. If Lilly roots be drunk in honied wine, they do euacuat downward at the siege with other ordure, the cluttered, bruised, and hurtfull blood within the body.ouer and besides, in this manner they help the spleen, them that are bursten and bruised, & withall, bring down womens terms orderly. But if they be foddenn in wine, and so laid to in forme of a cataplaine, they knit and heale sinues that were cut asunder. They rectifie running tertars and lepries, they scour away dandruff and pilling scales in the face, they make the skin smooth and take away riuels and wrinkles. The leaues of Lillies boiled in vinegre are good to be layed to green wounds: reduced into a cataplaine with Hony, Henbane, and wheat meale, incorporate and vnited all together, and so applied to the cods, they represseth the flux of humors falling to those parts. The seed made into a liniment allayeth the heat of S. Antonies fire. And in the same for the floures and leaues applied doe heale old horses. As touching the iuice which is pressed forth of the floures, of some it is called Mel [i. hony:] of others Syrium: a singular good for to soften and mollifie the matrice, for to procure sweat and to ripen impostumes tending to suppuration.

Now for Daffodils, there be two kinds of them admitted by the Physitians for to be vsed in medicine; the one with a purple floure, the other of a grasse green. This later Daffodil is aduerse and hurtfull to the stomack, and therefore causeth it to ouerturn and vomit: it setteth the belly also into a flux: contrary it is to the sinues, and stuffeth the head: for which narcotike qualitie of stupifying & benumbing the senses, it took the name in Greek Narcissus, of Narce which betokeneth nummednesse or dullnesse of sense, and not of the yong boy Narcissus, as the Poets do feign and fable. The roots as wel of the one as the other Daffodil, haue a pleasant taste as it were of honied wine: the same is good for burns, applied to the place with a little honey: and so it helpeth dislocations and healeth wounds. Moreover, a cataplaine made of it, honey, and oatmeale, doth resolute and ripen biles and great apostemations: and in that sort it drawes forth spils, shiuers, arrow heads, and thorns, and whatsoever stick within the body. Being stamped and incorporat with barley groats and oile, it cureth them that be bruised and smitten with a stone. Mingled with meale it cleaneth wounds, it scoureth the skin from all spots that disfigure it, yea, and taketh away the black morpew. Of this floure is made the oile Narcissinum, good to supple and soften all hard tumours, good also to reuiue and heat againe whatsoever is stark and benumbed with extreme cold. And aboue all, this floure is excellent for the eares, howbeit it maketh the head to ache.

Of Violets there be some wild and of the field: others domesticall, and growing in our gardens. The purple violets are refrigeratiue and do coole. And therefore a good liniment is made of them to be applied vnto an hot stomack, against burning inflammations. A frontall likewise may be made of them to be laid vnto the forehead. But a peculiar vertue they haue besides to stay the running and waterie eies: as also to help the precedence or falling downe both of tuill and matrice, and to reduce them again into their places. Moreover, being applied to swellings and impostumations, they resolute the same without any head or suppuration. Guirlands being made of violets and set vpon the head, resist the heauinesse of the head, and withstand the ouerturning of the brains vpon ouerliberal drinking; yea, the very smel thereof will discusse such fumes and vapors as would trouble and disquiet the head. Violets being drunk with water, doe cure the Squinancie. That which is purple in the floure of the Violets, helpeth the falling euil, in children especially, if they drink it with water. Violet seed resisteth the poison of scorpions. Contrariwise, the floure of the white Violet, to wit the bulbous stocke Gilloffe, is good to break all impostumat swellings, whereas March violets did resolute them. But as wel the white Violets as the yellow wall floures, are singular good to extenuate the grosse blood of womens terms, and to moue vrine. Violets, if they be fresh and new gotten, are not so effectuell for these purposes

* or rather the
springe lub-
stance grow-
ing vpon the
C. more briet
and wild Rose.

* Siccit famina
aspergentur: I
doubt that P.
my read in Di.
of soridit, iungit
for wipari, (in)
P. argentat: and
then it carrieth
this fence, that
dried Roses &
powdred, enter
into sweet
ointments.

purposes as the dry and old gathered, and therefore they would have a whole yeares drying before they be vfed. The wall-floure being taken to the quantitie of halfe a cyath in three cyaths of water, stirrth womens fleurs, and draweth them downe. A liniment made with the root and vinegre together, do mitigate and allay the paine of the spleen: likewise it asswageth the gout: and being tempered with myrrh and saffron, it is singular for inflammations of the eyes. The leaues mixed with hony clesne the head from scurfe and skall: reduced into a cerot, it healeth vp the chaps in the feat or fundament, as also all such Fissures in any moist place whatsoeuer. And with vinegre they are good for all collections of humours and apostemations.

Bacchar also is an herb wherof there is good vse in physick. Some of our countrymen have called it in Latine Perpenfa. It affordeth a good remedie against serpents: it qualifieth the excessive heat of the head, allaieth the ach, and refraineth the flux of humours downe into the eyes. A cataplasme is made thereof for womens breasts, swelling immediately after childbirth, for to breake the kernell. Also for fistulous vlcers, beginning to breed betwene the corners of the eies and of the nose, and Saint *Antonies* fire. The very odour thereof is a good inducement to sleep. The root sodden and taken in drink is singular for them that are troubled with cramps and convulsions; that haue fallen from on high, that be drawn together with spasmes; and finally for such labor for wind. A decoction made of three or foure of the roots, boiled away to the thirds, is giuen with good successe for an old cough. And this drink or Iuleb is very conuenient for to purge women that haue trauelled and bin deliuered before their time. It taketh away the stiches in the side, cureth the pleurisie, and skoureth the stone. Herof be bags and quilts made, and those if they be laid in a wardrobe among cloathes and apparell, causeth them to smell sweet.

As for Combretum (which I said was much like vnto Bacchar) if it be beaten to powder and tempered with hoggs greafe it maketh a foueraign salve that healeth wounds wonderfully. *Afarum* (by report) is an appropriat medicine for the liuer, if an ounce of it be taken in one hemine of honied wine. It purgeth the belly as violently as Ellobore. In case of the dropfy it is singular; as also for the midriffe, precordial parts, the Matrice, and the launife. If it be put into new wine when it worketh, and so tunned vp, it maketh a singular diuretic wine for to prouoke vrin. It must for this purpose be digged out of the ground when the leaues begin to put forth. Dried it ought to be in the shade; although it be subiect to corruption and mouldeth very soon.

CHAP. XX.

¶ Of French Nard, and Saffron. The medicinable vertues of Saffron, and the cake or dregs thereof. Of Saliunca, Polium, and Flour-de-lis. Of Holochryson, Chrysocome, and Melilot.

Forasmuch as some haue taken rustick Nard to be the root of Bacchar, and so named it: the which hath put me in mind of French Nard, and the promise which I made in my treatise of strange and forreine trees, to put off no longer than this place for to speake of it, and the properties thereto belong. To acquit my selfe therefore, I will here set down the vertues of the said Nard, as touching the vse thereof in Physicke. First therefore, if two drammes of French Nard be taken in wine, it is singular against the sting and biting of serpents. *Item*, if one drinke it either in wine or water, it causeth the passions of the Collick, proceeding from the inflammation of the gut Colon. In like sort it cureth the inflammation of the liuer and the reins, the ouerflowing also of the gal, and the launife thereupon. Taken alone by it selfe or with Wormewood, it is a good remedy for the Dropfie. It represseth the immoderat flux of womens fleurs.

As touching Setwall or Valerian, which in the foresaid place we named Phu; the *root either beaten into powder, or sodden and so giuen in drinke, is excellent for the rising of the Mother, which threatneth suffocation; for the pains of the breast and pleurisie. The same prouoketh the course in womens terms, so it be taken in wine.

Saffron will not resolute nor be mixed wel with hony or any sweet thing. Howbeit, in wine or water, it will dissolve very soon and be incorporated therewith. A foueraign spice this is, & singular for many maladies. The best way to keep saffron is within a box of horn. It discusseth verily all inflammations, but principally those of the eies, if together with an egge it be applied in forme of a liniment. Excellent it is for the suffocation of the matrice, the excalcerations

A of the stomacke, breast, kidnies, liuer, lungs, and bladder: and more particularly, if any of these parts be enflamed, a proper remedie also it is in that case. Likewise it cureth the cough & pleurisie. It killeth an itch, and prouoketh vrin. Our wine-knights when they purpose to sit square at the tauerne and carouse lustily, if they drinke Saffron, neuer feare surfeit nor the ouerturning of their braine: and they are verily perswaded, that this keepeth them from drunkenesse, and maketh them carie their drinke well. Certes, a Chaplet of Saffron vpon the head, dooth allay the fumes ascending vp thither, and prevent drunkenesse. Saffron induceth sleep, but it troubleth the braine * somewhat it pricketh forward to wanton lust. The floure of Saffron reduced into a liniment with white Fullers earth, helpeth the Shingles and *S. Antonies* fire. And Saffron it selfe entereth into very many compositions of Physicke. One Collyrie or * eye-salue there is, which taketh the name also of saffron. And when the ointment made of Saffron called Crocinum, is strained and pressed out, the grounds which remaine is named Crocomagma, which also is not without some speciall vses, for it cureth the suffusion of the eyes, or the cataract; but it causeth ardeur and heat of vrine more than Saffron it selfe. The best is that accounted, which if a man tast in his mouth, doth colour his spittle and staine his teeth.

As touching the Flower-de-lis, the red is thought to be better than the white. Certes if little infants do wear it tied about them by way of necklace, collar, or girdle, it is supposed to be a singular remedie, especially when they breed teeth, or haue the chincough. Also if they be troubled with the * worms, they hold it good gently to infill the same in the body (either by drink or clysters). All other operations that the Flour-de-lis hath, differ not much in effect from hony. A singular property it hath to clesne the head from fores and skalls, and generally to mundifie all impostumat vlcers. Two drams thereof taken with hony, causeth the belly, & prouoketh to the stoole. Giuen in ordinary drink, it staith the cough, appeaseth wrings, & dissolueth venosities in the belly. In vinegre it openeth the opilations of the spleene. And being taken with water and vinegre together, it is an effectfull remedie against the stinging of serpents and spiders. The weight of two drams eaten with bread or drunk in water, resisteth the poison of scorpions. Being made into a liniment with oile, and so applied, it cureth the bitings of mad dogs, and heareth the parts mortified with extreame cold. In like manner also it allaieth the paines of the sinews. Reduced into an ointment with Rosin, it is singular for the paine of the loins and the gout Sciatica. This root is hot in operation. If it be drawne or snuffed vp into the nose, it causeth sneezing, and purgeth the head. A liniment of it and Pome. quinces or Peare-quinces, causeth the head-ach: it represseth also the vapours flying vp into the head, causing distemperature of the braine, in a surfeit of wine or strong drinke. It helpeth strenghtnesse of breath, and such as cannot take their winde but sitting vpright. It prouoketh vomit, if it be taken to the weight of 2 Oboli. A cataplasme of it and hony together, draweth forth spils of broken bones. The powder of it is much vsed for Vhit-flawes: and the same applied with wine, taketh away cornes and werts: but it must lie on three daies before you vnbind and take it from the place. The very chewing of it, correcteth a strong and stinking breath: as also the stitche fauour of the arme-holes. The iuice thereof doth mollifie all hard tumors. It prouoketh sleepe, but it consumeth sperme or natural seed. The Fissures in the feat, as also the blind and swelling piles in the fundament and all superfluous excrecences of the bodie, it cureth.

There is a wild kind of Flour-de-lis, which some call Xyris: the root of this herb is good to resolute & discusse the swelling kernels named the Kings cuil, hot biles, & risings in the groin. Howbeit for to work these effects, there be certain ceremonies precisely to be obserued, namely, That it be taken out of the ground with the left hand in any case. *Item*, that they who gather it do say in the gathering, For whose sake they pluck it vp, and withall, name the person: & here in making mention of this matter, I cannot but detect the knaury of these Harbarits and simplers: Their maner is not to employ & occupie all that they haue gathered, but reserue & keep part thereof, as also of some other hearbes, as namely of Plantaine, and if they be not well contented, nor thinke themselves paid thoroughly for their paines in the cure, they make no more ado but burie and couer within the earth that part which they kept by them, in the same place where it was digged forth. And I beleue verily they haue an vnhappy meaning and a certaine kind of witchcraft herin: forsooth, That the maladies which they seemed to haue healed, should breake out and be sore againe, to the end that they might be set on work anew. As touching Saliunca, the decoction of it in wine and so taken, staith vomits, and corroboreth the stomack.

Muscus and *Hedysmum* the Poets haue a great opinion of Polium: for they giue counsell to all those that would come to preferment & promotion, for to be anointed all ouer with a liniment thereof: such also as be desirous of renouew and glory, to be euer handling of it, to set it also, and maintaine it in their gardens. True it is, that folke do carie Polium about them ordinarily, or lay it vnder their beds for to chafe away serpents. Physicians do seech it either new & green, or drie, in wine, and thereof make a liniment: or els they giue it to drinke in vinegre, to those that be pained with the jaundise, yea, & to such as be newly fallen into the dropsie, they giue counsell to drinke the decoction thereof, being sodden in wine. And of it so prepared, they make a liniment for to be applied vnto green wounds. Moreouer, this herb is very good to send out the after-burden in women newly brought to bed, and to expell the dead infant out of the mothers wombe. And otherwise it serueth well to mitigate any paines of the body. It doth purge and euacuate the bladder: and in a liniment applied to the eyes, restraineth their excessive watering. I know not any other hearbe better to goe with other ingredients into antidotes or countrepoysons (named of the Greeks *Alexipharmaca*) than this. Howbeit, some denie all this, and are of opinion that it is hurtfull to the stomacke, that the drinking of it stuffeth the head, and causeth women to fall into labor before their time. They say also, that this cerimonie would be precisely obserued, That in the very place where this plant is found, so soone as euer it is gathered it should be hanged presently vpon the necke of the partie, with a speciall care that it touch not the ground first, and then is it an excellent remedie for the cataract in the eye. And these authors describe this hearbe to haue leaues like Thyme, but that they be softer and couered ouer with a more hoarie and woollie downe. Being taken with wild Rue in raine water, so that it be beaten before into powder, it doth mitigat (by report) the deadly paines caused by the sting of the *Apis*, it bindeth and draweth vp a wound, it keepeth corrosiue sores from festering and going farther, as well as the floures of the Pomegranate.

The hearb *Holochrysos* if it be taken in wine, helpeth the strangury, and such as cannot piss but by drops. And a liniment thereof is passing good to repress the flux of humors to the eyes. If it bee incorporat with Tartar or wine lees burnt into ashes, and drie Barley groats, it mundifieth the skin, and riddeth away ring-wormes, tetter, and such like wild fires.

As for *Chrysocome*, the root of it is hot, and yet astringent. It is giuen to drinke for the diseases of the liuer and the lights. And being sodden in honied water, it assuageth the paines incident to the matrice. It prouoketh womens monthly purgation: and being giuen in drinke raw, it purgeth waterie humors gathered in the dropsie.

Touching *Baulm*, which the Greeks call *Melittis* or *Melissophyllon*: if Bee-hiues be rubbed all ouer and besmeared with the iuice thereof, the Bees will neuer away, for there is not a floure whereof they be more desirous and faine, than of it: and in truth, looke in what garden there groweth abundance of this hearbe, the Bees therewithen they swarme, will be soone intreated to tarie, & not be hasty to wander far abroad. The faine is a most present remedy not only against their stings, but also of wespes, spiders, and Scorpions. And being tempered with a little nitre, it is singular against the strangulation of the mother. Taken in wine, it pacifieth the wrings and torments of the belly. The leaues therof being sodden with salt, and brought into an ointment, are singular good for to be applied vnto the scrophules or swelling kernills called the Kings evil: and likewise to the accidents of the seat and fundament, as the swelling hemorrhoids or piles. The iuice taken in drinke, bringeth women to their ordinary monethly courses: it diffuseth ventosities, and healeth vlcers: it allaieth the paines of any gouts, and cureth the biting of mad dogs: it is good for the bloody flux that hath run on a long time: as also those fluxes which proceed from the imbecillitie of the stomack: it helpeth them that be stright in the chest, and cannot take their wind but bolt vpright: it mundifieth also the vlcers within the breast. To conclude, it is said to be a singular remedie & none like vnto it, for to dispatch the webs in the eye, if they be anointed with the iuice thereof and honey tempered together.

Mellilot is thought also to be good for the eyes, if it be applied with milk or line seed. It assuageth also the paine of the iawes and head, if it be laid too with oile of Roses: likewise it doth mitigat the paine of the ears, if it be infilled or dropped into them with wine cuit. Moreouer, the tumors and breaking out of the hands it helpeth. Being boiled in wine or stamped green, it easeth the griefe of the stomacke. The same effect it hath in the pain of the matrice. But if the coods be amisse, if the Longaon or tuill bee fallen, and beate out of the bodie; or if that part bee affected

A affected with other accidents, Bath the place with a decoction of it, boiled greene in water or cuit, and the patient shall find ease. But if there be an ointment made of it and oile of Roses incorporat together, it is a foueraign remedie for all cancerous sores. If it be boiled first in sweet wine or cuit, it is the better for the purpose aforesaid: and so prepared, a speciall and effectfull thing it is for the wens called *Melicerides*: wherein is engendred matter resembling honey.

CHAP. XXI.

Of Trefoile, and Thyme: of the dry Lillie *Hemerocallis*: of *Elecampane*, and *Southerwood*, and *Cypres*.

B I Am not ignorant that folke are verily perswaded, how that Trefoile or three leaved grasse, is of great force against the stings of serpents and scorpions, if either 20 graines of the seed bee inwardly taken in wine, or wacer and vinegre together; or if the leaues and the whole hearbe be sodden, and the decoction drunk: as also, that serpents are neuer seen to lie vnder this Trefoile. Moreouer, I know full well that diuerse Authors renowned and of great credit, haue deliuered in their bookes, That five and twentie graines of that Trefoile, which we called *Menianthes*, is sufficient for a preternatiue and antidot against all poisons whatsoever: besides many other medicinall vertues which be ascribed to this hearb. But for mine owne part, I am induced by the authoritie of the most graue and reuerend Poet *Sophocles*, to stand against their opinion; for hee affirmeth plainly, That Trefoile is venomous. Likewise, *Simus* the Physician doth report, that if the decoction of it (sodden, or the iuice thereof stamped, bee poured or dropped vpon any part of the body which is found, it will cause the same fiery and burning smart as followeth vpon a place bitten or stung with a serpent. And therefore I would thinke with them, and giue counsell also, that it is not to be vsed otherwise than a countrepoyson. For it may be peraduenture, that in this as in many other, one payson (by a certaine antipathic and contrarie in nature) expelleth & mortifieth another. Moreouer, this I mark and obserue in their writings, that the seed of the Trefoile which hath smallest leaues, if it be reduced into a liniment, is singular good to embelish womens skin, and to preserve their beauty, if the face be anointed therewith.

Thyme ought to be gathered whiles it is in the floure, and then to be dried in the shade: now there are of Thyme two kinds, to wit, the white, which hath a woodie root, growing vpon little hills; and this is thought to be the better: the second, is blacker, & caries besides a black floure. They are thought both of them, the one as well as the other, very good to cleare the eyesight, whether they be eaten with meats or taken as a medicine. In like maner, an electuarie or lioch made of Thyme, is supposed to be excellent good for an old cough, and being taken with hony and salt, to raise and breake steam, causing the same to be brought vp with more facility: also that if it be incorporat with hony, it will not suffer the blood to clutter and congeale within the bodie. Applied outwardly as a liniment with Senuie, it doth extenuate and subtiliate the rheume that hath of long time fallen in the throat and windpipe: and so also it amendeth the grievance of stomacke and belly. Howbeit, these Thyms must be vsed with measure and moderation: because they set the body in an heat, although they be binding and make the belly costie. Now in case there be an exulceration in the guts, there must be taken the weight of 1 denier or dram in Thyme, to euery Sextar of hony and vinegre: sensibly, it must bee ordered in case of the pleurisie, and when there lyeth a paine between the shoulders or in the breast. A drinke made of Thyme with hony and vinegre in manner of a iuleb or syrapp, cureth the griefe of the midriffe and precordiall parts betwixt the heart. And verily a foueraign potion this is to be giuen vnto them that be troubled in mind and lunaticke, as also to melancholicke persons. The same also may be giuen to those who be subject to the epilepsie or falling sicknes: whom the very perfume and smell of Thyme will raise out of a fit, and fetch them again, when the disease is vpon them: it is said, that such should lie ordinarily in a soft bed of Thyme. This hearb is proper for those that cannot draw their breath vnlesse they sit vpright, and to such as are short winded, yea, and good for women, whose monethly courses are either suppressed or come but slowly. And for that the infant were dead in the wombe, a decoction of Thyme, sodden in water vnto the thins and so taken, doth send it forth of the bodie. Men also doe find a great benefit by Thyme if they drinke a syrapp made of it with hony and vinegre, in case of ventosities and inflations: also, if their bellies be swoln or their coods yea, and when their bladder is pained: moreouer if it

be applied as a cataplasme with wine, it assuageth all tumors, and bringeth downe swellings: it staith also the impetuous and violent flux of any humours to a place, readie to breed an impostulation. But if the same be applied with vinegre, it taketh away werts and hard callosities. It is good for the Sciatica and other gouts, for dislocations and lins out of joint, being beaten to powder, and bestrewn vpon a quilt of wooll, moistned and bathed with oyle, and so laid to the place in manner of a fomentation. A portion also thereof is vually giuen in case of the gout, to wit the weight of 3 Obols, in as many cyaths of vinegre and honey. Also when the stomacke riseth against meat and refuseth it, a drage or powder of it with salt, brings the appetite againe.

The day Lillie Hemerocall, hath leaues of a pale and wannish green colour, otherwise soft and gentle, the root is bulbous or Onion like, and odoriferous: which if it bee laid to the bellie in manner of a cataplasme, doth euacuat waterie humors, yea, and thick blood that lieth cluttered within the bodie, ready to do a mischief. The leaues make an excellent liniment to anoint the eies and the parts about it, as a defence to againt the rheum falling thither with violence; as also to be applied vnto the paps and breasts of women, which ake and are pained presently after child-birth.

Helenium, an hearbe which sprang first from the teares of lady *Helena*, as I haue already shewed, is thought to haue a special vertue to preserve beauty, and to maintain the skin fair, pure, and delicate, as well in the face of women, as in other parts of their body. Moreouer, a deepe opinion thereon is of this hearb, that whosoever vse it shall proue amiable and gracious, they shall I say, win loue and fauour whosoever they come. Also there is attributed and prescribed to this herb, if it be taken in wine, a mightie operation to procure mirth and make the heart merry, and it is thought to be as effectuell that way, as was that noble drinke Nephentes (so highly commended in *Homer*) so called, for that it puts away all heuinesse, sorrow, and melancholy. And in faith the iuice of Helenium is * passing sweet and pleasant: the root of Helenium taken in water vpon an emptie stomacke when a man is fasting, is very good for them that are streight winded and cannot take their breath but vpright. Now is the root white within and * sweet also as is the hearb. The same is giuen to drinke in wine againt the sting of serpents. To conclude, being beaten into powder, it is said for to kill Mice.

As touching Abrotonum, I find that there be two kinds of it. The one of the plaines, which I take to be the male; the other of the mountaines, which I would haue to goe for the female. Neither of them both there is, but it is as bitter as Wormwood. The best is that which growes in Sicilie: next to which, that of Galatia is most esteemed. The leaues are much vfed, but the seed much more, for to heat and chaufe any part of the bodie. And therefore it is good and comfortable for the sinewes: it cureth the cough: it procureth them libertie of breath, who cannot fetch their wind lying or leaning with their heads: it helpeth the cramp: it consolidateth ruptures: it easeth the paine of the loines, and maketh free passage for vrine. The right manner of the decoction as well of the one as the other, is to seeth them in bunches or bundles like handfulls, vntill a third part of the water be consumed; and foure cyaths is an ordinarie draught of this decoction. The seed also being beaten into powder, is giuen to the weight of a dram in water, for a drinke. And indeed so taken, it comforteth the matrice and the natural parts of women. A poultice made of it and Barley meale: applied vnto dull and broad swellings which gather not quickly to an head, doth ripen them apace and bring them to suppuration. Also being reduced into a liniment with a quince rosted or baked, it cureth the inflammation of the eies, if they be annointed therewith; it hath a vertue to driue away serpents, & in case one be stung with them already, it expelleth the poison taken inwardly in drinke; or laid too outwardly in forme of an ointment, draweth it forth. But most effectually is the power thereof seene, in those poisoned and venomous stings which cause the bodie to shake, chill, and quake for cold, as namely those of scorpions, and the spiders called phalangia. Moreouer, good it is also for other poisons, if it be taken in drinke and so it helpeth those that be surprised with any extreme cold howsoever. This propertie likewise it hath, to draw forth of the bodie all spills or any thing else that sticketh within the same. It driueth out of the body the worms engendred in the guts. Finally it is said, that if a branch thereof be laid vnder the pillow where folk lieth in bed, it wil put them in mind of wantonnesse, and prouoke them to lust: and againt all charmes, enchantments, and witchcrafts, which cool the heat of the flesh, and disable or bind any person from the act of generation, it is the most powerfull hearb of all others.

CHAP.

CHAP. XXII.

The medicinal vertues of *Leucanthemum*, and *Sampfuchum*, [i.e. *Marjoram*.]

Leucaethemum mingled with 2 parts of vinegre, and so giuen to drinke, is good for those that be short winded. As for Sampfuchum or Amacacum, that of Cyprus is most commended, and the sweetest of all others: this hearb brought into a liniment, and applied with vinegre and salt, is good againt the venom of Scorpions. Moreouer, if it be put vpon the natural parts of a woman in forme of a pessarie, it helpeth much to bring downe their monthly courses: for if it be taken in drinke, it is not so effectuell. Applied as a liniment, after it is incorporated with barley groats, it restraineth the flux of humors to the eies. The iuice thereof when it is foddren, disencfeth and dissolueth the ventrosities that moue pang and wrings in the belly: a good medicine it is to prouoke vrine, and by consequence, for those that be in a dropsie. Marjoram dried, moueth sleepe. Thereof is made an artificiall oile, called Sampfuchinum or Amaracium, singular for to heat the sinewes, and to mollifie their stiffnesse and hardnesse: as also by the heat thereof to comfort the matrice. The leaues applied with hony, serue very well to reduce the black and blew marks occasioned by stripes or bruises, to their natural and liuely colour: and brought into a cerot with wax, it is good for dislocations of joynts.

CHAP. XXIII.

The vertues and properties of *Anemone* or *Wind-floure*, requisite in Physicke.

Whe haue discoursed of Anemone and those kinds thereof, which go to the making of chaplars and guirlands: it remaineth now therefore to speake of those which serue for good vse in Physicke. But first as touching Anemone in general: some there be who call it Phenion; and two principal kinds there be of it: The first groweth wild in the woods: the second commeth in places well tilled and in gardens: but both the one and the other loue sandy grounds. As for this later kind, it is subdiuided into many speciall sorts: for some haue a deepe red skarlet floure; and indeed such are found in greatest plenty: others bear a purple floure; and there be again which are white. The leaues of all these three be like vnto Parsly. None of them ordinarily grow in height aboue halfe a foot; and in the head of their stemme, they shoot forth sprouts in manner of the tendrils of Asparagus. The floure hath this property, Neuer to open but when the wind doth blow; whereupon it tooke the name * Anemone in Greeke, but the wild Anemone is greater and taller: the leaues also are larger; and the floures are of a red colour. Many writers, being carried away with an error, thinke this Anemone and Argemone to be both one: others confound it with that wild Poppy which we named Rhoeas: but there is a great difference betweene them, for that both these hearbes doe floure after Anemone: neither doe the Anemone yeld the like iuice from them, as doth either Argemone or Rhoeas before-named: they haue not also such cups and heads in the top, but only a certaine musculositie at the ends and tips of their branches, much like to the tender buds of Asparagus.

E All the sorts of Anemone or Wind-floure, bee good for the head-ach and inflammations thereof; comfortable to the matrice of women, and increaseth their milk. Being taken inwardly in a Prisane or barly gruell, or applied outwardly as a cataplasme with wooll, this hearb prouoketh their monthly tearmes. The root chewed in the mouth, purgeth the head of fleame, and cureth the infirmities of the teeth. The same being foddren, and laid to the eies as a cataplasme, represteth the vehement flux of waterie humors thither. The Magicians and Wife men attribute much to these hearbes, and tell many wonders of them, namely, That a man should gather the first that he seeth in any yeare, and in gathering to say these words, *I gather thee for a medicine againt tertian and quartan agues*: which done, the partie must lap and bind fast in a red cloth the said floure, and so keep it in a shady place; and when need requirith, to take the same; and either hang it about the necke, or tie it to the arme or some other place. The root of that Anemone which beareth the red floure, if it be bruised and laid vpon any liuing creature whatsoever, raiseth ablesse, by that causlik and corrosiue vertue which it hath: and therefore it is vfed to murther and cleane the filthy vcers.

CHAP.

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CHAP. XXIII.

¶ The vertues of *Oenanthe* in Physicke.

Oenanthe is an hearb growing vpon rocky and stony grounds. The leafe resembleth those of the Parsnep: roots it hath many, and those big. The stemme and leaues of this herb, if they be taken inwardly with honey and thicke sweet wine, doe cause women in labor, to haue easie deliuerance, and withall, doe cleanse them wel of the after-birth. Eaten in an Elec-tuarie, or licked in a lobeck made with honey, the said leaues doe rid away the cough, and prouoke vrine. To conclude, the root also is singular for the infirmities and diseases of the bladder.

CHAP. XXV.

¶ The medicines made with the hearbe *Heliocryson*.

Heliocryson, which others name Chrysanthemum, putteth forth little branches very faire and white: the leaues are whitish too, much like vnto *Abrotomum*: From the tips and ends of which branches, there hang down certaine buttons (as it were) like berries round in a circle, which with the repercussion and reuerberation of the Sun-beames, doe shine againe like resplendent gold. These tufts or buttons, doe neuer fade nor wither: which is the cause that the chaplets wherewith they crowne and adorne the heads of the gods, be made thereof: a ceremonie that *Plutarchus* K. of *Aegypt* obserued most precisely. This herbe groweth in rough places among bushes and shrubs. It is taken in wine, it prouoketh vrine, and womens flours. All hard tumors and inflammations it doth disesse and resolueth without supuration. A liniment made with it & honey, is good to be applied to any place burnt or scalded. It is giuen in drinke usually for the sting of serpents: for the paines and infirmities also of the loines. If it be drunke in honied wine, it dissolueth and consumeth the cluttered blood, either in the belly and guts, or the bladder. The leaues taken to the weight of three Oboli in white wine, do stay the immoderate flux of the whites in women. This hearbe, if it be laid in wardrobes, keepeth apparel sweet, for it is of a pleasant odour.

CHAP. XXVI.

¶ The vertues and properties of the *Hyacinth*, and *Lychnis*, in Physicke.

The *Hyacinth* loueth France very well, and prospereth there exceedingly. The French vse therewith to die their light reds or lustie-gallant, for default of graine to color their scarlet. The root is bulbous & Onion-like, well known to these flauce-courters, who buy them at best hand: and after, tricking, trimming, and pampering them vp for sale, make gain of them: for being reduced into a liniment, they vse it with wine to annoint as well the share of youths, as the chin and cheeks, to keep them for euer being vnder-grown, or hauing haire on their face, that they may appeare young still and smooth. It is a good defensative against the prick of venomous spiders: and besides, allaith the griping torments of the belly. It forcibly prouoketh vrine. The seed of this hearbe, giuen with * *Abrotomum*, is a preferatiue against the venome of serpents and scorpions: it cureth the jaundie.

As touching *Lychnis*, that flaming hearbe furnished Flammea, the seed of it beaten to powder and taken in wine, is singular good against the sting of serpents, scorpions, hornets, and such like. The wild of this kind is hurtfull to the stomacke, and yet it is laxatiue and purgeth downward. Two drams thereof is a sufficient dose to purge chollier, for it worketh mightily. Such an enemie it is to scorpions, that if they doe but see it, they are taken with a nummedicne that they cannot stir. In Asia or Natolia, they call the root of this hearbe *Bolites*, which if it be laid vpon the eyes and kept bound thereto, taketh away the pin and the web, as they say.

CHAP. XXVII.

¶ The medicinable vertues of *Pervincle*, *Ruscus*, *Bala*, and *Actinos*.

Also the *Pervincle*, called by the Greeks * *Chamaedaphne*, if it be stamped drie into powder, and a spoonfull thereof giuen in water to those that are full of the dropsie, it doth euacuat most speedily, the watry humors collected in their belly, or otherwise: the same root

of Plinies Naturall History.

A roasted in embres, and well sprinkled and wet with wine, discesseth and drieth vp all tumors, being applied thereto. The iuyce thereof dropped into the ears, cureth their infirmities. A cataplasm applied to the belly, helpeth them (as they say) very much, who are vexed either with gripes or fluxes of the wombe.

Concerning *Ruscus*, the decoction of the root, if it be giuen in drinke each other day, to them that be tormented either with the stone, or the wringing paines of the strangurie, or to such as piss blood, it helpeth them. Now the preparing of this medicine, and the proportion also of it, is in this wise: The said root must be taken out of the ground as it might be to day, and tomorrow morning betimes it would be foddren; and a sextar of this decoction is to be mingled with two cyaths of wine, and so the Patient is to drinke it. Some make no such ado, but take the root while it is green, stamp it, and in water draw the iuyce raw as it is, and so drinke it. In sum, it is held for certain, That there is no better thing in the world for the infirmities and diseases incident to the priuy members of men, than to bruse the tender crops of this herbe, and then with wine and vinegre to presse out the iuyce, and afterwards to drinke the same. In like maner, * *Barris* is good for them that be bound and coistue in the belly: and a liniment of it, after it is roasted in the embres and stamped, is singular for the gout. Last of all, as touching the herbe *Actinos*, the Egyptians vse to sow it, as well to make gurlands thereof, as to eat it. Surely I would say it were *Basil*, but that the branches and leaues be more hairy; for certainly it is very odoriferous. It hath a property to prouoke vrine, and womens flours.

* Taken by the most part for wild B. fill.

CHAP. XXVIII.

¶ The medicines that *Colocasia* or the Egyptian Bean doth afford.

Glausias was of opinion, that *Colocasia* was good to lenifie or mitigate the acrimony of humors within the body, and withall to help the stomack.

CHAP. XXIX.

¶ The medicines made of *Anthelium*.

Touching *Anthelium* (wherof the Egyptians vse much to eat) I find no other vse of it, but only from the kitchen to the table. Indeed there is an herb much like to it in name, which some call * *Anthyllion*, others *Anticellion*: wheroot be two kind; the one hath leaues and branches like to the Lentill, and groweth a hand breadth or span high: it cometh vp in sandy grounds exposed to the Sun, and is saltish in taste. The other resembles * *Chamaepitys* but that it is lower and more hairy: it beareth a purple floure, carrieth a strong sent, and loueth to grow in stony places. The former kind is a most conuenient and proper herb for the diseases of the matrice and the natural parts of women. Also being applied as a cataplasm with oyle of *Rosar* and milke, it is an vmbretarie medicine. In case of the strangury and paines of the kidneys it is giuen with good successe to the quantitie of three drams. The other likewise is giuen to drinke the weight of four drams with honey and vinegre, for to mollifie the hardnesse of the matrice, to assuage the torments of the belly, and to cure those that be taken with the falling sicknesse.

* Some take it for *Kali*, or *Hyssopus*. Digite, some white brackish, some muscated, or *Arbitraria*.

CHAP. XXX.

¶ Of * *Parthenium*, and the medicinable vertues that it hath.

As for *Parthenium*, some name it *Leucanthe*, others *Tamnaum*; but our countryman *Celsus* the Physitian calleth it *Perdicium* and *Muralium*. It groweth in the mounds & hedges about gardens: it bringeth forth a white floure, sauouring like an apple, and hauing a bitter taste. The decoction of this herbe, if a woman sit ouer it and receiue the fume into her body, is good to mollifie the hard tumors of the matrice and natural parts; as also to disesse all inflammations. A powder made of this herb dried, and incorporate with honey and vinegre, [i. *Oxymel*] and so applied, purgeth cholerae adult and melancholy. In which regard it is good for the swimming and dizziness of the brain, and those that are giuen to breed the stone. Being vsed in manner of a liniment, it is good for the shingles and *S. Antonis fire*: likewise for the Kings euil, if it be incorporate with old swines grease. The Magicians vse it much for Tertian

* Some thinke it is Mother-wort, others *Feuerfew*. * Specially according to *Disco-rid*. A Plaine should haue written thus: *Floure pur ambrosius candido, into mounds id off, with a floure white round about bur within of a dark yellow like to honey, & this giue to the Febricant*.

agues: but they lay a great charge, that it should in any wife be plucked vp with the left hand, and the parties precisely named for whose sake they gather it: but in any case they who pluck it, must not look behind them: which done, a leafe of the herbe must be put vnder the tongue of the sick patient; and when it hath bin held so a little while, it must anon be swallowed down in a cyath of water.

CHAP. XXXI.

¶ Of Night-shade or Morell: of *Alkakengi* and *Halicacabus*, and their vse in Physicke.

NOW concerning Night-shade or Morell, which some name *Strychnos*, others haue written by the name of *Trychnos*: would to God that the guirland-makers of *Egypt* had not employed and vsed in their chaplets the floures of two kinds of them, induced thereto by the resemblance that they haue to the Iuy floures: of which, the second that hath red berries like cherries of a scarlet colour, contained within certain bladders, & those berries full of grains or seeds, some name * *Halicacabus*, others *Callion*: but our countrey men here in Italy call it * *Vesicaria*, because it is good for the stone in the bladder. Certes this plant is more like a shrub, or little tree full of branches, than any herb-bearing great and large bladders, & those fashioned like a top, broad and flat at one end, and sharp pointed at another, inclosing within it a great berry, which ripeneth in the month Nouember. The third kind of *Strychnos* or *Solanum* hath leaues like to Basil: but I must but lightly touch this herb, and not stand long about the description either of it or the properties which it hath; since my purpose is to treat of hollofom remedies to faue folke, and not of deadly poisons to kill them: for certes this herb is so dangerous, that a very little of the iuice thereof is enough to trouble a mans brain, and put him beside his right wits. And yet the Grecke writers haue made good sport with this herb, and reported pretty jeasts of it: For, say they, whosoever taketh a dram of the iuice shall haue many strange fantasies appearing evidently vnto them in their dreames; if they be men, that they daily with faire women: if they be women, that they be wantons, playing and toying with men without all shame and modesty; and a thousand such vain illusions: but in case they take this dose double, then they shall proue foolish indeed broad waking, yea & go besides themselves: let them take neuer so little more, it is mortal, and no remedy then but death. This is that poison which the most harmlesse and best minded writers that euer wrote, called simply *Dorycnion*; for that soldiers going to battell vsed to anoint and inuention therewith the heads of their arrows, darts, and speares, growing as it did so commonly in euery place. But other Writers, who had not sought so far into the matter, nor aduisedly considered of it, gaue it the name of *Manicon*. But those that of a naughty mind, cared not secretly to impose upon the whole world, haue hidden the danger thereof, and term it by a name pretending no harm; some calling it *Neuris*, others *Perrison*. But as I protested before, I think it not good to be too curious and busie about the description of this herb, notwithstanding I might seem to giue a good caueat of it by further particularizing thereof. Well, the very second kind which they call *Halicacabus*, is bad enough, for it is more soporiferous than *Opium*, and sooner casteth a man into a dead sleep, that he shal neuer rise again. Some name it *Morion*, others *Moly*: and yet it hath not wanted those that haue thought it praise-worthy: for *Diocles* and *Eneor* haue highly commended it: and *Tamarißus* verily hath not stuck to write verses in the commendation of it: A wonderful thing, that men should so far ouerpasse themselves, and forget all honesty and plaine dealing: for they say, forsooth, that a collution made of this herbe confirmeth the teeth that be loose in the head, if the mouth be washed therewith. And one onely fault they found in *Halicacabus* (otherwise it might be praised without exception) that if the said collution were long continued, it would trouble the brain, & bring them that vsed it to foolerie & idleness of head. But for mine own part, my meaning is not to set down any such receipts and remedies, which may bring a further danger with them, than the very disease it selfe for which they were devised. The third kind also is commended for to be eaten as meate, although the garden *Morell* is preferred before it in pleasantness of taste. Moreover, *Morell*ates auoucheth, That there is no maladic incident to our bodies, but the said *Morell* is good for it. Howbeit, I make not so great reckoning and account of all the helpe that these and such like herbes may afford, as I doe make conscience

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A to deliuer them in writing, especially seeing we haue so great store of safe and harmlesse medicines, which we may be sure can do no hurt. Indeed, the root of *Halicacabus* they vse to drinke and make no bones at it, who would be known for great Prophets to foretell future things: and therefore it is alone for them to be seen furious and raging, the better to colour their knauerie and lead the world by the nose in a superstitious conceit and persuasion of their diuine gift of prophesie, and so to feed men still in their folly. But what is the remedie when a man is thus ouertaken? (for surely I am better content to deliuer that) Euen to giue the party thus intoxicated, a great quantity of Meade or honied water, and to cause him to drinke it off as hot as he can. Neither wil I ouerpasse this one thing besides. That *Halicacabus* is so aduerse vnto the nature of the *Alpis*, that if the root thereof be held any thing nere vnto the said serpent, it will bring allepe and mortifie that venomous creature, which by a soporiferous power that it hath also of the own, casteth a man into a deadly sleep, and killeth him therewith. And therefore to conclude, hercupon it cometh, that the same root bruised and applied with oile, is a soueraigne and present remedie to them who are stung by the forefaid *Alpis*.

CHAP. XXXII.

¶ Of *Corchorum* and *Cnicus*.

CHEY of Alexandria in *Egypt* vse to eat ordinarily of *Corchorum*. This herb hath leaues inwrapped and infolded one within another, after the manner of the Mulberry. Good it is (as they say) for the midriffe and the parts about the heart: also to recover haire that is fallen away by some infirmite; and likewise for the red pimples or fauce-flegme in the face. I reade moreover, that the skab or mange in kine and oxen is most speedily cured thereby. And *Nicander* verily doth report, that it helpeth the stinging of serpents, if it be vsed before it be in the floure. As touching *Cnicus*, otherwise called *Atractylis* (an herb appropriate to the land of *Egypt*) I would thinke it meet not to vse many words about it, but that it yeeldeth a soueraigne remedie against the poison of venomous beasts; yea, and the dangerous Murtherers if a man haue eaten them. This is certain, and an approved experiment, That whosoever are wounded by the sting of *Scorpions*, shall neuer feeble smart or paine, so long as they hold that herb in their hand.

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CHAP. XXXIII.

¶ Of *Perfoluta*.

THE Chaplet-makers in *Egypt* set great store by *Perfoluta* also, which they sow and plant in their gardens onely for to make Coronets and Guirlands. Two kinds there be of it, the male and the female. It is said, That the one as well as the other, if it bee put vnder man or woman in bed, they shal haue no minde nor power at all to play at *Venus* game, and specially the man.

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CHAP. XXXIV.

¶ Of *Measures* and *Weights*.

AND forasmuch as we shall haue occasion oftentimes in setting downe weights and measures, to vse Grecke vocables, I care not much euen in this place to interpret those words once for all. First and foremost, the Atticke Drachma [for all Physitians in manner go by the poise of Athens] doth poise iust a Roman silver denier: and the same weigheth also six Oboli: now one Obolus is as much in weight as ten Chalci. A Cyathus of it selfe alone cometh to ten drams in weight, When you shal reade the measure of *Acetabulum*, take it for the fourth part of Hemina, that is to say, fifteen drams. To conclude, Mna, which we in Latine call Mina, amounteth iust to an hundred drams Atticke.

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THE TWENTY SECOND BOOK OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIVS SECVNDVS.

The Proeme.



Man would thinke who did but reade the former Booke, That dame Nature and the Earth both had done their parts, and shewed their wonderfull perfection sufficiently; if he considered withall the admirable vertues of so many herbes which they haue brought forth and bestowed vpon mankind, as well for pleasure as profit. But see what a deale of riches more is yet behind; and how the same, as it is harder to be found, so it is in effect more miraculous! As for those Simples whereof wee haue already written, for the most part they are such as haue serued our turne at the board: or else in regard of their beauty, odor, and smell, haue endued vs to search farth her into them, and to make triall of their manifold vertues and operations in Physick. But yet there remain behind many more, and those so powerfull, that they proue evidently vnto vs, how Nature hath produced nothing in vaine and without some cause: although the same be occult and hidden many times from vs, and reserved only in her closet and secret counsell.

CHAP. I.

¶ Of certaine Nations which vse herbes for procuring and preserving of beauty.



Certes I do find and obserue, that there be forrein Nations who time out of mind haue bene euer accustomed to annoint their bodies with the iuice of certain herbes, for to imbellish and beautifie them, as they thought. And verily in some of these barbarous countries ye shall haue the women paint their faces, some with this herbe, and others with that: yea and among the Dakes and Sarmatians, in Transyluania, Valachia, Tartaria, & those parts, the men also marke their bodies with certain characters. But to goe no farther than into Gaule, there groweth an herb there like vnto Plantain, and they call it Gladium, [i. Wood] with the iuice whereof the women of Britain, as wel the married wiues, as young maidens their daughters, anoint and dy their bodies all ouer, resembling by that tincture the color of Moores and Ethiopians: in which manner they vse at some solemne feasts and sacrifices to go all naked.

CHAP. II.

¶ That Clothes be dyed with certaine Herbs.

And now of late dayes, we know there hath bene taken vp a strange and wonderfull manner of dying and colouring clothes. For to say nothing of the gown brought out of Galatia, M Africke and Portugal, whereof is made the royall Skarlet, reserved for princes only and great captains to wear in their rich mantles of estate and coats of armes: behold, the French inhabiting beyond the Alps, haue invented the means to counterfeit the Purple of Tyrus, the

Skar-

A Skarlet also and Violet in graine, yea, and to set all other colours that can bee deuised, with the iuice only of certain hearbs. These men are wiser (believe mee) than their neighbours of other nations before them: they hazard not themselves to found and search into the bottome of the deepe sea for Burrets, Purples, and such shell-fishes. These aduenture not their liues in strange coasts and blind baies, where neuer ship hath rid at anker, offering their bodies as a prey to feed the monstrous Whales of the sea, while they seeke to beguile them of their food in fishing for the said Burrets: & all to feed that, whereby as well vnehaist dames of light behaviour might set out themselves and seeme more proper, to allure and content adulterous ruffians: as also those gallantes again, squaring and rusting thus in their colours, might court faire ladies and wedded wiues, yea, and with more ease entrap and encompass them to yeeld to their pleasure: but these men stand safe vpon drie land, and gather those hearbs for to die such colors, as an honest minded person hath no cause to blame, nor the world rason to crie out vpon. Nay our braue minions and riotous wantons, it might become also to be furnished therewith; if not altogether so glorious to the eye, yet certainly with lesse offence and harm. But no part it is of my dessein and intent to discourse vpon these matters at this present: neither will I stand on the thrift and good husbandry that may be seen in such a thing as this, least I might seeme to colour any vanitie with a shew of commodity and frugalicitie: and to limit excesse and superfluitie within the tearms of profit and cheapnesse, which indeed will not be gaged and brought within any compassse. Besides, I shall haue occasion hereafter in some other place to make mention both of dying stones, and also of painting walls with herbs. As for the art and myserie of Diers, if euer it had bene counted any of the liberal Sciences, becoming a gentleman either to profess or practise, I assure you I would not haue ouerpassed it in silence. And yet I promise you, this feat grows to credit every day more than other: and the hauens abroad where those fishes be taken which furnish them with colors, are mightily frequented and in greater name and request than euer they were. In which regard, I cannot chuse but shew and declare what account we ought to make of these dumbe tinctures in that behalfe; I mean such hearbs and simples, whereof there is but bafe reckoning or none at all made: for those great princes which were the first founders and establishers of the Roman Empire, did mighty things therewith, and employed these herbs in the highest matters of state. For in the affaires of greatest importance, namely, either in publick sacrifice for the auerting of some heavy iudgement of the gods threatened: or in expiation of any grievous sinne and offence committed (whether they performed diuine seruice to their gods, or dispatched honourable embassages to other States) they vsed their Sagmina and Verbenar, by which two words verily was meant one and the same thing, euen some plain and common grasse plucked vp with ceremoniall deuotion, turfe and all, from their castle hill or citadel of Rome. And this at all times was observed religiously, that they neuer sent their heralds to the enemies of the people of Rome for to clarigat, that is to say, to summonne them with a loud voice for to make restitution of that which they deined of theirs; without a turfe and tuft of the said grasse: and euermore there accompanied their heralds in their train, one speciall officer who had the charge to carie and tender that hearbe, who thereupon was called Verbenarius.

CHAP. III.

¶ Of grasse Chaplets.

N O Coronets verily were there euer at Rome better esteemed, either to testifie the triumphant maiestie of that victorious citie (the foweraign lady of the whole world) or to giue testimony of honour and reward for some notable seruice performed for the Commonwealth, than those which were made simply of green grasse. The crownes of beaten gold, and enriched with pearle; the Vallare and Murall Chaplets bestowed vpon braue knights and valiant souldiers, who either entred the fortified camp of the enemy ouer trench & rampier, or mounted the walls in the assault of a city, came nothing neer to this: the Nauall garlands giuen to admirals and generals at sea, for obtaining victory in that kind of seruice: the ciuick coronets also presented vnto such as had rescued a Romane citizen, and saved his life, came behind these: and in one word, the Chapter triumphall, which they were wonted with triumph into Rome, was nothing comparable to these. And yet all these Guirlands aboue named haue notable prerogatives, and differ one from another in many respects. In a word, those Coronets and Chaplets of

honour

honor, all saue these made of grasse, were given many times by some priuat and particular persons, are by the captains and generals themselves vnto their soldiers, yea, and otherwhiles from one General to another, when they were ioined together in equall commission, in testimony of vertue and valour.

CHAP. III.

¶ The singularitie and rare examples of such Chaplets made of grasse.

Now, whereas other Garlands of honour and Coronets of triumph, were alwaies either obtained by a decree from the Senat in time of peace, and after the troubles of warre overblowne, or granted by an act of the people, being quiet and in repose, when dangers were past; this Chaplet of grasse aforesaid, it was neuer any mans hap to haue, but in some extremity and desperat case of the whole state: nor at any time adiu'dged to a man, but by the whole army, confessing with one voice and generall consent, That by him alone they were all saued from the edge of the sword, or famine. As for the rest, the capitaines and generals vsed to giue them: this onely was presented by the souldiers to their chiefe leader. The same was called also an Obidional coronet or siege-garland; namely, when some capitaine had forced the enemies to raise the siege and dislodge, and thereby saued either a whole towne or campe from vtter shame and finall destruction. And Certes, if there were so great account made of a ciuicke garland for rescuing the life of one onely citizen of Rome (and such an one perchance as was of all others the meanest) that whose fortune it was to obtain it, he was honored euer after with many priuiledges and immunities, and counted sacred: how highly then is he to be esteemed, who by his own valour and proesse hath saued many thousands, and a whole army of such citizens? This Chaplet then, so singular and excellent, was made of the green grasse, or herbes taken and gathered from the very place where a man had saued & deliuered the besieged. For in truth, the greatest signe of victory in old time, and of yeelding to the mercy of the enemy, was this. If the vanquished did take vp grasse, and tender it vnto the conqueror: this serued as a confession and protestation, That they rendered vp all their interest which they might challenge in the earth (the mother that bred and fed them) yea, and the very right of sepulture in her: which custome I vnderstand, the Germans do retaine and observe, even at this day.

CHAP. V.

¶ What capitaines they were, who alone receiued the honor of a brasse Chaplet.

Lucius Sicius surnamed Dentatus, was crowned but once with this Coronet of grasse: notwithstanding it was his good fortune to defende and obtaine foureteeen Ciuicke garlands: to fight with his enemy in a hundred and twenty battels, and euer to return out of the field with victory: whereby we may see how rare a thing it was in times past, to see an army thus faued through the valour of their capitaine, for to recognize by this publick present their only fauor. And some leaders and captains haue bin honoured this way oftener than so: as for example, *P. Decius Mus* receiued two such Coronets: for being a Colonell and knight Marshal of the campe, he behaued himselfe so valiantly, that one was giuen him by the regiment or army which himselfe led, and another by those who had bin besieged within their fort. And how highly he esteemed of this honourable reward, hee testified by his religious deuotion and the sacrifices which he offered thereupon to the gods: for no sooner had hee receiued these Coronets; but whereas the armie aforesaid besieged, and by him deliuered, had bestowed vpon him ouer and aboute for his braue seruice, one white Oxe, and an hundred others, which were brenned, hee sacrificed them all vnto god *Mars*. This was that *P. Decius*, who afterwards being Consul together with that surly and imperious colleague of his [*T. Manlius*] surnamed *Imperiosus*, deuoted and yeelded himselfe to all the duels of hell for the safety of his armie, and the obtaining of victory. Moreover, that noble and renowned *Fabius*, who set vp right again the declining state of the Romane Commonweale, with lying off and not fighting at all with *Annibal*, was crowned therefore with such a chaplet, by authority from the Senat and people of Rome: such an honor in my iudgement as no man in this world can reach and attain to higher. True it is, that before time he had performed good seruice, & namely, when being Dictator, he refused & saued his

A his high^e Constable or grand master of the Caullery, together with his whole army: and yet was he not thus highly rewarded then, with this Coronet of green grasse. For in testimony of thankfulness, this gratuity they whom hee had saued, thought at that time better, namely, to crowne him (as it were) with a new name & title to his former stile, calling him with one voice, Father: but the honor aboue named was giuen vnto him (as I said) by the generall consent as well of Senat as people, at what time as he chased *Annibal* out of Italy. And in truth, neuer man yet was in this wise knowne to be crowned by the hands (if I may so say) of the whole Empire, but himselfe alone. This peculiar honor obtained he aboue all others, that this Chaplet alone was offered and presented vnto him by all the states of Italy.

CHAP. VI.

¶ What he was, who alone of all Centurions receiued this Chaplet of grasse.

Besides those abouenamed, I find that *M. Calpurnius Flammia*, a Colonell of a regiment of souldiers in Sicily, was in this manner rewarded and honored with a grasse garland. But neuer was there known to this day any one to haue bin crowned in this wise, of so base degree and condition as *C. Porcius Atticus*, in that war wherein the Cimbrians were defeated, who indeed was no better than a simple Centurion. This Centurion hauing by his place the conduct of the foremost band of a regiment of souldiers vnder Colonell *Catulus*, seeing vpon a time certain companies excluded out of their owne campe, by reason that the enemies had put themselves between them and home, and there incamped; perceiving his capitaine or Colonell *Catulus* aforesaid, timorous and doubtfull to breake through the enemies campe; put on a resolute mind, slew his own Colonell, exhorted and encouraged the companies to quit themselves like men, and follow his ensigne; and so he defeated his enemies and deliuered his own legion. I read moreover in the Chronicles, That the same Centurion ouer and aboute the foresaid braue ornament of a grasse Coronet, had this honor done vnto him, that being clad in a long robe of purple imbrodered, and assisted with both the Consuls for the time being, *Marius* and *Catulus*, he was allowed to sacrifice vnto the gods with a noise of fifes and haut-boies founding hard by the hearth or altar fire. Furthermore, *Sylla* the Dictator hath left in writing, That when he was lieutenant General vnder the Consuls, and had the leading of the army in the expedition or journey against the Marians, the whole army presented vnto him a Chaplet of grasse, before the city of Nola. And in very truth hee caused this to be poutrised in a painted table within a house of pleasure which he had in Thuscule, the same that afterwards *M. Tullius Cicero* was master of. Which if it were true, the more shame deferred he in my conceit: and I hold and pronounce him so much the more accursed and detestable, for taking this crowne from his own head, and losing such a braue badge of honor, in prohibiting, overthrowing, banishing, and murdering afterwards, a greater number of citizens (without all comparifon) than those souldiers came to, whose liues he saued, at what time as he took that garland first vpon his head. Let him vaunt as much as he wil of the said Coronet, as also of the proud and vain glorious title of Felix, happy (which addition or surname he took vpon him & caused to be put into his stile) yet, when as through his tyranny he held besieged those Roman citizens whom he had proferibed and confined into all parts of the world, surely he forewent all and yeelded that crowne vnto *Sertorius*.

Moreover, *M. Furio* doth report, That *Scipio* surnamed *Emilianus*, was honoured with an Obidional Coronet in Africk (the same yere when as *Manlius* was Consul) for sauing three cohorts besieged, as also three companies besides which he led forth to deliuer the other, and by whose means he forced the enemy to breake vp his siege. This is to be seen and read in a Table, which *Augustus Caesar* late Emperor of famous memory, caused to be hangd vp at the base or foot of the said *Scipios* statue erected in the Forum or publick hall which himselfe built. As for *Augustus* himselfe, the Senate crowned him with an Obidional Chaplet, vpon the thirteenth day of September, that yere when he was Consul with *M. Cicero*, the son of that great *Cicero* the Orator. Whereby we may see, that a Ciuicke Chaplet was not thought sufficient nor any waies comparable to this Coronet. And setting aside these aboue named, I do not find in histories of any one who was crowned with a green chaplet of grasse. Now, this you must note withall, That there was not one certaine hearse set out & appointed for these honorable Guirlands: but look what kind of herbage grew then in the place besieged & where the danger was, that

M. Minutius

Made of Oxe
leaves and
branches:

that very same they tooke, were they neuer so base weeds and of no reckoning: for as contemptible otherwise as they were, yet being once imploied to this vse, they innobled & adorned the person himselfe who ware them in a Chapter. And certes, the lesse maruel I haue if these things be vnknowne to vs now adaies, seeing as I doe, how little or no account is made euen of those things which make to the maintenance and preseruation of our health; to the cure of all dolorous griefes and maladies of the body, yea, and to the preuention of death it self. But what man is there well giuen and honestly minded, who can containe and hold his peace, hauing so iust cause to reprove and rebuke the manner of the world in these our daies? first and formost, our life was neuer so costly as now it is, in regard of the dainties, delights, and superfluities, which must be maintained, if it will live to the fashion of the time: and for to enjoy these pleasures onely, we hold our liues more sweet and precious. Neuer were men more desirous of long life, and neuer lesse carefull to entertaine the means of long life. The government of our health we commit to the charge of others, and strangers we credit with our owne bodies, and yet slacke enough and negligent are they, to ordain according to our trust and confidence, that which indeed should do vs good. Thus the Physitians are provided well for; they thrine alone and go away with the gains by this means. Oh good God, to see the folly and vanity of man! Nature hauing put so many good things into our owne hands as she hath, and willing that we should inioy them for our health and pleasure; yet we (to our great shame and rebuke be it spoken) are so vnhappy, as to commit our selues to other mens tuition, & lue vnder their warrantize and assurance. Full well I know, that I for my part also, shall haue but small thanks of many a one for all my paines taken in writing this history of the world and Natures works: nay, I am assured that I make my selfe a laughing stocke, and am condemned of them for spending and losing my time in such a frivolous piece of worke as this is. Howbeit, this is yet my comfort and no small contentment I take herein, that my labors and trauels (excessive and infinit though they be) cannot be despised, but the contempt will redound likewise to dame Nature her selfe. And yet the againe, as a kind and tender nurse ouer mankind, hath not failed (as I will declare hereafter) for our good, to indue the very weeds which we tread vnder foot with medicinal vertues, yea, & hath bestowed vpon those which otherwise we hate & dare not approach, but with careful heed (for the shrewd pricks and thorns which they carry about them) singular properties to cure diseases. For ouer and besides those wherof I made mention in the booke going next before this, there be other herbs of that pricking kinde, which are so wonderfull in their operation and effects, that I can neuer admire sufficiently and comprehend her prouidence appearing in them. Furnished shee had the earth, with smooth & pricklesse plants enough, in the nature of meares, for to content our tooth, & satisfie our appetite, shee had ingrauen and liuely painted in floures, notable properties in physick for to recouer & maintain our health; & by the singular beauty which the gaue vnto them, to allure the heart and eye of man to look toward them, saying (as it were) Come and gather vs: wherein shee had made a good medley of profit and pleasure together. And when shee had thus done, shee staid not there, but desired to bring other herbs, hideous to the eie, and vntractable in hand. As if in the forming of them in that fashion, we might heare her to giue a reason, Why by the so did saying after a sort vnto vs in an audible voice, That shee made them with pricks and thornes, because shee would not haue the foure footed beasts (as hungry and greedy after meat as they be) to eat them down, That the shrewd hands of some vngracious folk, who can let nothing stand, might not be euer & anon plucking and twitching at them for wantonnesse, that people should not go carelesly trampling vpon them with their feet: finally, for feare that birds pecking & setting aloft vpon their tender branches would flie them down or knap them asunder. Therefore (I say) with these prickles, seruing in stead of weapons as well defensive as offensive, shee hath both protected and also armed them: and al to keep them safe and sure, for the health of man, and to do him seruice. Lo, how euen that which wee hate and seeme to abhorre in these herbs, was deuised for our comfort and benefit, if we had the grace to see it.

CHAP. VII.

¶ The medicinable vertues of other floures and herbs seruing for Chapters. Also of Erynge.

Among those hearbes which beare pricks, * Erynge or Eryngion, is singular: for a souveraigne hearbe it is against serpents, and all poylous whatsoeuer, as if it grew for nothing els. but to come

As come to particulars, for stings & bitings of venomous creatures, the root therof to the quantity of one dram, is taken in wine. And in case (as most times it falleth out) that a fever follow vpon such accidents, then the patient must drinke it with water. A speciall and effectuell property it hath against certain land-snakes called Cheridyri, and venomous todes, if it be reduced into a liniment, and so applied to the sore. But *Heraclides* the Physitian is of opinion, That if the said root be boiled in the broth of a goose, it is of more efficacie than all other, against the *Toxica* and *Aconita*. But whereas others do boile it in shere water against the poisons *Toxica*, *Appel. lodarus* would haue a frog sodden withal. The herb it selfe is of substance hard, branching much, full of leaues, and those beset with prickles. A stem or stalk it carrieth, parted by knots and joints, a cubic high & somewhat more. Moreouer, as there is white Erynge, so you shall haue of it black: The root is odoriferous. Eryngion verily cometh vp ordinarily of seeds and by setting. But it groweth also in rough and stony places of the own accord. And that which we see along the sea shore is harder and blacker than the rest, leaued also like common Ach or Persely.

CHAP. VIII.

¶ Of the hearbe or thistle commonly called *Centum-Capita*, i. the hundred heads.

As for the white Erynge, our countrymen call it in Latine *Centum-capita*. But they be all of one and the same operation and effect. And the Greeks verily make their ordinary meate as well of their stalks as roots, both waies, to wit, either raw or boiled, as they list. Certes, there be wonders reported of this herb; namely, That the root of this white Eryngion (which is very geafon and hard to be found) resembleth one while the male sex, and otherwhiles the female of our kind. But if it chauce that a man do meet with that Eryngion which is like to that member which distinguisheth him from a woman, hee shall be very amiable and beloued of women. Which was the reason (men say) that lady *Sappho* was so enamoured on the young knight *Phao* of Lesbos. And verily, as touching this herb, not only the Magitians, but the disciples also and followers of *Pythagoras*, tell vs many vain and foolish tales.

But to come indeed to the vse of it in Physick.ouer and besides those vertues and properties which I haue related already, good it is to resolute ventosities: it easeth the gripes and wrings in the belly; it cureth the diseases and debility of the heart; it helpeth the stomack and liuer. For the midriffe and precordial parts, it is very wholsome taken in honied water: and for the spleen, in vinger & water together. Also drunk in mead or honied water asore said, it is singular for the kidneys, the strangury, the cramp or crick that pulleth the head of a body backward: for other spasmes also and convulsions: for the loines, the dropsie, and the falling sicknesse. Soueraigne it is moreouer for womens monthly floures, whether they do stay vpon them, or contrariwise run excessively from them: and in one word, it cureth all the accidents & infirmities of the matrice. Being applied as a liniment with hony, it draweth forth any offensive thing sticking within the body. And if it be laid too with salt, lard, or hogs greafe, and so incorporat into a cerot, it heales the kings euill, the swelling kernels within the eares, and the flat billes and botches. It recoineth also the flesh that is gone from the bone, & finally, foudereeth and knitteth broken bones or fractures. Taken before a man sit downe to eat or drinke, it preferreth him from surfeit or drunkennesse: and bindeth the belly. Some of our Latine writers would haue it to be gathered a little before the summer-solstice, saying moreouer, That if it be applied with rain water, it helpeth al the infirmities incident to the nape of the neck, and by their report, if it be bound to the eyes, it cureth the pin and the web.

CHAP. IX.

¶ Of *Acanus* and *Liquorice*.

Some there be who take *Acanus* for a kind of Eryngium. And they describe it to be a low herbe, and yet growing broad and large, full of prickles and thornes, and those likewise bigger than ordinary; being applied outwardly, wonderfull effectual it is (by their saying) to stanch blood. Others there are, who haue thought Erynge and Liquorice to be all one, but they are deceiued. Howbeit, for some resemblance that is between them, I think it not amiss to set downe the description therof immediately after these Erynges. Doublelesse this Liquorice also is

* Echivasis. It seemeth that this Liquorice, buttred by for spyn, Lem. affords indeed the leaves are like to those of the Lentiske tree.

* Lingue fabu- dit asch as be our Edigma or Lochs.

to be counted among these thorny plants, for that the leaves stand *pricking vp sharp pointed; the same are fatty, and in handling gummy and glewie. It putteth forth many branches, and those two cubits high: it carrieth a floure in manner of the Hyacinth, and beareth fruit resembling bals of the bignesse of thole which hang vpon the Plane tree. The excellent Liquorice is that which groweth in Cilicia; the next for goodnesse cometh from Pontus; and hath a sweet root which only is vsed in Physick. Taken vp this is and gathered at the setting or occultation of the Brood-hen star, and is found running along in the ground in manner of the Vine root: in colour like to the Box tree. That which is dusky and somwhat black, is thought to be the better: like as the lithe & pliable root which wil wind and turn every way, is preferred before that which is brittle and easie to break. Great vfe there is of it in those medicines which be * held vnder the tongue, so to resolue & melt leasurly, namely, after it hath bin sodden to the thirds: yea, and otherwhiles boiled to the height and consistence of hony. Sometimes they vfe to bruse it, and in that manner they do lay it vpon wounds, where it doth much good: as also if it be applied to all the diseases and accidents befalling to the throat and jawes. The juice of Liquorice reduced to a thick consistence, if it be put vnder the tongue, is singular for to cleare the voice. In like manner it is supposed very wholesome for the breast and liuer. And therewith (as I haue sayd before) both thirst and hunger may be slaked and allaid. Which is the cause that some haue called it Adipison; and in that regard ministred it to those persons who be fallen into a dropsie, for to preuent and take away their thirstinesse. Therefore it is thought to be a proper remedy for the diseases of the mouth, if it be either chewed, or otherwise cast and strewed vpon the vlcers therein: and so it cureth the excrescences also and exulcerations about the roots of the nailles. Moreover, it healeth the excoriation & forenesse of the bladder, assuageth the paine of the kidneies, cureth the swelling & aking piles, the fissures also in the seat, and finally the vlcers of the priuy parts. Some Physitians haue prescribed to drink in a quartaine ague, the weight of two drams of Liquorice, & one of Pepper, in a draught of water to the quantity of a smal pint or hemina; this root being chewed, stathieth bleeding in a wound. To conclude, some haue written that it expelleth the stone and grauell.

CHAP. X.

¶ Of the Caltrop thistle Tribulus, The sundry kinds thereof, and the medicines which they yield.

Some of these Thistles come vp in gardens: others grow in and about riuers only. The juice which is drawne from these, is thought to be good for the eyes: for this herb being as it is of a cooling nature, is a singular remedy for inflammations and gathering of imposthumes. A good medicine for all vlcers, but those especially which break out of themselves in the mouth: it cureth likewise those of the Amygdals, or almonds of either side of the throat. If it be taken in drink, it freetheth & breaketh the stone. The Thracians dwelling vpon the riuier Strymon, feed their horses fat with the leaves of this herb: and she themselves with the kernels or fruit thereof, making a kind of sweet bread therewith, which also bindeth the belly. The root if it be gathered by the chaste and pure hands of a virgin discuffeth and dissolueth the kings euill. The feed if it be tied to the swelling vains, assuageth their pain. Lastly, being beaten into powder and cast into water, it killeth the fleas in any place where that water is thrown or sprinkled.

CHAP. XI.

¶ Of Stabe, and the medicines which it affordeth.

Stoebe, * which some call Phleon, boiled in wine, is a soueraigne remedy for cares that run with attar: likewise for bloudthorren eyes, especially vpon a stripe or stroke giuen. Being ministred by way of clyster, it is good for the bloody flux and the exulceration of the guts.

CHAP. XII.

¶ Of Hippophyes and Hippoe, with their medicinable vertues.

Hippophyes is an hearbe growing in grauellly and sandy places, and namely along the sea-side, armed with white prickles or thornes: it beareth berries by clusters after the manner of

A of Iuie, and those be partly white & partly red. The root is full of a certain juice, which is good either to be condite and confected alone, or els to be reduced into Trochiscs with Eruile meale: this being taken to the weight of one Obolus, purgeth cholericke humors, and a most wholesome medicine it is, especially with honied wine.

Another herb ther is, named Hippoe, which neither riseth vp in stalk, nor beareth floure, but hath leaues only, and those small. The juice also of this herb, is wonderfull good for those who are in a dropsie. V here it is to be noted, That these two herbs should haue some especial properties respectiue to the nature of horses, considering both their names are deriued from nothing els, for in very truth, some things there be which Nature hath brought forth as appropriate remedies for certain particular beasts, whereby we may see her diuine power, and how well appointed she is and provided for to bring forth medicines of all sorts: so as the depth of her prouidence cannot be founded, neither are we able sufficiently to admire her wit and description in disposing and digesting her remedies according to sundry kinds of creatures, according to diuers causes, and different seasons: in somuch as the remedies serueng one, are not fitted for another, neither are they of the same effect and operation at all times: nay, there is not a day almost in the yere throughout, but it yeildeth a remedy respectiue vnto it.

CHAP. XIII.

¶ Of the Nettle, and the medicinable vertues thereof.

C S there any thing more hated and odious than the Nettle: and yet to say nothing of the oile made of it in Egypt (according as we haue shewed heretofore) induced thee is and furnished with many good properties serueng for Physick. For first, as touching Nettle seed, Nicander affirms, That it is a very counterpoison against Hemlock, venomous musthums, and Quicksilver. Apollodorus addeth moreover, and saith, That being boiled in the broth of a Tortoise, it is singular good for the poison of Salamanders: also that it is contrary to the pernicious nature of Henbane, and the deadly poyson of serpents, & namely, of scorpions. Euen that very bitterness and mordacity which the Nettle hath, causeth the Vvula in the mouth which is false, to knit vp again: the matrice also which is ouer-loose and beareth downe, to arise into the place, yea and the tuill or fundament in children hanging forth of the body, to return & abide where it ought to be, only with touching these parts therewith. If the legs be rubbed, and the forehead especially with Nettles, it is a good means to awake them out of their drowie and dead sleep, who are surprisid with a lethargy. The same being applied with salt, is passing good for the biting of dogs. If it be bruised and put vp to the nostrils, it stancheth bleeding at the nose; but principally the root of it. If it be tempered with salt, it mundifieth cancerous and soule filthie vlcers, likewise it helpeth dislocations and bones out of joint; it discusseth or ripeneth bitches in the emunditories, and the swelling kernels behind the eares; and healeth vp the places where the fleshy parts be gon from the bones. Nettle seed taken in wine cuit (as a drinke) openeth the matrice when it is ready to strangle or suffocate a woman: and being applied with wine, it stancheth bleeding at the nose. If one drinke Nettle seed after supper, with hony and water, to the quantity of two oboles weight, it openeth the passages & maketh way for to womit with greater facility: but the weight of one Obolus taken in wine, refresheth those who haue a lassitude or wearinesse vpon them. The same being parched against the fire and drunk to the measure of one Acetabulum, is singular for the imperfections of the matrice: and in cuit, it withstandeth the ventrosities and inflations of the stomack. Giuen inwardly with hony in the form of a loch, it doth them good who labor for wind, and cannot take their breath but sitting vpright; and after the same manner it cutteth scame and clenseth the breast of it. Being applied in a bag together with line seed, it taketh away the stitch and pain in the sides: but some put hyssope thereto, and a little pepper. A liniment made therewith, cureth the spleen. Being parched or roasted and

F for euen with meat, it keepeth the body soluble. And Hippocrates affirmeth, that the said seed is very good to be taken in drinke, for to cleanse the matrice in women: and being parched and giuen to the quantity of one Acetabulum in sweet wine cuit, it allaieth the grieue and paine of the said part, in case withall there be a cataplasme applied to the region thereof, together with the juice of Mallows. If it be taken in hydromel, honied water, together with salt, it expelleth

(by his saying) the worms in the belly. Applied in a liniment to the bare and naked places of the head, it causeth the haire to grow again, and bringeth all to the former beauty. Many doe use to make a cataplaine of Nettle-seed and old oile; or els stamp the leaues together with Beares greafe, for the pain of the gout; and verily for that purpose, as also for the spleen, the root pound with vinegar, is no lesse effectuell. Being boiled in wine, it discauffeth and drieth down risings in the groine, and such like emunctories, so it be laid too with old hogs greafe falted. But the same root dry is a very depilatorie, and fetcheth haire off. *Phania* (the natural Philosopher and Physitian) in a severall treatise which he made in the praise of Nettles, professeth, That he knoweth not the like remedy to the Nettle, boiled first and then condite, for the windpripe, the cough, the distillation and flux of the belly, the stomacke, the biles and bitches in the emunctories, the swelling and inflamed kernels behind the eares, and kibed heels. The same with oile procureth sweat, and fadden with muscles, and such like shell-fishes, it moueth to the stoole: with ptisane or barley broth, it purgeth the breast, and fendeth down womens termes; applied with salt, it restraineth vlcers that be corrosive and apt to run & spread farther. The juice also of the Nettle, serueth to many vses; for being pressed forth & laied as a liniment to the forehead in a frontal, it stancheth bleeding at the nose. The same taken in drinke, prouoketh vrine, and breaketh the stone; but if one gargle with it, it staies the Vvula from falling as for the feed, it ought to be gathered in harvest time; & that which is brought from Alexandria, is esteemed best: for all the particular diseases above rehearsed, the kinder and gentler Nettles also, enen those that be young and tender, are knowne to be of good operation; but principally that wild kind before said, and this property moreover it hath, To rid away the leprose out of the face, if it be taken in wine. Finally, if a foure-footed beast will not abide to be covered or serued with the male of that kind, an ordinary practise it is, to rub the nature or shap with a Nettle, for that will make her stand to the fellow.

CHAP. XIII.

¶ Of *Lanium*, and the medicinable vertues thereof.

As touching that dead-Nettle, which among the other kinds we named before *Lanium*, i. Archangell, it is the mildest of all others and most tractable, for the leaues bite not nor sting at all. The same, if it be applied with some corns of salt, to contusions and bruises, to deep burns, the Kings euill, swellings, gouts, and wound's, cureth them all. The white that it hath in the mids of the leafe, is singular for *S. Antonies* fire, the shingles, and such like. Some there be of our Latine writers, who treating of Nettles, haue couched them in their ranks respectiue-ly to the time, saying, That the root of a Nettle which commeth in the Autumne, cureth the tertian ague; but it must be tied fast to the Patient: and these ceremonies are to be obserued also in the taking it forth of the ground, That the party be named for whom it is gathered; the severall of what type or kind it is; yea and who be the parents of the sick person; and then hee or shee shall be sure to be deliuered of that disease. The said root, with the same circumstances, is of the like operation to drive away the quartan ague also. The selfesame authors do assume moreover, That the root of a Nettle being applied with salt, draweth out all thorns and thiuers that stick within the flesh. Also, that a cataplaine of the leaues and hogs greafe incorporat together, doth resolute the scrophulcs or swelling kernels called the Kings-euill; or if they are come to suppurat, catch and worketh them forth, and doth incarnat & fl vp the place again

CHAP. XV.

¶ Of the herb *Scorpius*: the sundry kinds thereof, and the medicinable properties.

There is an herb called * *Scorpius*, which took that name of the resemblance that the head hath to a scorpions tail. Few leaues it beareth; but (according to the name) it is good against the sting of scorpions. Another herb there is of the same appellation, & of like effect to the other; but it sheweth no leaues at all; the stalke is smooth, and resembleth garden Spurge: in the top or head whereof, there is a pricke to be seen like a sting, which gaue occasion of the foresaid name.

CHAP.

CHAP. XVI.

¶ Of *Leucacantha*, and the vertues thereof good in Physicke,

The Greeks, some call this Thistle, *Leucacantha*, or the white thistle; others, *Phyllon*; some *Ischia*, others, *Polygonaton*; but be the name what it will, it hath a root resembling that of * *Cyperus*, which if it be chewed in the mouth, allaieth the tooth-ache. *Hicetius* saith likewise, That if either the seed or the juice of the root therof, be taken in drinke to the weight of eight drams, it assuageth the pain of the sides and loins. The same also cureth ruptures, convulsions and crampes.

CHAP. XVII.

¶ Of *Helxine* or *Perdicium*, called also *Parthenium* or *Sideritis*, and the vertues medicinable.

As for *Helxine*, some call it *Perdicium*, because Partridges delight most to feed thereupon; others name it *Sideritis*, and many giue it the name of *Parthenium*. Leaues it carrieth of a mixt form and resemblance, between Plantain and Horehound. The branches or small stalks grow in thick tufts, and those be of a light reddish colour: the seed in the head, of a Bur kind which sticketh to folks cloaths, whereupon they would haue it to be called *Helxine*. But in the former booke I haue described the form of the right * *Helxine* or *Parietarie* indeed. The property of this herb is to giue a tincture or die to wooll: it healeth the shingles and *S. Antonies* fire: it cureth swellings, and all apostemations of humours, yea and also burnes. The juice thereof incorporat with ceruse or white lead, and so applied, serueth greatly for bites and bitches, *S. Antonies* fire, tumors, gatherings and risings in the flesh; yea and helpeth them whose throat begins to swell. Also if a man take the quantity of one cyath thereof, it cureth inuerterat and old coughs: it healeth all infirmities either occasioned by phlegmatick humors, or els incident to moist parts: like as with oile rosat it is a proper medicine for the accidents of the auuydales about the passage to the throat, and for the swelling of veins. Moreover, if it be reduced into the form of a cerot, with goats suet and wax of Cypres, and so applied, it cureth the gout. Moreover, *Perdicium* or *Parthenium* (for *Sideritis* is another herb) our countrey men call in Latine, * *Vrceolaris*; of others, *Astericum*. In leafe it is like to Basil, save only that it is blacker; it groweth vpon tile-houses, and old decayed wals, and such ruinous places. Being beaten into powder & applied with corns of salt, it hath the same operation that the Nettle *Lanium*, and cureth the selfe same diseases; and the one is vied in like sort as the other: & if the juice be drunk hot, it is singular for inward and secret imposthumes full of filthy matter, and drieth them outward. Also it is excellent for vlcers, ruptures, and bruises, whether it be that one hath tumbled head-long from some high down fall, or that he hath bin crushed by the overthrow of some wagon or chariot. It fortuned that a Page of *Pericles* a prince of the Atheniens (whom hee loued intirely) having climbed vp to the top of the lantern or spire of a temple which the said prince built in the castle or citadell of Athens, fell down from thence, who was cured by the means of this herb, revealed vnto *Pericles* in his sleep by the goddesse *Minerva*: whereupon it tooke the name first of *Parthenium*, and is consecrat vnto the said goddesse: this is that Page whose molten statue is to be seen at this day made of brasle: this is (I say) that noble and famous image called * *Splanchnoptes*.

CHAP. XVIII.

¶ Of *Chamaeleon* the herbe, the sundry kindes thereof, and the vertues medicinable.

Concerning *Chamaeleon*, some there be who name it *Ixias*; whereof be two kinds: the whit-ter hath the rougher leaues: it creepeth close by the ground, and setteth vp stiffe prickles in manner of an *Vrchin*: the root is sweet in tast, but of a most strong sent. In some places it ingendreth a white kind of gum or clammy glew, vnder the wings or arm-pits (as it were) of the leaues, after the same manner as *Frankincense* is said to breed, but especially about the

* Parietarie of the wall.

* Where, to say a truth, he describeth *Helxine* for *Jaine*, or *Chamaeleon* the white.

* *Diof. Cerato Cyprino*.

* or *Vitraria*; because it is vied to scoure glasses and pipkins withall.

* Made with a druff: to blow roles & kindle fire for to roast the inwards of beasts: sic. d. or as some thinke, it was the proof: Per name of Ixias ycaus.

rising of the Dog- star: & for that it is like to a kind of birdlime, it is called Ixia: our women vse this instead of Mastick. And the reason why this herb is named Chamæleon, is by occasion of the variable leaues which it beareth, for according to the nature of the soile where it groweth, it changeth hew; whereby in one place you shall haue it blacke, in another green; here you shall see it look blew, and there yellow, and euermore altering the color. Of which Chamæleons, the white cureth such as are in a dropsie, if the root be boiled, and the juice thereof taken to the quantity of a dram in sweet wine cuitt. The measure of one acetable of the same juice, if one drink in a green harth wine made of the hedge vrsipe grape, wherein certain bunches of Origanum haue lien infused, it is thought to be a singular remedy to kill the worms that breed in the guts. It anaileth much also to help those who pisse with difficulty: and yet this juice being giuen to dogs or swine in barley groats, killeth them. If there be water and oile mingled therof, it draweth rats and mice to it, but it is their bane, ynclesse presently they drinke water. Some prescribe for to cut the root thereof into thin rondelles, and to keep them enfiled vp, or hanging by a string, and then to seeth them; for to be eaten against the flux of humours, which the Greekes name Rheumatismes. Of the black kind, some hath named that the male, which hath the purple floure; and the female with the violet colour. They all grow vp with one stem and no more, and the same is a cubit high, and a finger thick. The roots are good to heale ringworms, tetters, and such like wild fires, if they be foddren together with brimstone and Bitumen: but if the said root be chewed in the mouth, or a collution be made therewith foddren in vinegar, it fastens the teeth which shake and be loose in the head. The juice of this root healeth the scab or mange in four-footed beafts. Herewith also folke vse to kill the ticks that breed in dogges: but it stoppeth the wind of heifers and yong steers in manner of a squinancy: and therefore of some it is called Vlophonon and Cynozolon, in regard of the strong and stinking smell that it hath. These Chamæleons do beare a certain viscus gumme, most proper for vlcers. And the roots of all the sort of them, as well blacke as white, are singular against the poison of serpents.

CHAP. XIX.

¶ Of *Coronopus* or *Harts-horne*, with the medicinable vertues thereof.

Coronopus is an herb bearing long leaues, and those clouen into certain fissures and knags: and howsoeuer it groweth wild, yet otherwhiles it is set and sowne in gardens, for the excellency of the root; which being roasted vnder the ashes, is soueraign for the flux, & weakness of the stomacke.

CHAP. XX.

¶ Of *Orchanet* or *Alkanet*, as well the right as the bastard, and their properties in Physicke.

The root of Orchanet is much vsed about medicines: of the thicknesse it is of a finger: it will tend and cleaue in manner of the papyr reed: and it coloureth the hands of as many as handle it, with a red and bloody colour: it prepareth wooll and woollen cloth for to take rich and deep colours. If it be incorporat into the form of a cerot, it healeth vlcers, especially in old men; as also places that be burnt. It cannot be refused in water, but it is oile that must dissolve it: and verily this is a good experiment of that which is true and nothing foppishcat. A dram thereof giuen in wine to drink, is singular good for the pain in the kidneys: but in case the Patient haue a feuer vpon him, then it ought to be taken in the decoction of * Balanos. In like manner is it to be vsed in the opilations or obstructions of the liuer, of the spleen, and in the laundrie. A liniment made of it and vinegar, cureth the leprosie, and the red pimples arising in the face. The leaues stamped with hony and meale vntill they be incorporat together, and so applied as a cataplasme, are thought to be good for distillations: but if they be taken inwardly to the quantity of two drams in honied wine, they bind and knit the belly. The root boiled in water is said to kill fleas.

Another herb there is much like vnto it, and thereupon called Pseudanchusa [*i. bastard Orchanet*] of some, but of others Enchusa or Doris; and many other names it hath besides. More full of downe or hairy mosse it is, and lesse fatty; but the leaues are smaller, more ranke and feeble.

A feeble. The root yeeldeth no oleous substance, but a reddish juice; wherein it differeth from the right Anchusa or Orchanet. The leaues or seed being taken in drinke, is a most effectual counterpoison against the serpents. The substance of the leaues being applied to the places which bee stung, are soueraigne for to cure and heale them vp. The very herb it selfe chaifest away all poison of serpents. There is a drink made therof, commended highly for the chine or ridge-bone of the back. The Magicians do prescribe the leaues to be bound vnto some part of the Patient against a tertian ague, with this charge, That they be gathered with the left hand, & that in the gathering, the party or patient for whose sake they are gotten, be named.

CHAP. XXI.

B ¶ Of *Onochiles*, *Anthemis*, *Lotos*, and *Lotometra*: of *Turassoll-Tricoccus*: of *Adiantum*, and *Callitrichon*.

A Nother herb there is, particularly named Onochiles, which some call Anchusa; other s Arcebion or Onochelis; some Rhebias, and many Enchusa: a small herb this is; it carrieth a purple floure, leaues and branches rough: a root in harvest time as red as blood, otherwhise black; and groweth in sandy grounds: effectually it is against serpents, and Vipers most of all others, both in the root and leafe, as well eaten with meat as taken in drinke. In the full strength it is in harvest. The leaues if it be bruised or stamped, do yeeld the fauor and smell of a Cucumber. If the matrice of a woman be slipt downe, a draught of three cyaths thereof, doth reduce it vp into the place: and together with hyssope, it drieth out the broad wormes in the belly. For the pain of the kidneys or the liuer, it ought to be taken in mead or honied water, if the Patient haue an ague withall; otherwhise in wine. The root brought into a liniment, cureth the Lentils or red spots, yea and the infection of the leprosie. And it is said, That as many as haue it about them, cannot be stung by serpents. There is yet another Orchanet or Anchusa like vnto this, in regard of the red floure which it beareth; howbeit a lesse herb than the other, hauing the like operation, and imploied in the same vses. It is reported, That if one chew it in his mouth, & spit it forth vpon a serpent, the same will surely die thereupon.

As touching Anthemis [*i. Camomile*] *Aclepiades* the Physitian doth highly praise and commend it. Some name it Leucanthesis, others Leucanthemus; & there be, who giue it the name **D** Eranthemion, because it flourisheth in the Spring; others againe name it Chamæmelon, for the sent or fauour that it hath of an Apple: many call it Melanthemion. Three kinds there be of it, differing onely in the floures (for none of them exceed an hand-breadth in height) which bee small, and in forme resemble those of Rue: shewbeit, these floures be either white, yellow, or red. In a lean ground and neer to beaten paths, this herb louch to grow; gathered it is in the spring, and layed vp for to serue in garlands: at which time the Physitians also stampe the leaues and make them vp into Troches: so do they also by the floure and the root. This vertue they haue, That if they be all mingled together to the weight of one dram, they are thought to be a soueraigne remedie against the sting of all serpents. This herbe expelleth dead infants within the mothers wombe, if it be taken in drinke. It bringeth downe also the monthly fleurs of women; prouoketh vrine, and sendeth forth the stone and grauell. Being chewed, it dissolueth ventosities, it cureth the obstructions and defects of the liuer, it helpeth the jaundie, healeth the fistules between the angle of the eye and the nose, and generally all running sores and marring vlcers. But of all these kinds, that which beareth the red purple floure hath most effectfull operation for the stone: and indeed, both the leaues, and also the branches of this Camomile, are somewhat larger than of the rest: and some there be, who giue this a name it selfe, and call it Eranthemion. As for those who take *Lotos* to be a tree only, may be conuincen even by the authority and testimony of *Homer*, who among other herbes growing for the delight and pleasure of the gods, hath named *Lotos* as principall. The leaues of this herbe incorporat with hony, and so applied, cureth the cicatrices or scars in the eie; the spots also appearing therein, and dissoluing the cloudy skins which ouercast the sight: there is a kind of *Lotos* named *Lotometra*, comming of the garden *Lotos*: it carrieth a seed like to Miller, whereof in *Aegypt* the Bakers make bread; but they work & knead the floure of this seed with water or milk. There is not any bread in the world (by report) more wholsom and lighter than this, so long as it is hot, but being once cold, it is harder of digestion, & becometh weighty & ponderous. This is known for certain, that

that as many as live thereof are infested & troubled neither with the dysenterie or bloody flux, ne yet with the troublefome offers and strains to the siege without doing any thing, nor any other difeases of the belly: and therefore it is counted a principal remedie for those maladies. Concerning Turnfol, I have oftentimes related the wonderfull nature thereof, namely, how it turneth about with the sun, although it be a close and cloudy day (so great is the love of this herb to that planet): and in the night season forwant of the Suns presence, as if it had a great misse thereof, * it draweth in and shutteth the blew floure which it beareth. Two kinds there be of this Heliotropium or Turnefol, of which the lesse is called Tricoocum, the other Helio-copium: of the twain, this later is the taller (and yet neither of them both exceedeth halfe a foot in height) and putteth forth branches from the very root. The feed of this greater forth lieth within a little coole, and is gathered in harvest time: it groweth not but in a fat soil wel manured, whereas Tricoocum comes up every where. I find, that if it be boiled it is a pleasant and delectable meat; but soddin in milk it loosneth the belly gently and with ease: for otherwise the bare colature of the decoction in water, if it be taken, purgeth most extremely. The juice of the greater kinde ought to be drawn or gathered in summer at noontide; which, if it be tempered with wine, becometh more strong and effectual. A property it hath being mingled with oile of roses, to mitigat the head-ach. The juice drawn out of the leafe, medled with salt, takes away warts: whereupon our herbarists have called the herb in Latine *Verrucaria*. Wertwort: whereas indeed for other better effects and operations that it hath, it deserveth to have some denominations correspondent therunto; for a countre poison it is against serpents and scorpions, if it be drunke with wine or honied water, as *Apollonius* and *Apollodorus* do report in their writings. A liniment made of the leaues cureth the rheumes and distillations of the braine in children, which discafe they call * *Siriasis*. Likewise it helpeth contractions of finnes, and drawing in of joints, although the patient be taken after the manner of the falling sicknesse; and for such as be thus afflicted, a fomentation made of the decoction of this herb, is very wholefome and comfortable; but if one drinke the colature thereof, it thrusteth forth the wormes in the belly, and scourteth out the granelle in the kidnies. If Cumin be put thereto, it breaks the stones ingendred and confirmed there already. Boiled it ought to be roote and all, the which with the leaues and goats tallow, being reduced into a liniment, is singular good for all kinds of gout.

The other kind which we call Tricoocum, and is otherwise named Scorpion, hath not only smaller leaues, but also they incline and bend downward to the ground. A feed it beareth resembling the figure of a scorpions taile, whereupon it took that name. A liniment made therewith is powerfull against all venomous beastes, and namely the perillous spiders Phalangia, but specially against the poison of scorpions. And in truth, look who carry this herbe about them shall not be stung. If a man make a circle or compasse vpon the earth with the branch of this herb, a scorpion (as some say) being within the same, shall not haue the power to get forth nay, if the herb be laid vpon a scorpion, or if with the same being wet a man besprinkle the said scorpion, it will surely die out of hand. It is said, that foure grains of the seed taken in drinke, do cure the quartan, and three the tertian; or if the very herb it selfe be laid vnder the patients head, after it hath bin thrice carried about the bed, it worketh the like effect. The seed is of power to stir up carnal lust. Applied with hony, it dissoloth biles rising in the emunctories. Yea & this Heliotropium for a certaintie causeth werts to fall off by the very roots: as also it taketh away all excrecences in the fundament. It draweth down by vrin the corrupt blood in the reines and loins, lying cluttered about the ridge bone, in case the seed be either applied as a liniment, or soddin in the broth of a cock or capon, and so supped off, or else with Beers and Lentils. As for the vrmost rind of this herbe, it is singular for to recover the fresh and native colour in places black and blew with stripes. The Magicians and Wise-men do prescribe for the quartan & tertian agues, That the Patient should tie the herbe Heliotropium, with three knots in a tertian, and with four in a quartan, praying withall and making a vow, That he would vndo those knots after he were once cleared of the fever: but this he must do before the herbe be taken out of the ground.

Another property as strange and miraculous is reported of * *Adiantum*: in Summer it is green: in winter it withereth and decaith not: it checketh all water, for being bespreint, dashed, and drinched quite therewith, yet it looketh as if it were dry: so great is the antipathy or contrariety between them: whereupon the Greeks gaue it that name. And otherwise a plant

A it is fit for Vine-workes and knots in a garden. Some call it Callitrichon, others Polytrichon, both which names were given it for the effect that it worketh. For it coloreth the hair [black] And for this purpose it is soddin in wine with the seed of Ach or Persley: and a good quantity of oile is put thereto, for to make the haire curled and to grow thick, by which means it keeps the hair from shedding and falling off: 12 kinds thereof of it, the white and the black, which also is the shorter. The greater kind they call Polytrichon: the other, Trichomanes. Both of them haue pretie fine branches shining with a blacke color, and the leaues resemble fern, in which, the nether sides vnderneath be rough, dusky, and browne: but all the leaues stand directly one against another in order, fastened to the stalkes by slender steles. No roote at all these Capillar hearbes haue: but they grow vpon shadowie rocks and walls, dashed and beaten on with water: but most of all they seek after pits or holes of wells and springs, and stony places wherout fountains issue: and that is a strange & marvellous thing, considering they be not wet with water, nor haue any fence or feeling thereof. They haue a wonderfull faculty, and the black especially, to break the stone, and to expel it out of the body. For which cause, rather than for growing on stones and rocks, I beleue verily it was by our countrymen called in Latin Saxifrage. To this purpose, as much as 3 fingers be able to pluck vp, is ordinarily taken in wine: they prouoke vrin, and resist the poison of serpents and venomous spiders. Being boiled in wine, they lay the flux of the belly. A Chaplet made of them, allaith the head-ach. And a liniment thereof is thought good to be applied against the sting of the Scolopendres: but it must be often taken off and renewed, for feare the hearb become ouer-drie and lose all the vertue. In this wise it is to be used when the haire is fallen away by some infirmity. These hearbes discause and resolue the kings euill: they dispatch and rid away the skales or dandruffe in the visage, and heale the skales of the head. A decoction of these Maiden-haires, is singular good for those who are short winded: for the liuer allo, the spleene, the jaundise, and the dropie. An ointment made with Maiden-haire and Wormewood, ease the paines of the kidneye, and in case of strangurie, procureth ease and free passage of vrine. They bring downe the after-birth in women, and their monethly tearmes. Howbeit, drinke them with vinegre or the juice of the blackberrie bramble, they tanch blood. A proper liniment is made thereof with oile Rosat, to annoint young children that haue the red gum and be all broken out: but first they must be bathed in wine. The leaues of Maiden-haire stamped with the vrine of a man child vnder foureene yeares of age, and yet not vndergrowne, together with the vrine of salt petre, is said to keep the bellies of women from wrinkles and riuels vpon child-bearing, if they be annointed therewith. To conclude, men say, That Partridges and cockes of the game will fight more lustily, in case this hearbe bee entermingled with their meat. And the same also is very good for sheepe to graue vpon about their folds.

CHAP. XXII.

¶ Of *Pieris*, *Theflum*, *Asphodell*, *Alimus*, *Acambus*, or *Brankursine*, *Elaphoboscum*, *Scandix*, *Iustione*, *Of Cautalis*, *Sinn*, *Silybum*, *Scolymus*, or *Zimontum*, *Soackus*, *Chondrillum*, or *Chodrilles*: and of Mushromes.

E The hearbe * *Pieris* tooke the name (as heretofore we haue said) of the notable bitternesse which it hath. The leaues thereof be * round. Excellent good it is to take away werts. Theflum likewise cometh nothing behind for bitternesse: but it purgeth the bellie: for which purpose it must be stamped, strained, and taken in water. As touching the *Asphodell*, it is one of the foueraign & most renowned herbs in the world. Some haue given it the name Heroion. And *Hesiodus* hath written that it grows in the woods. *Diorysius* saith, That there is both male and female of it. Certain it is, that the bulbous roots of the asphodell soddin with husked barley, is a singular restorative for those bodies which are wasted with a consumption, & especially of the lungs: and bread made of them, wrought together with corne meal of floure into a dough, is most wholefome for mans bodie. As for *Nicander*, he vsed to giue either the stem which we called Antherichon, or the seed, or els the Onion bulbous roots thereof, in wine, to the quantitie of three drams, as a preternatiue against serpents & scorpions: and to prevent the feare and daunger of these harmefull and pestilent creatures, he appointed the same to be laid vnder folks heads as they lay asleep. Vially also is this herb giuen against venomous fishes of the sea, and the Scolopendres of the land. In Campaine, the shell-

* A kind of Choria.
* So are none of our Cicioris.

pents. The root also reduced into a liniment with Sal-nitrum put thereto and incorporate together, cureth all fores called fistulaes. But the said root ought to be dried first for those purposes, to the end that it should not be full of the own juice and moisture: and yet this humour dulceth not the vertue thereof, nor maketh it lesse effectual against the sting of serpents.

Touching the herb * Scandix, the Greeks have ranked it also among the wild worts, or pot-herbs good for to be eaten, according to *Opion* and *Erasistratus*. The same being foddren, knitteth the belly and stoppeth a laske. The feed taken with vinegre presently stayeth the yox or hiequet: it prouoketh vrin, and serueth well in a liniment to heale vpon burns. The juice of it being boiled to a juleb, is good for the stomack, liuer, kidneys and bladder. This is the herb which *Aristophanes* the Comedian twitted the Tragical Poet *Enripides* by, obiecing vnto him merily by way of a scoffe, that his mother, who was a gardener, vled to sit in the market and sel neuer a good wort or pot-herb indeed, but made her markets only of Scandix. And verily I would say that * Anthriscus were the same herb, if it had smaller, tenderer, and sweeter leaues. This peculiar praise and commendable propertie it hath, that if the body be overlaid and wearied with the vse of women, it restoreth the spirits and refresheth them again. Yea & such as be well slept in yeares, and begin to droup, it maketh lully and able to perform the act of generation youthfully. It stayeth the flux of the whites in women.

Moreover, * Lasone is counted also a wilde wort, comming vp of it selfe and good to be eaten. This herb creepeth by the ground, full of milke it is, and beareth a white floure which some call Concilium. The like name and commendation there goeth of this herbe for stirring vnto letcherie. Being taken raw with meat in a vinegre sauce, it breedeth plenty of milke in women. A singular restorative it is for them that feele themselves wearing & decaying by a consumption. A liniment made therewith and applied to the head of yong infants, causeth hair to come vp thicke: and by shutting the pores of the skin more close, it is a means to retain the hair till that it shed not easily.

As for * Caulis, an herb like to Fenel, but that it hath a short stalk and a white floure: it is good also to be eaten, and is besides counted a cordial. A drink likewise is made of the juice thereof, passing comfortable to the stomack, of power to prouoke vrin, to expel grauel & stone, and to stay the itching within the bladder: it doth subtiliate the grosse and rough flegm which causeth obstructions in the spleen, liuer, and kidneys. The feed being taken inwardly helps toward the monthly sickness of women when it stayeth vpon them, and drieth vp the cholericke humors which flow after child-birth, or the after-burden. It is giuen also to men for the spilling of natural feed, or the running of the reins. *Chrysippus* is of opinion, that it is singular good to help women for to conceiue, if they be desirous of children. But the manner is to drinke it in wine next the heart fasting. And as *Petrus* the Poet hath deliuered in verse, a liniment of this herb is singular against the poisons of venomous sea-beasts.

Among these herbs is reckoned * Sion, a plant growing in waters of it selfe, with leaues like Parly or Smallach, but that they be larger, fatter, & of a deeper blackish green: it beareth seed plentifully, and in tast resembleth water-Cresses. It is thought to be excellent good for those that cannot make water, for the distikes of the reins, and paine of the spleene, yea and for women whose monthly termes are suppressed: whether the substance thereof be taken as meat, or the juice of the herb decocted, or the feed drunk in wine to the weight of two drams. It breaks the stones ingendred within the body, and notwithstanding it groweth in water, yet it euacuareth those aquosities and waterie humors which ingender the same. Being clisterized it helps those that haue the bloody flux. If women anoint their faces with a liniment made of it ouer-night, it doth embelish their skin at one instant and with one dressing: yea, it taketh away the pimples and spots that disfigure the face, in manner of Lentils. This ointment is held also to be good for the farsins and such sores, in horses and fish like beasts, and to mitigate the grievous paines and trouble of any ruptures.

As concerning *Silybus*, an herbe like vnto the white Chamaleon, and as full of thornes, it groweth abundantly in Cilicia, Syria, and Phoenice: and yet in these countries they make not so much account of it as to be flow the dressing of it, it asketh so much adoe in the kitchen, before it be in case to be serued vp in the hall. And for physicke there is no goodnesse in it at all.

The plant * Scolymus is vfed also much to be eaten in the East parts, where they call it by another name *Limonia*: It neuer exceedeth a cubit in height: the leaues be crested: the root blacke,

A blacke, but yet sweet. *Erasistratus* commendeth it as a principal dish for a poor mans table: and it is said that it hath a special vertue to prouoke vinegre and with vinegre if it be applied, to cure the foule tetters called Lichenes, and the leprosilso by the testimony of *Hippocrates* and *Alcimus*, if it be taken in wine, it inciteth to wantonnesse and fleshly pleasures. These Poets doe write, That when this herbe doth flourish and is at the best, then grasshoppers chaunt loudeli and sing most shrill: and as women at such a time be most desirous of mens company and hottest in lust, so contrariwise men are most loth to turn vnto them, and least able to content their appetites, if Nature to satisfie the pleasure of these good wines, had provided against that faint season, the help of the Arrichoke, as a viand most powerful at this time to set their husbands in a heat, and to enable them to that business. Moreover, an ounce of the root cleaned from the pith, foddren to the thirds in three hemines of the best Falerne wine, and either taken in drinke vpon an empty stomack, presently after that one hath sweated, and is new come forth of the Baine: or else to the quantitie of one cyath immediately after euery meale, doth correct and take away the stinke and ranke smell of the arme-pits. And a strange thing it is, that *Xenocrates* affirmeth vpon his owne experience, and promisseth, That this decoction is of such efficacy, that it causeth the said strong sent to passe away by the vrine.

Moreover, the * Sowthistle is an herbe for to be eaten, for we read in the Poet *Callimachus*, * Sonchus. That the poore old woman *Uteale*, at what time as prince *Tibellus* fortun'd on necessity to take his repast in her simple cottage, made him a feast, and set before him a principal dish of Sowthistles. Two kinds there be of them, the white, and the black: both, like unto leduce, but that they are full of prickles. They run vp into a stalk of a cubite in height, the same is cornered and hollow within; but break it, and you shall see it run out with milke plentifully. The white, which hath that bright colour of the milke within it, is thought to be as good as Lettuces, for those that be streight winded, and cannot take their breath but vpright. *Erasistratus* sheweth plainly, That if it be eaten, it expelleth grauel by vrine, and chewed only, it correcteth the stinking fauor of the mouth, and causeth one to haue a sweet breath. The juice thereof drawn to the measure of three ciaths, made hot in white wine and oile, and so taken, helpeth women in labor, that they may be soone deliuered, but presently after they haue drunk it, they ought to stir their bodies and walke vp and down their chamber. Also it is vfed to be foddren in broth, and so stopped vp. The very stalk therof being boiled, maketh milke noures to haue good store of milke, and the children at their breast to be better coloured. But most excellent it is for such noures as feele their milke to cruddle in their breasts. The juice thereof dropped into the ears, doth them much good, and a measure of one cyath drunk hot, is as good for the strangurie. But in the fretting and gnawing of the stomack, it would be taken with Cucumber seed and Pine-nut kernils. Applied in form of a liniment, it cureth the apostemations in the fundament. A drinke is made thereof, which is a countrepoyson against serpents and scorpions: but then the root also must be laid outwardly vnto the soie place. The same root boiled with oile within the pill of a pomgranat, is a good remedie for the paines and maladies of the ears. Note, that all these vertues must be vnderstood of the white Sowthistle. And *Glennopus* doth accord hereto as touching the white, but he alloweth in no wise to eat of the black, for he is of opinion, that it breedeth difficulties. *Aquabellus* also prescribeth the juice of the white Sowthistle to them who haue drunk Bulls blood, and suspect themselves poysoned therewith. Howbeit, they be all agreed, that the blacke is refrigeratiue: in which regard it ought to be applied outwardly with Barly goats. *Zenon* declareth, That the root of the white Sowthistle, cureth the strangurie.

As for * Chondrilla or Chondrille, it hath leaues like to Endine or Cichory leaues green, wed or eaten round about a stem not a foot high, and the same full of a bitter iuice: a root like vnto * Beans, and otherwise there be many of them together. This herbe putteth forth close to the ground a certain kind of gum like Mastick, swelling out to the bignesse of a Bean, which being applied to the naturall parts of women, is said to draw down their monthly courses. The same herbe being stamped root and all together, and digested into troches, is thought to be singular good against serpents: and a probable reason herof is collected, because the field mice and rats when they are stung by serpents, haue recourse to this herbe, and eat thereof. The juice drawne out of this herbe, after it is foddren in wine, bindeth the belly. The same is singular good to be drisse, couch and lay even the disorderly hairs of the eye-lids, as effectually as the best gum in the world. *Dorotheus* the Poet hath deliuered in his verses, that it is good for the stomack, and helpeth

Plinies vteris,
wild Cheruile,
or Stephacids
needie.

Our Cheruile.

A kinde of
smooth Bind-
weed.

Bastard Parly

A kinde of wa-
ter Cresses or
Lauer.

Some take
cheefe for our
Arrichokes.

* Gum Succ.
cori.

* Dist. betanaga,
is bul and freish
but it seemeth
that it is
readie to use.

helpeth digestion. Some hold opinion, That it is naught for women & hurtful to the eies, also that it is contrarie to the feed of man and doth hinder generation.

Among all those things which are eaten with danger, I take that Mushromes may iustly be ranged in the first and principal place: true it is, that they haue a most pleasant and delicate tast, but discredited much they are and brought into an ill name, by occasion of the poyson which *Agrippina* the Emperesse conueighed vnto her husband *Tiberius Claudius* the Emperour, by their means: a dangerous president giuen for the like practice afterwards. And verily by that fact of hers, she set on foot another poyson, to the mischiefe of the whole world and her owne bane especially (euen her own sonne *Nero*, the Emperour, that wicked monster.) The venemous qualitie of some of these Mushromes, may be soone known by their weak rednesse, their mouldy hew so vnpleasant to see to their leaden and wan colour within-forth, their chamfered streakes full of chinks and chaps, and finally, their edges round about pale and yellow. For others there be that haue none of all these markes: but are drie, and carie certain white spots like to drops or grains of Sal-nitre, putting forth in the top out of their tunicles. And in truth, before that the Mushrome is formed, the earth bringeth forth a certain pellicle or coat first, called in Latin *Volua*; for this purpose, that the Mushrome should lie in it, and then afterwards shee engendreth it enclosed within, much like as the yolke of an egge, enuclled within the white. And so long as the Mushrome is young and not come forth but lieth as a cabe within, the said core or tunicle is as good meat as the Mushrom it selfe: but so soon as the Mushrom is formed, this membran breaketh, and incontinently the body or substance therof is spent in the stele or foot that beareth it vp: and seldom shall you see 2 Mushromes vpon one of these steles or feet. Moreover, these mushrooms take their first original and beginning of a slimy mud, and the humor of the earth that is in the way of corruption: or els of some root of a tree, & such for the most part as beare Maist. It seemeth at the first, as if it were a kind of glutinous some or froth, then it growes to the substance of a pellicle or skin, and soone after sheweth the Mushrom indeed, bred, formed, and consummat within, as is aforesaid. And verily all such are pernicious and vtterly to be rejected neer to which when they come new out of the ground, there lay either a grieue-stud or leg harness-naile or some rustie yron, or so much as an old rotten clout: for looke what naughtinesse foucer was in any of them, the same they draw and conuert into venome and poyson. But none are able to discern these hurtful Mushromes from others, how curious and circumspect foucer they be, save only the peasants of the country where they grow, and such as haue the gathering of them. And here is not at the mischiefe that lieth in them: For dangerous they be otherwise, and meet with more meanes to make them deadly, namely, if a serpents hole or nest be neare by, or if at their first discouerie and coming forth, a serpent chance to breath and blow vpon them: for so prepared they be and disposed as a fit subiect, to enter, that presently they will catch and entertain any poyson. And therefore on any hand we must not be bold and lusty with them before the time that serpents be retired into the ground, & there taken vp their harbor. Which is an easy matter to know, by the tokens of so many herbs, trees, & shrubs, which from the time that they first came abroad above ground, vntill they haue taken vp their winner lodging again, looke alwaies fresh and Greene: & principally by the leaues of the Ash, alone, if there were no more trees: for Ashes neither bud and spring forth, but after that serpents come abroad, nor shed and fall away, before they be gone into the ground again. In summe, this would be noted, That Mushromes be vp and down, come and gon, alwaies in a seuen-night space. Thus much of the Mushromes named in Latine *Boleti*.

C H A P. XXIII.

Of other Mushromes or Toad-stoles called *Fungi*. Of *Silphium*, and *Laser*.

As touching those excrecences in manner of Mushromes, which be named *Fungi*, they are by nature more dull and slow. And albeit there be many kinds of them, yet they all take their beginning of nothing els but the slimy humor of trees. The safest and least dangerous be those, which haue a red callositie or outward skin, and the same not of so weak a red, as that of the Mushromes called *Boleti*. Next to them in goodnesse are the white, and such as haue a white foot also, beir a head much resembling the *Flamins* turbant or mitre, with a tuft or crest in the crown. As for the third sort that be called *Suilli*, as one would say, Swine-Mushromes

or Puffs, they are of al others most perillous, and haue the best warrant to poyson folk. It is not long since that in one place there died thereof, all that were of one household; and in another, as many as met at a feast and did eat thereof at the same board. Thus *Annius Sennius*, captain of the Emperour *Nero* his guard, came by his death, with diuers coronels and centurions, at one dinner. And I wonder much, what pleasure men should take thus to venture vpon so doubtful and dangerous a meat. Some haue put a difference of these mushrooms, according to the severall Trees from which they seeme to spring, and haue made choise of those that come from the Fig-tree, the * Birch, and such as beare gum. For mine own part, as I haue said before, I hold those good that the Beech, Oke, and Cypress trees doe yeeld. But what assurance can a man haue thereof, from their mouths who sit in the market to sell them? for all the sort of those Puffs and Toadstooles look with a leaden hew and wan color. Howbeit, the nearer that a Mushrome or Toadstoole cometh to the color of a fig hanging vpon the tree, the lesse presumption there is that it is venemous.

Touching the remedies for to help those who suspect they haue eaten these dangerous mushrooms, I haue said somewhat already, and will say more hereafter. Mean while this would be noted, that as perillous as they be, yet some goodnesse there is in them, and diuers medicines they doe yeeld. First and foremost, *Glucias* thinketh and affirmeth, That the Mushromes *Boleti* be good for the stomacke. As for the swine mushrooms, named in Latin *Suilli*, they are hanged vp to dry inslaid vpon a rush running through them, as wee may see in those that come out of *Bithynia*. And these are supposed to be singular for those fluxes and catarrhs that take a course to the belly and breed fluxes, called by the Greekes *Rheumatismes*: these cure the excrecences of the flesh, that rise in the fundament; for they eat them down, & in tract of time consume them quite: also they are good to take away the pimples and freckles that appeare vpon the skin, like to *Lentils*, yea and the deformities and spots in womens faces that disfigure their beauty: these mushrooms be * washed as lead, for to enter into collicies and eye-falues: and a liniment is made thereof, which being applied with water, cleanseth filthie sores and vicers, cureth the skals that breake out in the head, and healeth the wounds occasioned by the biting of dogs.

And now for that our fine mouthed and dainty wantons who set such store by their tooth, take so great delight to dresse this only dish with their own hands, that they may feed thereon in conceit and cogitation all the while they be handling and preparing the same, furnished in this their businesse with their fine knives and razors of amber, and other vessels of silver plate about them: for my part also am content to frame and accomodate my selfe to their humorous fantasie, and will shew vnto them in general, certaine obseruations and rules to order and vse them, that they may be eaten with security. Marke then those mushrooms, which in the feeding prove hard and tough, such be all of them hurtfull: Lesse dangerous they be, if some salt-nitre be put to them while they be a boiling ouer the fire, provided alwaies, that they be fully sodden before they be taken off. Also, a man may be more bold to eat those which be sodden together with flesh meat, or with the tails or steles of peares. The eating also of peares immediately after one hath fed vpon Mushromes, doth kill or dull all the malice that they may haue. Also, vinegar is of a contrary nature vnto them, and doth extinguish or mortifie their venemous qualitie. To conclude, all these mushrooms do come vp and are engendred in rain. Semblably, good shrowes doe breed *Silphium*.

This *Silphium* came at the first from *Cyrene*: (as I haue before writtē) but nowadays, since time that all the *Cyrenaick* *Silphium* is destroyed and gon (as hath bin said) the greatest store thereof is brought out of *Syria*: howbeit so good it is not as that which *Parthia* yeelds, though it be better than that which the merchants bring over with them out of *Media*: this * *Silphium* is of great vse in Physicke; for the leaues are sodden in white odoriferous wine: of which decoction, there is made a drink for to cleanse and purifie the matrice, and to expell the dead infants therein; so it be taken to the measure of one *Acetabulum*, immediately after the woman hath bin in the stoue, and there sweet. The root is singular for to cleare the windpipes, and to take away all the alperity and roughnes in those parts; and being applied in form of a liniment, it helpeth importunat inflammations proceeding from the ranknes and ebullition of the blood: & yet as many as take it at the mouth and eat thereof, find that it is hard of digestion; for it breedeth ventosities and causeth much belching. Hurtful also it is and contrarie to the free passage of urine. A liniment made thereof together with wine & oile, is a most familiar and agreeable medicine

* Betula, vite Ferula.

* Laventur ut plumbum, sive read Lavanar ad plumbum, (s) a liniment is made of the for lead-shorte eyes, &c., vide p. 2. lib. 25.

* or *Laserpitia*.

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for

for the black and blew marks remaining after stripes but if the same with some adition of wax, G be reduced into a cerot, it healeth the Kings euil. The piles or werts growing in the fundament, with a suffumigation of Silphium oftentimes vsed, will fall off.

As for the liquor Lafer, issuing from Silphium (in that manner as I haue shewed) it is holden for one of the most singular gifts that Nature hath bestowed vpon the world, and entrench into many excellent confections and compositions. Of it selfe alone, it reduceth those to their naturall heat, who are staruen and benumbed with extreame cold. Taken in drinke, it alliaeth the accidents and griefes of the nerues. It is both giuen to women in wine, and applied also in soft locks of wooll to their natural parts, for to bring down their mensrual purgation. If it be mixed and incorporat with wax, it draweth and fetcheth out by the roots, the agnells or corns in the feet, if so be they be feared round about before with the lencer. Being dissolved in some convenient liquor and taken to the quantity of a chich peece, it prouoketh vrin. And thus the Physici- H an doth allure and warrant vs, That if it be taken in greater quantity, it breedes no windnesse in the stomacke, but helpeth digestion mightily both in women and also in old men: VWho faith moreover, that it is better and more whole some in winter than in summer, and d for those especially who drinke nothing els but water: only they must look to this and take heed, that there be no exulceration within the body. A great restorative it is with meat, and quickly fetcheth them on foot, who haue lien along and bin brought low by sicknesse: for Lafer if it be applied in due time, is as good as a potentiall cautery * to raise a blister: but better it is for them who are acquainted with it, than for those who haue not bin vsed to it. Outwardly applied, no man makes doubt but it is of singular operation, and worketh many effects: taken in drinke, it extinguisheth the venome left in the bodie, either by poisoned dart, or serpents sting; and if the wounds be anointed with the same, dissolved in water, it is the better: but particularly for the prickles of scorpions, it would be applied with oile. Also in case that vlcers will not grow to any maturati- I on, nor yeeld from them concocted matters; a pulues made of Lafer, together with barley floure or figs, is a singular d'gestiue. Being laid too with Rue, or hony, or by it selfe alone (so the place be anointed ouer it with some viscus gum to keep it too that it run not off) it is excellent for the carbuncle, and the biting of dogs. If it be sodden in vinegre with the rind or pil of a pomegranat, it is passing good for the excrescences rising about the tiwil, if the place be bathed with that decoction. Being incorporat with Sal-nitre, and well wrought withall beforehand, and so applied, it taketh away the hard horns and dead cornes arising in the feet, which commonly be called in Latin Morticini. Tempered with wine & saffron and pepper, or if it be but with miced K dung and vinegre, it is a good incarnatiue in vlcers: & an excellent drawer to the outward parts for to fill vp the skin and make a bodie fat. A good fomentation there is made of it and wine, for to bath kided heels: for which purpose, it is boiled in oile and so applied. In like manner, it serueth to soften hard callosities in any place whatsoever: and for the foresaid corns of the feet especially, if they be feared and scraped before, it is of great efficacy. Singula it is against vnhol- L som waters, pestilent traicts, and contagious airts; as in times suspected of infection. Soueraigne it is for the cough, the fall of the Vvula, and an old jaunise or ouerflowing of the gall: for the dropsey also and hoarsenesse of the throat; for presently it skoureth the pipes, cleers the voice again, and maketh it audible. If it be infused and dissolved in water and vinegre, and so applied with a sponge, it assuageth the gout. Taken in a broth or thin supping, it is good for the pleurisie, especially if the patient purpose to drinke wine after it: being couered al ouer with wax to the quantity of one chich peece, it is giuen very well in case of contractions & shrinking of finewes, and namely to such as cary their heads backward perforce, by occasion of some crick or cramp. For the Squinancie, it is good to gargarize therewith. Semblably it is giuen with leeks and vinegre, to those that wheeze in their chest, and be short winded, & haue had an old cough sticking long by them: also with vinegre alone, to such as haue supped off and drunk quailed milke, that is cluttered within their stomack. Taken in wine, it is singular for the faintings about the heart; as also for colliquations and such as are faine away and far gone in a consumption, & those that M be taken with the falling sicknes: but in honied water, it hath a special operation respectiue to the palfie, or resolution of the tongue. With sodden hony and Lafer together, there is made a liniment, very proper to anoint the region of the hucklebone, where the Sciatica is seated, and the small of the backe, to allay the pain of the loins. I would not giue counsell (as many writers doe prescribe) for to put it in the concauitie or hole of a rotten tooth, and so stop vp the place

close

* He meaneth by Cauterizing, some kind of punction, or burning, or some incision, which doth draw humours and the blood to the habit and outward parts: a needfull counsell to be taken in Astrophia, and namely after long diseases, that the body may be equal- ly nourished.

A close with wax, for feare of that which might enue thereupon: for I haue seene the fearful sequel of that experiment in a man, who vpon the taking of that medicine, threw himselfe headlong from an high loft and brake his necke; such intolerable paines he sustained of the tooth-ache: and no maruell, for do but anoint the muffle or nose of a Bull therewith it will set him on a fire & make him horn-mad: and being mingled with wine, if serpents (as they are most greedy of wine) chance to lap or lick thereof, it will cause them to burst. And therefore I would not aduise any to be anointed with it and hony of Athens incorporat together, howsoever there be some physitians who set down such a receipt. Certes, if I should take in hand to particularize of the vertues that Lafer hath, being mingled with other matter in confections, I should neuer make an end. But my purpose is to deale with simples only, wherein Natures work is most apparent & euident to be seen; whereas in compositions we go altogether by coniectures which many times deceiue vs: neither can a man be assured of their operation; for who is able to obserue the iust proportion in these mixtures, either of the contrarieties and repugnances, or the concord and agreement of the ingredients in Nature? But of this point I will write more at large hereafter.

CHAP. XXIV.

¶ Of the nature and properties of Hony. Of honied water or Mead called Hydromel. How it cometh to passe, that the manners and behaviours of men be altered by mead and viands. Of honied wine named Melittes, and of Wax. Also against the abuse in composition of medicines.

Hony, were it not so common as it is, and euery where to be had, would be as high esteemed and of as great price as Lafer. As for this drug, Nature hath framed and made it immediately her own self; but for the getting and working of hony the hath created a li- quoring creature of purpose, as we haue already said: by means whereof we haue this celestial li- quor, which serueth for an infinite number of vses, considering how often it entrench into mix- tures and compositions. And first to speak of that cereous substance Propolis, which, as it hath bin shewed already, offereth it selfe first to be seen at the very entry of the Bee-hive. These vcer- D ous medicinale it hath, namely to draw forth all prickles, thorns, and what offendeth thing foc- uer sticketh within the flesh of a body; to dissolve and dissipate all tumours and swelling bun- ches, to concoct and mollifie any hardnesse, to assuage the pains of finewes, and finally to incar- nat, heale vp, and skin any desperat vlcers.

As touching Hony it selfe, of this nature verily it is, That it wil suffer no dead bodies to put- trifie, notwithstanding it be of a sweet and pleasant tast, far from any agrenesse, and contrary to the nature of salt: for the throat, the kernels of each side thereof called the Tonils or Amyg- dals; for the Squinancie, and all the accidents befalling to the mouth; as also for the drinnesse of the tongue through extremite of heate in feuers, it is the most soueraigne thing in the world. Hony boiled is singular for the inflammation of the lungs, and for the pleurisie: also it cureth the wounds inflamed by the sting or teeth of serpents; and helpeth those who haue eaten veno- E mous mufthons. Being taken in dulcet or honied wine, it cureth those that lie of a palfie; al- though indeed the said honied wine alone hath many gifts and properties by it selfe. Hony to- gether with oile of Roses dropped into the ears, cureth their ringing and pain. Good it is also for to kill lice and such like vermin in the head, and to rid away nits: where note by the way, that if hony be disumped, that is to say, skummed and clarified, it is euermore the better for any vse. Howbeit, the stomack it puffeth vp and maketh to swell with ventosities: it engendred and en- creaseth choleric humors, and taketh away appetite to meat; yea and some are of opinion, that being vsed simply alone, and not compounded with other things, it is hurtfull to the eyes; and yet others giue counsell to touch and anoint the corners of the eyes therewith, when they be ex- ulcerat. Touching the materiall cause whereof hony is ingendred, the manner how, the diuers F sorts, the countries where it is made, the price also and value, with the sundry proofs and tria's thereof, I haue written already once in my treatise of Bees; and a second time in my discourse of the nature of Floures: for so the order and course of this my Worke forced me to treat distinctly of those matters; which, they that be desirous to know exactly the nature of Simples, may put together and mingle again at their pleasures. By the same reason also, since we are en-

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trud into the vertues and operations of Hony, I must of necessity handle and declare the qualitic of Hydromel or honied water, so neere a dependant thereto.

Of which there be two kinds: the one is fresh and new made in haft vpon occasion, and presently vsed: the other is kept and preferued. As touching the former Hydromel, if it be made as it should be of disphumed and clarified hony, it is of singular vse in that exquisit & spary diet fit for sick persons, and namely in meats of light digestion, such as is a thin gruell made of naked frumenty washed in many waters: also to be ioyned in restoratiues for to recouer the Patients strength much enfeebled. Moreover, good it is for the mouth and the stomacke, to mitigate the fretting humors sciled and bedded therein, & to cool the extremity of heat: for I find in good authors, that to ease and mollifie the belly, it is better to be giuen cold than otherwise. Also that it is a proper and conuenient drink for those who chile and quake for cold: likewise for such as be heartlesse & haue smal or no courage at all, whom those writers cal * Micropychos.

* Someremade
microphylos:
out of Drifter,
bawing a finite
& weak pulse.
* Corpuscula
pyrum.

Moreover, there is a reason rendred full of infinite subtiltie, and the same fathered first vpon *Cato*, Why the same things feel not alwaies bitter or sweet alike in euery mans tast: for he saith that this diuersitie proceedeth from those little mores or * bodies that go to the making of all things: whiles some of them be smooth, others rough & rugged, some cornered, others round: in sum, according as they be more or lesse respectiue and agreeable to the nature of each man: this is the cause, that those persons who are ouer-wearied or exceeding thirsty, be more cholerick and prone to anger. Good reason therefore, that such alperity of the spirit, or rather indeed of the vital breath, should be dulced and appeased by the vse of some sweet and pleasant liquor which may lenifie the passage, and mollifie the conduits of the said spirit, that they do not cut, race, and interrupt it going in & out in drawing or deliuering the wind. And in very truth, euery man may find by experience in his own self, how meat and drink doth moderat and appease anger, sorrow, heauinesse, and any passion or perturbation of the mind whatsoever. And therefore those things would be obserued which make not onely to the nourishment and health of the body, but also serue for to rectifie and reform the maners and demeanor of the mind.

Now to return again vnto our Hydromel or honied water, very good, by report, it is for the cough, and being taken warm it prouoketh to vomit: put oile thereto, and it is singular against the poison of Cense or white lead. A countre-poison also it is and a preferuatiue to such as haue eaten Henbane and Dwayne, especially taken with asses milk, as I haue obserued heretofore. Infilleted into the ears, or poured into the fistulous sores of the secret parts, it is thought to be excellent. Incorporat with the crums of soft bread, and reduced into the form of a pessarie, and so put vp, it is singular for the infirmities of the natural parts of women, and being applied accordingly, it taketh down all sudden swellings [occasioned by windines], cureth dislocations, and in one word, mitigareth all pains. Thus much of Hydromel new made: for our moderne physicians haue vterly condemned the vse of that which is kept vntill it be stale. And this they generally hold, that it is not so harmlesse as water, nor so solid and powerfull in operation as wine. Howbeit let it be long kept it turneth into the nature of wine, and (as all writers do accord) then is it most hurtfull to the stomack, and contrary to the sinewes.

As for honied wine, the best and most wholesome is alwaies that which is made of the oldest wine, that is hard, and indeed with it you shall haue it to incorporate very easily, which it will neuer do with any that is new & sweet: and being made of green, harsh, or auftere wine, it doth not fill and charge the stomacke, no more it doth being made of boyled hony, and ingendrerth lesse ventosities, which is an vsual thing with hony. This hony bringeth them to appetite of meat who haue lost their stomack. Taken actually cold, in many it loosneth the belly, but being hot it stayeth and bindeth the same. The honied wine is very nutritiue and breedeth good flesh. Many haue held out a long time fresh and lusty in their old age, with the nourishment of honied wine alone without any other food: whereof we haue one notable example of *Pollio Romanus*, who being about an hundred yeres old, bare his age passing well: whereat the Emperour *Augustus* of famous memorie maruelled much, and being vpon a time lodged as a guest in his house, he demanded of him, what means he vsed most for to maintaine that fresh vigour both of body and mind? to whom *Pollio* answered, By vsing honied wine with in, and oile without. *Varro* saith, that the yellow jaundise was called a * Kings disease, or a sicknesse for a King, because it was cured ordinarily with this honied wine, called *Mulfe*.

* Regius mor-
bus.

As touching another kind of honied wine, named *Melitics*, how it is made of Must, or new wine

A wine & hony together, I haue declared sufficiently in my treatise of wines. But I suppose there hath bin none of this sort confectioned these hundred yeares past and aboue, for that it was found to be a drink which bred ventosities in the stomacke and other inward parts. Howbeit, the manner was in old time, to prescribe it for to bee giuen in agues, to make the bodie solubile, prouided alwaies, that it had the due age: also to those who lay of the gout: to such likewise as had weak and feeble sinewes: and to women who abtained altogether from meere wine.

Next after Hony, the treatise of VVax (which is correspondent to the nature of Hony) by good order followeth. Concerning the original working and framing thereof, the goodnesse, the several kinds according to diuers countries, I haue written in conuenient place. This is generally obserued, that all sorts of wax be emollient, heating, and incarnatiue, but the newer and fresher they are, the better they are thought to be. Wax taken inwardly in a lipping or broth, is singular for the bloody flux and exulceration of the gurs: so be the very hony-combes giuen in a gruell made of frumenty, first parched and dried at the fire. Contrarie it is to the nature of milk: for take ten grains of wax, made in final pills of the bignesse of millet corne, in some conuenient liqur, they will not suffer the milke to cruddle in the stomacke. If there be a rising or swelling in the share, the present remedie is to stick a plaister of white wax vpon the groune. Moreover, to reckon vp and decipher the sundry yses that wax is put vnto in matters of Physicke, as it is mixed with other things, it is no more possible for a Physician, than to particularize of other simples and of their wholsom vertues, according as they enter into many compositions which proceed all (as I haue said) from the wit and artificiall inuention of man: for we neuer find, that Cerors, Cataplasms, Emollientes, Plaisters, Collyries or Eye-salues, Antidotes or Preferuatiue confections, were euer of our great mother dame natures makings: who indeed is the diuine worke mistresse of all things, these are the deuises of Apothecaries, nay they are rather tricks proceeding from auarice and couetousnesse. As for Nature, she hath made nothing vnperfect, her workes be absolute all and accomplished in their essence: ordained hath shee no compounds, vnlesse it be very few, wherein she proceedeth vpon good cause and reason, and goeth not by blind aime and doubtfull coniectures: as namely, when according to her rule and order, shee doth incorporate some things of a drie constitution and substance, with a liquor, that they may pierce & enter better within the pores of the body, or els when the giuent confidence to liquid matters by some bodily substance, which may write and knit them together. To goe about for to compass the vertues of euery simple ingredient in these compositions curiously by scruples and graines, fauoureth of impudencie rather than a worke grounded vpon humane coniecture. For mine owne part, I haue nothing to doe with these drugs and far-set wares that come from India and Arabia: I meddle not (I say) with these medicinable spices brought out (as it were) of another world. These simples growing so far off in such remote countries, please me not, neither do I thinke them meet for to cure our maladies: they were neuer brought forth by Nature for vs; no nor for them neither, where they grow: otherwise they were not such fols (I trow) as to sell and passe them away as they doe. Buy them, and spare not, for sweet pomanders, perfumes, and delicate ointments: ye may buy them also (if you please) vpon a superstitious deuotion for the worship of gods; for that now we cannot sacrifice, pray, & serue God (forsooth) without Frankincense and Costus. And that our daintie ones and effeminate persons should be the more ashamed of themselves, I will the rather shew and proue, That we may both preserue and recouer our health well enough without these exotical and foraine drugs: and that each region is furnished sufficiently with home-physicke of their owne. But now, since we haue taken so much paines as to collect the medicinable vertues of guirland-floures, of pot-herbes also, harden woorts, and salad herbes, How may I for very shame leaue out the properties of corne and grain seruing for Physick: and therefore in this place it shall be well done, to discourse of them likewise.

CHAP. XXV.

¶ The medicinable vertues and properties of corne and graine.

First and foremost this is holden for certain, that they be the most ingenious and wisest creatures of all others, which liue of corn. The grains of the fine blanchd wheat Siligo, being burnt, brought into powder, and applied with Ammoniac wine in manner of a haiment, doe

restrain the flux of humors to the eies. Also the cornes of the ordinary wheat *Triticum*, being parched or roasted upon a red hot yron, are a present remedie for those who are scorched and singed with nipping cold. The meale of the said wheat sodden in vinegre, and applied as a cataplasme, helpeth the contraction and shrinking vp of the sinews: but wheat brans, with oile of roses, drie figges, and sebesten sodden together, make a collution, the gargarizing wherewith, is good for the inflammation of the Tonills or Amygdales, and to cure all the accidents of the throat. *Sextus Pompeius*, who in his daies was one of the principal peers of high Spain, & left a sonne behind him, who afterward was lord Pretour of Rome, sitting on a time before his barnedores to see his corn winowed, was surpris'd sodainly with a fit of the gout, and whether it were by chance, or in a rage for the extremite of paine, thrust his legs about the knees into the heap of wheat lying thereby: but finding his legs mightily dried hereby, and himselfe wonderfully eased of his paine by that means, he neuer vied any other remedie afterwards, but so soone as he felt a fit of his gout coming, he plunged his feet and legs into a heap of wheat. Certes wheat is such a defecatiue, that it will draw and drievp the wine or any other liquor in a barrell which is buried within it. Moreover, the best experienced Chirurgians in the cure of ruptures, affirm, That there is nothing better, than to lay the chaffe of wheat or barley hot to the grieved place, and to foment the same with a decoction wherein it was sodden.

As for the bearded wheat Far, there is a certaine worme breeding in it like to a moth or the grub that eateth wood, which is singular good to make rotten teeth to fall out of the head; for if the same be lapped within wax, and so put into the hole of the faultie tooth, it will drop out: or if the sound teeth be but rubbed therewith, they will shed and fall forth of the head.

Touching the graine Olyra, we have said already that it is called also *Aricina*. The Egyptians make thereof a certaine medicinable decoction or gruell, which they call *Athara*, passing good for young babes, yea and it serueth to bath and annoint elder folke withall.

Barly meale either raw or boiled, doth discusse and resolute, assuage & ripen all impostumes engendred either by way of gathering and collection of humours, or by some deflux and rheumatick descent. The same otherwhiles is sodden in honied water, or els with drie figs: but for the paines of the liuer, it had need to be boiled with *Oxyctre*, i. water and vinegre together, or els with wine. But when the case standeth so, that the tumor must be partly dissipated, & partly brought to maturation, then it is better that it be incorporate in vinegre, or the lees of vinegre, or at least waies in sodden peares or sodden quinces. Being tempered and medled with hony, it is very good for the biting of the cheelips or many-foot worms, called *Multipedes*: but for the sting of serpents, it is better to mix it with vinegre, as also to keep sores from festering and rankling: but in case it be needful and requisite to cleanse them from suppurat matter therein gathered, then it would be applied with vinegre and water, with rosin also and gal-nuts added thereto. For inueterat and old vlcers, to bring them to maturation, it is laid too with rosin: for to soften hard tumors, it is vsed either with pigeons dung, or with drie figs, or ashes. Being applied with *Poppie* or *Mellio*, it is singular for the inflammation of the nerves, of the gurs & sides: also for the paines of mens priuie parts: or when the flesh is departed from the bone. Incorporate with pitch, and the urine of a boy not yet vndergrowne nor fourteene yeares old, it is a proper medicine for the swelling kernels named the Kings euill: with oile and Fenigreeke, it helpeth the tumors of the midriffe and precordiall parts: or in case the fever be busie with the Patient, then it must beeuiled with hony or old greafe. But if those swellings tend to maturation, then wheat meale is commonly more lenitiue, and assuageth pain better. The same being reduced into a liniment with the iuice of Henbane, is good for the nerves; but with hony and vinegre, it taketh away the red pimples and spots appearing in the skin, called *Lentils*.

Touching * *Zea*, whereof is made the ordinary frumenty as I haue said: the meale of it is counted better in operation than the other of barley, but that of the three-moneth corn is more moist and emolliatiue. Tempered with red wine, and so applied warm, it is commended for the pricke of Scorpions: also for them that reach and spit vp blood: and all accidents happening to the throat and windpipes: but with goats suet or butter, it is good for the cough. The flour or meale of Fenigreeke, is the softest of all other: it healeth running vlcers, it skoureth dandruffe or scales in any part of the body, it appeaseth and assuageth the paines of the stomack, it cureth the maladies incident to the feet and paps, if it be sodden with sal-nitre and wine, and so applied accordingly.

The

A The meale of Yrain or Darnell, doth cleanse old vlcers and gangrenes more than any other. Tempered with raddish, salt, and vinegre, it cureth ring-worms, tetters, shingles, and such like: with Sulphur-vif or quick brimstone, it scoureth away the leprosie. Applied in a frontall to the forehead with Goose-greafe, it helpeth the head-ache. Boiled in wine with Pigeons dung and the Line-feed, it digesteth and bringeth to maturation the swelling kernels named the Kings-euill, and other biles which be long ere they gather to an head and do ripen.

Of the fundry sorts of Barly groats or grossemeale called *Polenta*, I haue said enough in my Treatise of corn, which did require also the discourse of such things as be made of corn. It differeth from Barly meale, in that it is torrifed or parched: in which regard it doth the stomack good. It bindeth and staith the flux of the belly: it represteth also and smiteth back the flushing of humors, to the breeding of red and angry tumors. It serueth for a liniment to the eies, and easeh head-ach, if it be applied with * *Mints*, or some other cooling herb. In like manner, it cureth kided heels, and the wounds occasioned by serpents: also it healeth burnes and scalds: if it be laid too with wine: and in that sort it keepeth them from blistering. If meale be driuen through a sercer or boulder, and so reduced to flour, and afterwards made with dough or paste, it is a great drawer of noisom humors to the outward parts: which is the cause that being applied to such places which look dead & mortified, by reason of the blood spread vnder the skin, it draweth out the same, so that the very linnen bands wherewith they be lapped & rolled, become bloody again. But if wine cuite be ioined therewith, the operation is more effectuall. Moreover, the said flour is good to be laid vnto the callosities and corns of the feet. For the fine flour of meale being sodden with old oile and pitch, and applied so hot as the patient may abide it, doth wonderfully cure the swelling piles and all other griefs about the fundament. As touching the thick gruell or paps made with flour, it nourisheth much, and causeth the body to feed well: the paste made of meale, wherewith they vse to glew Papyr, is ordinarily giuen warm to good effect, for the reaching and pitting of blood.

As for the frumenty called *Alica*, it is a meere Roman inuention, and not long ago first deuised: for otherwile the Greeks if they had known of it, would neuer haue written as they did in the commendation of husked Barly named *Prisana*, rather than of it. And I thinke verily, that the vse thereof was not taken vp in the daies of *Pompey* the great, and therefore the followers and disciples of *Alepiades* haue left little or nothing thereof in writing. That it is a foueraign and most wholsom thing, no man verily maketh doubt or question; whether it be washed and so giuen in honied water, or whether it be sodden and so vied in a thin supping, or boiled higher to the consistence of a thick gruel or pottage. The same for to stay the belly, and stop a lask, is torrifed: and then afterwards sodden with virgin-wax, as before I haue shewed. But a peculiar vertue it hath by it selfe to restore those that are consumed and fallen away through a long & languishing sicknesse: and then it must be ordered thus. Take three cyaths of the said Frumenty, seeth it in a sextar of faire water ouer a soft fire gently, vntill by little and little all the water be consumed: now after this inbibition, when that the Frumenty hath thus drunk vp all the water, there must be added thereto a sextar of Ewes milk or Goats milk, and in the end a little hony. This the patient is to take for certain daies together. And in truth, such a broth or supping is this, as what is not in the world a more foueraigne restoratiue for all colliquations and consumptions therebouer, nor that will sooner fet vp on their feet again those who be far gone and spent that way.

To come now to Millet, it is a grain, which being torrifed aforehand for the purpose, stoppeth the lask, and dispatcheth all collick pains and torments of the belly. Being fried and laid too hot in a bag, there is not a better thing for the griefe of the sinews, or to alay any other pain: for, most soft it is, and lightest of all other, and nothing in the world retaineth heat so well. No maruell then if Millet be vied ordinarily in those cases, where heat is to do good. To conclude, the meale or powder thereof incorporate with tar, is a singular plaister to be laid upon sores, occasioned by the sting of Serpents or the pricke of the vermine named *Multipeda*.

F As for the Panick, *Diacles* the Physitian called it *Mel-frugum*. The same operations and effects it hath that Millet. Being taken in wine, it is good for the dysentery or bloody flux: to such tumors as need to euaporat and be resolute, it is singular good for to be applied hot, by way of fomentation. Sodden in Goats milk, and giuen twice a day to drink, it bindeth the belly, & staith eth flux: and in that manner it assuageth the torments and wrings in the collicke.

Sesama

Vide Galen,
lib. de Natu-
rall. facul-
tatiibus.

Spela

* Com. Mentis,
rather *Mellis*,
i. hony, accord-
ing to *Caleni-*
corius: for
Mintis bech.

Sefama stamped or beaten into powder, and so taken in wine, refraineth immoderat vomits. Reduced into a liniment, and so applied, it doth mitigate the inflammation of the ears, & cureth any burne or scalt place of the body. The same effects it hath when it is green & groweth in the field. Ouer and besides, a cataplasme made thereof, being boyled in wine, is good for fore eyes. To be eaten, it is no wholfome meat for the stomack : and more than that, it causeth a stinking breath. Howbeit, they hold it excellent to withstand the venomous sting of the Stellions, and the dangers that it may inferre : as also to heale the old cancerous and maligne vlcers, named Cacoethe, & Morimals. There is an oile made thereof, which as I haue before shewed, is good for the eares.

Touching Sefamocides, which taketh that name of the resemblance that it hath to Sefama, the same being taken to drink in water, purgeth chollerick humors. A liniment made of the seed, doth alluage the heat of *S. Anthemonis* fire, and doth disperse and relouche biles. And yet there is another Sefamocides growing in Anticyra, which thereupon some do call Anticyricon: otherwife much like it is to the herb Groundswell, whereof I will speake in place conuenient. The graine or seed of this Sefamocides is giuen in sweet wine, as a purgatiue of chollerick and flegmatick humors; to the quantity of as much as may be contained with three fingers; but to quicken the fame, the Physicians vse to put one Obole and an halfe of the white Ellebore-root or Neefewort: which purgation they vse in case of madnesse, the melancholicke disease, the falling sicknesse, and the gout. By it selfe alone, the weight of one dram is a sufficient laxatiue, & doth euacuate the belly.

The best Barley is that which is whitest. The iuice of Barley boiled in rain water, is made vp into certain trofches, which is singular good to be either conuied into the guts by way of clyster, for the exulceration thereof, or els injected into the Matrice by the merenchynte, for the vlcers therein. The ashes of Barly burnt, are good in a liniment for Burnes, for places where the flesh is gone from the bones, for wheales, and small pocks, and for the biting of the Hard shrew mouse. The same with a little sprinkling of salt, and some honey amongst it, is counted a good dentifrice, to make the teeth look white, and the breath to smel sweet. There is an opinion commonly receiued, That whosoever vs to eat Barly bread, shall not be troubled with the gout of the feet. And they say, that if a man take nine barley corns, & with euery one of them draw three imaginary circles about a felon with his left hand, and when he hath done, throw them all into the fire; presently it shall be cured. There is an herb which the Greeks call Phenicea, and our countrymen in Latine Hordeum * Murinum. This herb or weed being beaten to powder, & taken in wine is singular to bring down the course of womens flours.

Hippocrates the famous Phytitian, hath made one * intire booke in the praise of *Ptifana*, which is a groat made of Barly: but all the vertues and properties thereof are now attributed vnto our Frumenty *Alica*, and that goeth away with all the commendation. * And yet a man may see how much more harmlesse it is than *Alica*. *Hippocrates* commended it only for a supping, as being slippery & easie to be taken, good to put away thirst, not swelling in the belly, passing quickly and easily through the body, and such a kinde of meat as might alone of all others be giuen twice a day in a feare to those who were vfed to it: so farre was hee in opinion from them who would famish all diseases & cure them by *fasting & vter hunger. Howbeit, hee forbod to giue it whole in substance to be luppod off, & allowed nothing but the very simple iuice and broth of *Ptifane* or husked Barly: neither allowed hee it in the beginning of an ague fit, so long as the feet continued cold, for during that time he would not admit so much as a thin potion therof. Now beides the *Alica* or frumenty made of Zea, there is another which commeth of the com: nowmbeate, more glutinous and better indeed for the exulceration of the wind pipes.

As touching Amylum or starch powder, it dimmeth the eyesight, & is hurtful to the throat, and is nothing good to be eaten, contrary to the common received opinion. It staith the inordinat flux of the belly, reprefeth the rheum into the eyes, it healeth vlcers, and cureth pufes, wheals, and blains, and refrainteth fluxes of blood. It mollifieth the hardnesse growing in the eye-lids. To such as caft vp blood, it is vually giuen in an egge. In pain of the bladder, halfe an ounce of Amylum made hot ouer the fire vntill it fuet, with one egge and as much cuir as will giue into three eggs, fhels, taken immediately after the bath or hot houfe, is a fingular remedy: moreouer, catemace, foddin in vinegar, taketh away moles and freckles of the skin.

The

A The very ordinary bread, which is our daily food, hath an infinit number of medicinable faculties. Bread crums being applied with water and common oyle, or els with oyle of Rofes, doth mollifie impurities: & with honied water afflugeth any hardnes, wonderfully. Given in wine, it is good to diffolve and refolve. It is of force alfo to bind and knit where need is, and fo much the rather, if it be given with vinegar. Alfo it is fingular againft the fharp & eager flux of fleame, which the Greeks call Rheumes: likewife for bruifed places vpon ftripes or blows; yea, and for diflocations. And in very deed, for all thefe purpofes, leavened bread, called of the Greeks *Autopyros*, & downright made, is better than any other. Moreover a liniment thereof applied with vinegar, is good for whitelaws and the callolities of the feet. Moreover, ftale bread and bisket, fuch as fea-faring men do eat, being ftamped & fod again, is good to bind the belly: for fingeing men and chorifiers who are defirous to haue a cleare voice, for fuch alfo as be fubject to rheums falling from the head, it is the wholefomeft thing in the world, to eat dry bread in the beginning of meals. The Sitanian bread, that which is made of three months corn, being incorporat with hony, is a faire medicine to cure either the black prints remaining after ftrokes, or the fcailing and pilling of the face. White bread crums foked either in hot or cold water, yeld vnto ficke men a meat of light digeftion. The fame being applied with wine, cureth fwelled eyes. And fo it healeth the breaking out in the head, efpecially if dry Myrtles be put thereto. It is an ordinary thing to prefcribe vnto them that are given to fhaking, for to eat faling bread foked in water, prefently after they come forth of the bath. The perfume of bread burnt, taketh away all other cuill fmelles that may be in a bed chamber: & being put into thofe Hippocras bags through which wines be ftrained, it altereth the naughty tafte which they haue.

Furthermore, even Beans have their properties which serve in Physick: for being fried all whole as they be, and so cast piping hot into sharp vinegar, they help the collicke and pangs of the belly. Broiled and so eaten, or sodden with Garlick, they be excellent good against coughes that were thought past cure and remediless; yea, and imposthumes in the breast grow to suppuration; but the patient ought to feed thereof continually every day. Also if one chew them fasting, and so apply them to a fellow, they are thought passing good either to ripen or to disperse the same. Boiled in wine, and so laid roo, they assuage the swellings of the cords and priuy parts serving to generation. Bean flour sodden in vinegar, doth ripen and breake all tumors: in like manner it doth leech black bruised blood lying under the skin, and healeth burns. *M. Varro* is of opinion, that it is good for the voice. Bean stalks and bean cords burnt to ashes, and so incorporated with old Swines seame, is good for the Sciatica and all inueterat pains of the finews. The very husks of beans alone sodden to the thirds, do stop the lask and running out of the belly.

The beeft Lentils be they that are moft tender, and ask leaft feeding; alfo fuch as drink much water. Lentils verily do dim the cie-fight, and breed ventofities in the ftomack: but taken in meat they ftay the flux of the guts, and the rather if they be thoroughly foddin in rain water: but in cafe they be not fully boiled, they do open the belly and make the body laxative: the efcars or rofts remaining vpon cauterized or bliftured fores, they break and make to fall off: & thofe vlcers which are within the mouth, they mundifie and clenfe. Applied outwardly, they appeafe the pains of all impoftumes, efpecially if they be exulcerat and full of chaps: and reduced into a cataplafm with melilote or a quince, they are fingular for to reftrefe the flux of humors to the eyes: but for to keep impoftumes and tumors from fuppuration, they are laid out with Barley groats, or the groffe meal thereof torried. The iuice of Lentils after they be foddin, is good for the exulcerations of the mouth, and the genitors: likewise with an addition of oile Roft or Quince, for the inflammation of the feat or fundament. But if the parts affected and exulcerat do require stronger and fharper remedies, the fame would be applied with the rind of a pomgranat, and a little hony put thereto. And to the end that the faid cataplafme fhall not dry quickly, they vfe to put thereto Beet leues. Lentils foddin thoroughly in vinger, ferue for a cataplafm to be laid vpon the fwelling kernels called the Kings euill, and other fell billes, whether they be ripe or in the way only of maturation. Applied with honied water, they be very good for any eliffs and chaps: but with the pill or rinde of a pomgranat, for Gangrenes. In like manner, with barley groats they be appropriat for the gout, the kidnies, the naturall parts of women, for kibes, and fuch vlcers as be hardly brought to cicatrice. Thirty grains of Lentils fwallowed down by way of Boile are fingular for the feebleneffe and diffolution of the ftomacke. In dyfenteries or bloody fluxes, in the violent rage of cholerick humors which caufe euacuations both vpward & downe.

downward, Lentils do effectuall their operation much more, if they be foddén in three waters. For which purpose also better it is to torrefie them first, and then to pound or beat them small, that they may be given to the patient as fine as may be, either by themselves alone, or els with a Quince, with Peas, Myrtle berries, wild Cichory, black Beets or Plantain. Howbeit, note thus much, That Lentils are nought for the Lungs, for head-ache, for all nervous parts, and the gall; and this ill property they haue besides, to keepe the patient from sleep. Being foddén in sea-water, they are good for puthes and angry wheeles, for S. *Anthony's* fire, and the accidents that befall womens breasts: but if they be boiled in vinegar, they discusse all hard tumors, & the kings euil. They that haue but weak and bad stomacks, vse verily to put Lentils to thicken their portage and gruels, instead of Barly groats, and find thereby much ease. If they be halfe foddén in water, afterwards braied or stamped, & then let passe through a tamise, that the brans might be separtat from the rest, they are thought very good for burns: but then, within a while as the cure goeth forward, they must be applied with honey also put thereto. Finally, if they be foddén in Oxyerat or water and vinegar together, they help the swelling bunch of the throat called Bronchocela.

There is a kind of marish or moory Lentils [called Ducks meat] growing of it selfe in standing waters. This herb is by nature refrigerative: in which regard, it serueth to make a liniment vsed for inflammations and hot impothumes: but principally for all manner of gouts, either alone or mingled with Barly groats. The same hath vertue to knit & consolida ruptures, when the bowels are fallen downe.

Moreover, there be wild Lentils, called by the Greeks *Elisphacos*, by others, *Phacos*. These be lighter than the tame Lentils which are sowed, bearing a smaller leafe, drier also, & more odoriferous than the other. Of which wild Lentils, there is a second sort, carying a strong smell: in somuch as the former kind is counted the milder. These Lentils haue leaues formed to the fashion of quince leaues, but that they be lesse and white, and commonly they are foddén branch and all together. Their medicinable vertues be, to bring down the monthly sicknesse of women, to prouoke vrines, and to heale the wounds occasioned by the venomous prick of the sea pussh or fork-fish. Now the nature of this fish is to benum and mortifie the place which is stricken. Of these Lentils and Wormwood, there is a drink made, good for the dysentery, or bloody-flux. The same taken with wine, draweth down womens flours that stay vpon them: but if their bare decoction be drunk, it will stay them when they flow immoderately. The herb alone applied outwardly, represseth the ouermuch bleeding of fresh wounds: it cureth the sores occasioned by the sting of asperpents. The decoction thereof in wine, doth mitigate the itching of the coods, if they be bathed and fomented therewith.

Our moderne Herbarists in these daies, doe call that in Latine *Salvia*, (*?*) Sange, which the Greeks name *Elisphacos*. An herb it is much resembling Mints, of a gray and hoary colour, and withall odoriferous. Being applied to the naturall parts of women, it fetcheth away the dead infant within the womb: it riddeth the ears also and festered vlcers of those wormes and vermin which breed therein.

Moreover, there is a kind of wild Cich-peafe bearing leaues like to the other of the garden, and which be sowed, saue that their smell is strong & vnpleasant. If a man feed largely of them, they stir the belly and moue to the siege, they breed ventosities, cause the collicke and wringing of the guts. Howbeit, if they be parched or torried they are reputed the wholsome.

The Cichling or pety Cich-peafe, is thought to be better and more wholsome to the belly than the other: but the meale as wel of the one as the other, doth heale the running sores & scales of the head: howbeit, the wild better than the rest. Moreover, these ciches are taken to be good for the falling sicknesse, the swellings of the liuer, and the sting of Serpents. They procure womens termes, and prouoke vrine, and especially the grain it selfe rather than the leafe. The same are singular for tetters and ring-worms, for inflammations of the coods, for the jaundie & drop-sie. But all the sort of them be hurtfull to the bladder and kidneys, especially if they be exulcerat. For gangrenes and those morrall vlcers called *Cacoethe*, they be better, in case they be tempered with honey. Some there be, who for to be ridde of all kinde of Warts, take as many Cich-peafe as there be warts, and with euery one of them touch a wart, and that, vpon the first day after the change of the Moon: which done, they tie the foresaid Peafe or Ciches in a little linen bag, and sling them away backward behind them: and they are persuaded that the warts will

A will be gone by this means. But our Latine Phyticians are of opinion, That the blacke ciches which be called *Ram-ciches*, should be well and thoroughly foddén in water and salt: of which decoction they prescribe vnto the patient for to drinke two cyaths, in difficulty of making water, for to expell the stone, and rid away the jaundie. Their leaues and stalks of straw being foddén in water ouer a good fire, yeeld a decoction, which being vsed as hot as may be suffered, doth mollifie the callosities & hardnesse growing about the feet: so doth a liniment also made of the very substance it selfe, stamped and applied hot.

The Columbine ciches foddén in water, are thought to lessen and shorten the shaking fits in tertian and quartan agues. The black cich-peafe being beaten to powder with halfe the quantity of gall-nuts, and incorporat with sweet wine cuir, called *Passum*, and so applied, cureth the B vlcers of the eyes.

As touching *Eruile*, somewhat I haue said already touching the properties thereof, when I made mention of it among other kinds of pulse. And indeed the old writers haue attributed as great power & vertue vnto it as to the Colewort. Being laid to with vinegar, it cureth the burts that come by the sting of serpents, or the teeth of man & crocodile. There be writers of approved authority, who ascribe for certain, That if a man doe eat *Eruile* fasting euery day, it will diminish and wast the swelling of the spleen. The meale of *Eruile* (as *Varro* reporteth) taketh away the spots and moles of any part of the body. And in truth, this pulse is singular to repress corrosiue and eating vlcers: but aboute all, it is most effectuall in the sores of womens breasts: applied with wine, it breaketh carbuncles. Being torried and incorporat with hony, and reduced into an electuare or bole, and so taken as much as an hazell nut, it amendeth the suppreffion or difficulty of voiding vrine, dissolueth ventosities, openeth obstructions, and helpeth other accidents of the liuer, the prouocations and proffers to the stoole without doing any thing: reuiuet those parts that milke and feele no benefit or nutriment of meat, which they call in Greek *Atrophia*. In like manner it cureth shingles, ring-worms, and tetters, if it be first foddén in vinegar so applied, and not remoued vntil the fourth day. If it be laid too with hony, it kepeth bites from supuration. A fomentation made with the decoction thereof in water, helps kided heels, & the itch. And it is generally thought, That if a man drink it euery day next his heart vpon an empty stomach, it will make the whole body looke with a better and more liuely colour. Contrariwise, the common opinion is, That it is not good to be eaten ordinarily as meat, for it moueth to vomit, troubleth the belly, lieth heavy vpon the stomach, and fumeth vp into the head: it breedeth ache and heauinesse in the knees. But if it haue lien many daies in sleepe, after that imbibition of water, it becommeth more mild, and is a most wholsom prouender for horie and oxen. The green coods of *Eruile* before they waxe hard, if they be stamped with their stalkes and leaues together, do colour and die the hairs of the head blacke.

As touching wild Lupines, they be inferior to those which come of seed, in all respects, but only in biternesse. And verily there is not a thing more commendable, wholsome, and light of digestion than white Lupines, if they be eaten dry. They are brought to be sweet and pleasant by hot ashes or scalding water. Being eaten at meales vially, they make a fresh colour and chearfull countenance. Bitter Lupines are very good against the sting of the Aspidess. Dry Lupines husked & clesed from their skins & applied to black & mortified vlcers, full of dead flesh, with a linnen cloth between, reduce them to a liuely colour, and to quick flesh again. The same foddén in vinegar, discusse the kings euil, and the swelling kernels & impositions behind the ears. The broth or collature of them being foddén with Rue and Pepper, may be giuen safely, although it were in an ague, to those that bee vnder thirty yeares of age, for to expell the wormes in the belly. As for young children who haue the wormes, it is good to lay Lupines to their bellie whiles they be fasting. All others are to take them torried, either by way of drinke in a kind of wine cuir, or els in electuare after the maner of a lioch. The same do giue an edge to the stomacke, and quicken the appetite to meat. The meale or powder of Lupines wrought with vinegar into a dough or paste, and so reduced into a liniment, and vsed in a bain or stoupe, represseth and kepeth down all wheales and itching pimples which are ready to breake forth: and of it selfe is sufficient to drie vlcers. It bringeth to the native and liuely colour all places blacke and blew with stripes. Medled with Barly groats, it assuageth all inflammations: For the weaknesse of the huckle bone, the haunch, and loins, the wilde Lupines are counted more effectuall than the other. A fomentation with the decoction of these wild Lupins, maketh the skin

* For that colour in old time was best esteemed, and therefore by chaste Matrons were knowen from wanton harlots, who affected yellow haire. Alex. ab Alex. c. 18. l. 55.

more smooth and beautifull, taking away all spots and freckles. But if the same or garden Lupines be boiled to the height and consistence of hony, they do cleanse the skin from black morpew and the leprosie. These also if they be applied as a cataplasme, do break carbuncles, bring down, or else ripen the swelling kernels named the kings eul, and other biles and botches, which of their nature be long ere they gather to head. Boiled in vinegar, they reduce places cicatrized, to their naturall colour, and make them look faire & white again. But if they be thoroughly foddren in rain water, of the collature that passeth from them, there is made an absteriue and scouring lie in manner of sope, most excellent for to foment gangrenes, small pocks, & running vlcers. A drink made thereof, is singular for the spleene: and if hony be put thereto, it prouokes womens fleurs, which make no halt downward. Take raw Lupines, stamp them with drie figges and vinegar into a cataplasme, and apply them to the spleen, it is an excellent remedy. The root also foddren in water, prouoketh vrine forcibly. Lupines boiled in water with the herb Chamæleon, do cure the diseases incident to sheep and other such final cattell, if they do but thinke of this decoction. Let them be foddren in the mother or lees of wine, or mingle both their decoctions therewith: they do heale the farfins, scab, and mange of all other foure-footed beasts what soeuer. The time of them as they burne, killeth gnats.

Concerning Irio, I said before in the treatise of come and pulse, that it was like Sefama, and named by the Greeks Erysimon, whereas the Gauls do call it Velarum. This plant brancheth very much, and beareth leaves like to Rocquet, but that they be somewhat narrower, and brings forth feed resembling that of Cresses. This Irio taken with hony in form of a Iohock, is excellent good for the cough, and those who reach out filthy matter from their cheest. Given it is for the jaundise, the diseases of the loins, for the pleurisie, the torments and wrings of the collicke, and the fluxes occasioned by the debility and weakness of the stomacke. Applied in form of a liniment, it is singular good for the inflammations behind the ears, for the cancerous vlcers also, and the symptoms thereto belonging. Laid to the cods with water, and otherwhiles with hony, it altereth their distemperature of heat, and the inflammations whereto they are subiect. And soueraigne it is for infants. Likewise a cataplasme made of it, with figs and hony, is singular for the accidents and griefes of the fundament, as also for the gout and pains of the joints. Taken in drink, it is an effectuall counterpoison. It cureth those who are short winded. Applied outwardly with old hogs-grease, it helpeth fistulous sores, so there be care had that none of it go into the vlcers.

As for the graine Horminum, it hath a seed resembling Cumin, as I have said before: otherwise it is like to * Porret: and groweth to the height of a span or nine inches. Two kinds there be of it: whereof the one hath a blacker seed than the other, and somewhat long. * This hath power to prouoke lust, and is much vsed for the pin and web, for the perle also in the eye: the other hath a whiter seed and rounder. Both the one and the other if they be stamped, draw forth pricks and thornes out of the body, if a liniment be made of them alone, and applied with water. But a cataplasme of the leaues with vinegar, or alone by themselves, or else with honey, discusse and resolute biles without suppuration. In like manner they dispatch fellons, if they be taken before they grow to any head, and generally all tumors proceeding from sharp and hot humors. And thus much of grain.

A strange thing that Nature hath so ordained, That the very pestilent weeds which plague come, should haue their vse in Physicke. For first and foremost there is Darnel, which albeit Virgil termeth Infelix, vnhappy, yet if it be ground and foddren in vinegar, and so applied, it cureth tetters and dry scabs joined with a great itch: and the sooner doth it the deed, the oftner it is removed and changed. Darnell floure laid too, with Oxymell, cureth the gout & other pains. And to say a truth, the manner of this cure differeth from the rest. For the preparing of which medicine, the said floure must be ordered in this manner, & after this proportion: for every sextar of vinegar, it sufficeth to dissolve therein two ounces of hony, take then three sextars of this mixtion, and put thereto two sextars of Darnell meale, foddren to a thicke consistence: which done, temper all together, and apply this cataplasme to the grieved and pained members. The same meale draweth forth spils of broken and shivered bones.

A weed there is, called Miliaria, for that it killeth the grain Miller. Bear it this to powder, and mingle it with wine, then poure this drench with an horne downe the throat of laboring jades: they say it will cure their gouts.

As

A As for Bromos[i] wild Otes, which the Greeks take for the seed of a certain spiked or eared weed, counted it is for one of the imperfections growing among come, and may be ranged with the kinds of Otes: for blade and stalk, it commeth neere to wheat; it beareth in the law or hea: certain grains hanging down, which resemble small locusts; the seed is good to be vsed in the cataplasms, into which barley and such like do enter; the iuice or liquor made of it, is singular for the cough. A weed there is which we named Orobanche, for that it choketh Erule and other pulse: some call it Cynomorion, for the resemblance that it hath to the cullions and pizle or genital member of a dog. It riseth vp in a small stem without any leaves or blade: fatty it is and red: sometimes it is eaten alone; otherwhiles it is serued vp tender foddren, between two dishes, with other viands. Moreover, there do ingender in pulse, certain little venomous vermins, who will pricke and sting their hands who are employed in the plucking, yea and put them in danger of the ir life: a kind they are of these Solingæ or Solpugæ. The remedies for all these, be the same which are set downe against Spiders, and Phalangia.

Thus much as touching all kinds of graine, as far forth as they concerne Physick. But this moreover is to be noted, that of corn there be certain drinks made, as namely, Zythus in Egypt, Cœlia and Ceria in Spaine; Ale and Beere and many more sorts, in Gaule and other prouinces. Now the froth or barme that riseth from these Ales or Beers, haue a property to keepe the skin faire and cleare in womens faces. But for the operation that Ale and Beere hath in them who drink thereof, I meant to passe them ouer here; for I thinke it better to proceed to the treatise of wine: but first I will discipher the medicinable vertues of trees, and begin with the vine



THE TWENTY THIRD BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS
SECVNDVS.

The Proeme.

Thus far forth haue we gone ouer the vpper face of the earth, and shewed what medicinable vertues there be in all kinds of graine, as well come as pulse: as also what Physicke may be found in roots and pot-herbs: yea and in those garden plants, which by reason of their faire floures and sweet odours, serue mans turne for garlands and chaplets. It remaineth now to speak of lady Pomona and her gifts, who certes commeth not behind dame Ceres with all her riches. And verily this Nymphe and goddesse Pomona, not content thus to protect, maintaine, and nourish vnder the shade of her trees, those fruits of the earth aboue named: but displeased rather and taking sorne, that such plants which grow farther from the Cope of Heauen, and beg in long after trees to come vp and shew themselves, should seeme to haue so many vertues: hath likewise furnished the fruits hanging vpon her trees, with their properties, and those of no small operation and effect in Physicke. And in truth, if we consider and weigh the cause aright, she it was that afforded to mankind the first food from those her trees: inducing vs thereby to lift vp our eyes and looke to Heauen-ward: yea and she giueth the world to vnderstand, that if Ceres and Flora both should faile, she with her goods only were able euen still to sustaine and feed vs sufficiently. And to beginne with the Vine, which ought by right to be ranged in the highest ranke of all those plants that beare the name of Trees: This bountifull Ladie not satisfied herein, that shee had done pleasure vnto man, in furnishing him with noble perfumes, odours, and delicate Ointments, by means of the grape vcr-

iure.

The Earth.

juice, the Vine-flower Oenanthe, and namely the wilde Vine Massaris in Affricke (according as I have dis-
 G
 cussed more at large heretofore) hath therefore bestowed upon Vines those medicinable vertues in
 greatest measure, and withall of these remaneth vnto men in this manner: Call to minde (quoth
 thee) how many benefits and pleasures thou receivest at his hands: Who is it but I, that haue brought forth
 Wine, that sweet juice of the Grape? Who but I, haue given thee Oyle, that daintie liquor of the Olive?
 From mee, come Dates and Apples: from mee thou hast all Fruits of such varietie, that nothing is it
 to number them. Neither doe I deale by thee as dimes * Tellus doth, who bestoweth nothing upon
 thee without labour and sweat of thy browes: nothing (I say) but before it doth thee any good, requireth
 tillage by Oxen and Ploughs, thrashing with flail upon the floor, or trampling of beastes feet upon the mow,
 and then the Mill-stones to grind in: Such adoe there is, and so long a time first, before thou canst enjoy
 the benefits thereof for thy food. But contrariwise, what fewer cometh from mee, is ready at hand: there
 H
 needs no intreating of the Plough, nor any great labour and industrie to haue and enjoy my fruits; for they
 offer themselves of their owne accord: yea, and if thou thinke much of thy paines to climbe, or to put up thy
 hand and gather them, loe they are ready to droppe downe and fall into thy mouth, or else to lie vnder thy
 feet. See how good and gracious Nature hath bene vnto vs herein, and how shee hath strewn with her
 selfe, Whether she should profit, or pleasure vs more! & yet I take it, that she affected Commoditie rather
 than Delight.

For to come vnto the vertues and properties of the vine, The very leanes and tender burses thereof,
 applied with barley groats, do mitigate the paine of the head, and reduce all inflammations of the bodie vnto
 the due temperature. The leanes alone of the vine, laid vnto the stomack with cold water, alay the vin-
 kinds heats thereof: and with barley meale, are singular for all goutes and distempers of the ioints. The ten-
 I
 drels or young branches of the vine being stamped and applied accordingly, drye up any tumors or swellings
 whatsoeuer. Their iuice iniectioned or poured into the guts by a clystire, cureth the cloudy flux. The liquor
 concreat (which is in manner of a gumme (issuing from the vine) healeth the leproie and all soyletittars,
 scabs and manges, in cast the parts affected were prepared and rubbed before with saltnier. The same liquor
 or gumme is likewise depilatorie: for if the haire be often anointed with it and oyle together, they will fall
 off: but the water especially that sweateth out of greene vine branches as they burne, hath a mightie opera-
 tion that way, in so much, as it will scatch off Warts also. The drinke wherein young vine tendrels haue lien
 infused, is good for those who reach up and spit blood, as also for women who beeing newly conceined and
 breeding childre, haue many swannes come ouer their heart, and be often times subiect with faintings. The
 vine barke or rinde, likewise the dried leanes slanch the bleeding in a wound, yea and doe consolidate and
 K
 heale up the wound it selfe. The iuice drawne out of the white Vine being stamped greene, and Frankin-
 cense together, take away stingles, ring-wormes, and such like wilde-fires, if it bee applied thereto. The
 ashes of the vine-stocks, vine-cuttings, and of the kernels and skinnies of grapes after they be pressed, appli-
 ed with vinegar vnto the seat or fundament, cure the piles, swellings, stiffness, chappes, and other infirmities
 incident to that part: but incorporate with oile. Rosat, Rue, and vinegar, they helpe dislocations, burnes, and
 swellings of the splene. The same ashes strewd with some aspersen or sprinkling of wine, upon S. Antho-
 nies fire, without any oyle, doe cure the same: as also all frets and galls betwene the legges, and besides eat
 away the haire of any place. The ashes of vine-cuttings, besprinkled with vinegar, are giuen to drinke for
 the distempers of the splene; so as the Patient take two cyatts thereof in warme water, and when hee hath
 drunk it, lie vpon the splene side. The very small tendrels of the vine whereby it climbeth, catcheth, and
 claspeth about any thing being punned and taken in water, stanch and represseth vomiting in those, whose
 L
 stomacks are disorderly to be keckish and soone to overturme. The ashes of vines tempered with ale lugges
 greasie, is singular to abate swellings, to cleanse fistulous ulcers first, and soone after to heale them up cleane:
 likewise for the paine of sinewes proceeding of cold, and for contraction and shrinken of the nerves: also for
 burses being applied with oyle. Moreover, they eat away all excessen of proud flesh about the bones be-
 coming tempered with vinegar and water: and last of all mixed with oile, they heale the wounds made by scor-
 pions or dogs. The ashes of the vine-bark alone, cause the haire to come againe in a burne place.

How grape veruice should be made, when the grapes are young and nothing ripe, haue shewed in the
 Treatise of Perfumes and Ointments. It remaineth now to discourse of the medicinal vertues thereof:
 and first to begin withall, It healeth all ulcers that happen in moist parts, and namely those of the
 mouth, Tonsils or Almond-kernels on either side of the throat, and of the priue members: the same is
 M
 souveraigne for to clarify the cie-sight: it cureth the appetite and roughnesse of the cie-lids, the fistulous
 ulcers in the corners of the cie, the cloudes or floues that shadow and cover the sight, the running fores

in

A in any part of the body whatsoeuer: the corrupt and withered cicatrices or scars, and the bones charged with
 purulent and skinnie matter. Now if this veruice bee too tart and eager, it may be delaid with honey or
 wine-cut: and so it is good for bloody fluxes, and the exclamation of the guts: for those who reject and reach
 up blood, and for the Squinane.

Next after the wine veruice Omphacium, I cannot chuse but write of Oenanthe, which is the flower that
 wild vines doe beare, whereof I haue already made mention in my discours of ointments. The best Oenan-
 the is that of Syria, especially along the coasts and mountains of Antiochia and Laodicea. That which
 groweth vpon the white vine, is refrigerative and astringent: being powdered and strewd vpon wounds,
 it doth very much good: applied as a liniment to the stomack, it is exceeding comfortable. A proper me-
 dicine it is for the suppression of urine, the infirmities and distempers of the liuer, the head-ache, the blonde
 B
 flux, the imbecility of the stomack, and the loosenesse proceeding from it: also for the violent motion of cho-
 lerick humours proceeding upward and downward. The weight of one obolus thereof taken with vinegar,
 helpeth the loathing that the stomacke hath to meat, and procureth appetite. It drieth up the running scales
 breaking out in the head: and most effectually it is to heale all ulcers in moist parts, and therefore cureth
 fores in the mouth, priue members, and the seat or fundament. Taken with hony and saffron, it knitteth the
 belly. The curse and roughnesse of the cie-lids is doth cleanse and make them smooth: it represseth rheume
 in watric cie. Giuen in wine to drinke, it comforteth and confirmeth feeble stomacks; but in cold water, it
 C
 staies the casting and reaching up of blood. The ashes thereof is much commended in collicies & cie-faltes,
 also for to mundifie filthy and ulcerous fores: to heale likewise whitflawes rising at the nail roots, and either
 the going away of the flesh from them, or the excessen thereof remaining about them. For to bring it
 into ashes, it must be torried in an Oven, and so continue vntill the bread be baked and ready for to be
 draine.

As for Massaris, or the Oenanthe in Affricke, it is imploied onely about sweet odours and pomanders:
 and both it, as also other flowers, men haue brought into so great name, by making haste to gather them be-
 fore they could knit to any fruit: so inuenient is man wit, and so ready to hunt after nouelties and strange
 deuises.

CHAP. I.

D The medicines which grapes fresh and new gathered doe yeeld. Of Vine branches and cuttings:
 of grape kernels, and the cake remaining after the presse. Of the grape Theriac. Of
 dried grapes or Raisins, Of Ailapbis of Staphis-acre, otherwise called Pitui-
 taria. Of the wild vine Labrusca: of the wild vine both white
 and blacke. Of Musks or new wines. Of sundry kinds
 of Wine, and of Vineger.



E Grapes that grow to their ripeness and maturitie, the blacke are more
 vehement in their operation than the white: and therefore the wine made
 of them is nothing so pleasant: for in very truth the white grapes be swee-
 ter far, by reason they are more transparent and cleare, and therefore re-
 ceive the aire into them more easily. Grapes new gathered doe puffe up
 the stomacke and fill it with winde; they trouble also the belly, which is
 the cause that men are forbidden to eat them in fevers, especially in great
 quantity; for they breed heauinesse in the head, and induce the Patient to
 sleepe ouermuch, vntill hee grow into a lethargie. Lesse harme doe those grapes, which after
 they be gathered hang a long time: by which means they take the impression of wind and aire,
 and so become whollome to the stomacke and to any sicke person; for they doe gently coole
 and bring the Patient to a stomacke againe. Such grapes as haue bin condite and preserved in
 some sweet wine, are offensive to the head and time up into the brains. Next in request to those
 above said, which haue hanged a long time, be such as haue bin kept in chaffe: for as many as
 F
 haue lien among wine-mare, or the refuse of kernels & skins remaining after the presse, are hurt-
 full to the head, the bladder and the stomacke: howbeit they doe stop a laske, and nothing is
 there better in the world for those that doe caite and reach up blood: and yet those grapes that
 haue bin kept in must or new wine, are much worse than such as haue lien in the mare afore said.

O 2

MORRIS.

Moreover, wine cuir, if they haue come into it, maketh them hurtfull and offensive to the stomack. But if they must needs be preferred in some liquor, the Physicians hold them most whol some which haue bin kept in rain water, although they be least toothsome: for they do the stomack a great pleasure in the hot distemperature thereof; they be comfortable when the mouth is bitter, by occasion of the regurgitation of choler from the liuer and the burse of the gale; they giue great contentment also in bitter vomits; in the violent and inordinat motion of cholericke humors raging vprward and downward; as also in case of dropsie, & to those that lie sick of burning feuers. As touching grapes preferred in earthen pots, they refresh and season the mouth which was out of tast: they open the stomack, and stir vp the appetite to meat: howbeit this in-conuenience they bring with them, That they are thought to lie more heavy in the stomack, by reason of the breath and vapor which exaleth from their kernels. If hens, capons, cocks, and such like pulle, be serued among their meat with the floures of grapes, so as they once tast and eat thereof, they wil not afterwards peck or touch any grapes hanging by clusters vpon the vine.

The naked branches and bunches wherupon there were grapes, haue an astringent vertue; and indeed more effectual that way be such as come out of the pots aboue said. The kernels or stone within the grapes, haue the same operation: and in very truth, these be they and nothing els, whereby wine causeth head-ach. Being torrifed & beaten to powder, and so taken, they be good for the stomack. Their powder is usually put into the pot in manner of barley groats for to thicken broth and supplings, which are ordained for them who haue the bloody flux, who are troubled with a continual loosenesse following them by occasion of the imbecillity of the stomack; and for such as are ready to kecke and heaue at euery little thing. Their decoction serueth very well, to foment those parts which are broken out and giuen to bleach and itch. The stones themselves are lesse hurtful to the head or bladder, than the little kernels within. The same beeing driuen into powder, and applied with salt, are good for inflammations of womens breasts: the decoction thereof, whether it be taken inwardly, or vied by way of fomentation, helpeth as well those who haue gone a long time with a dysentery, or bloody flux, as them who through imbecillity of stomack, do scoure and purge downward continually.

The grape Theriack, whereof we haue written in due place, is good to be taken as a counterpoison against the sting of serpents: & it is a common received opinion, that the burgeons and branches of that vine, should likewise be taken inwardly as meat, & applied outwardly for the same purpose: also that both wine and vinegar which is made of them, is of singular operation to the same effect.

The dried grape or raisin, which they call A staphis, would trouble the stomack, belly, and in-trails, but for the kernels that are within the stones, which serue as a remedy to preuent and cure those inconueniences; which being taken forth, raisins be thought good for the bladder: but particularly for the cough, those of the white grapes be the better. Soueraigne are they also for the wind-pile and the reins: like as the sweet cuir which is made thereof hath a speciall power and vertue against the Hamorrhoids alone, of all other serpents. A cataplasme made of them, together with the powder of Cumin or Coriander seed, applied to the couds, cureth their inflammation. Likewise, if they be stamped without their stones or kernels, together with Rue, they are singular good for carbuncles and gouts: but before this cataplasme be laid to any vicers, they ought before hand to be bathed and fomented with wine. Applied with their stones, they heale chilblanes and bloody falls, yea and ease the paines and wrings which accompany the bloody flux. Of them boiled in oile, there is a liniment made, which being applied with the outward rind of a radish root and hony, helpeth gangrenes: but if there be Panace or Loue-ach added thereto, the liniment cureth the gout, and confirmeth nails which be loose. Being chewed alone with some pepper, they purge the head and the mouth.

A staphis agria, or Staphis, which some (though vntruly) call Vva Taminia (for this is a feuer-rail kind by it selfe, growing vp with straight black stalks, and carying leaves like to the wilde vine Labrusca) beareth bladders or little couds more like than grapes, of a green color, & resembling cich-peafe, within which is to be seen a three-cornered kernel: it waxeth ripe and beginneth to change colour and looke black, at vintage time, whereas we know that the grapes of the Taminian vine be red: also we are assured, that Staphis-acre loatheth to grow in Sun-fine places, but the Taminian grape nowhere but in the shade. The said kernels I would not aduise to be used for a purgation, considering the doubtfull event and danger that may insue of choking

A and strangulation: neither for to draw downe fleame and waterish humors into the mouth, for surely they be enemies to the throat and weain pipe. The same, if they be done into powder, and lice out of the head & al parts of the body besides which they do the better & with more ease, in case there be Sadaracha or Orpiment among. In like manner, they kill the itch and the scabs. For the tooth-ache, they vse to be foddren in vinegar, for the discaise also of the ears, for rheums and eating, & makers of the mouth. The floure beaten into powder and so taken in wine, is singular for the biting in a sting of serpents: for I would not giue counsell to vse the feed, so exceeding hot it is and of so fiery a nature. Some call this herb Pituitaria, and apply it as a liniment to the fores occasioned by the biting of serpents.

As for the wilde vine Labrusca, it carrieth also a floure named in Greeke Oenanthe, whereof I haue written enough before. The wilde vine which the Greeks name Ampelos Agria, hath thick leaves, and those inclining to a white colour: the stalks or branches be diuided by joints and knots, & the bark or rind is all ouer full of chinks & creuises: it beareth certain red grapes much like vnto the berries wherewith they colour scarlet, which being stamped with the leaves of the same plant, and applied with iuice of the owne, are good to cleanse and beautifie the skin in womens faces; and besides, do help the accidents and griefs that may befall to the humer, huckle-bone, and the loins. The root boiled in water, and so taken in two cyaths of the wine of the Island Coos, doth euacuat watery humors gathered in the belly, and by consequence is thought to be an excellent drink for them who are in a dropsie. And this is the plant, which in my iudgment should be that vine which commonly is called in Latine Vva Taminia, rather than any

C other. Vied much it is for a counter-charme against all witchcrafts: and giuen it is to gargarise only with salt, thyme, and honied vinegar or oxymell, to them that spit and cast vp blood, with this caveat, To let none of it go downe the throat: and therefore men leare to purge therewith, so dangerous it is thought to be. Another plant there is much like to this, called in Latine Salicifolium, for that it groweth in willow rews: and albeit these two carry diuers and distinct names, yet they be of the same nature and property, and be vied to the like purposes. Howbeit this Salicifolium is taken to be more effectual of the twain for to kill the scab, scurfe, and itch, as well in men as in four-footed beasts, if it be bruised and applied with honied vinegar.

There is a certain wild white vine, which the Greeks call * Ampeloleuce, some Ophiostaphylon, others Melochron or Psilothirum; some Archezotis or Cedrostis, others Madon. This plant putteth forth long and slender twigs, parted and diuided by certaine joints or knots, and these climb vp and clasp what beuer they meet withall. The leaves grow thick and full of tendrils or yong burgeons, as big as luy leaves, diuided & jagged in manner of other vine leaues: the root is white & big, like at the first to a radish, from which there spring certain flowers or fons resembling the buds of A sparagus: these yong sprouts foddren & eaten with meat, purge both by siege and vrine: the leaves and branches be exulcerating, and will raise blisters vpon the body, and therefore applied with salt as a liniment, they be good for corone vicers, gun-rens, volues, and the old morrall sores in the legs. The feed or graine ther of is contained within certaine berries hanging down thinne, and there in small clusters, which yeld a certain red iuice or liquor at the first, but afterwards it turneth to a yellow saffron colour: this know the curriers well

E who dresse skins, for they vse it much. There is an ordinary liniment made therewith, for scabs, mange, and leprosie. The feed being boiled with wheat, and so taken in drink, causeth nurses to haue good store of milk. The root of this wilde vine is very fouraigine, and serueth in right good stead for a number of purposes: first if it be powdered to the weight of two drams and giuen in drink, it is singular against the sting of serpents: it is excellent to scoure the skin of the face, to take away all spots and speckles, flecks and freckles, in any part of the body: the black and blew tokens of stripes, by reason of bruised blood lying vnder the skin, foul & vnseemly sweet scars, it reduceth to the fresh & naturall colour: these operations it hath, being boiled in oile: the decoction also is usually giuen in drink to those who should be subiect to the falling euill: likewise to such as be troubled in mind & beside themselves: so many as are giuen to dizzies & giddines of the brain, and do ween that euery thing turnes round, but they must take the poise of one dram euery day throughout the yeare. The same root if it be taken in any great quantitie, * purgeth the fencens. But the principall and most excellent vertue that it hath, is this, That if it be stamped with water, and so applied, it draweth forth spels of broken and shivered bones as well, and effectually as the verie true Bryonic, which is the cause that some doe call it White Bryonic:

for there is another which is black, and of greater efficacy to the same purpose, if it be applied with honey & Frankincense. It is very good to resolve impostumes and biles which are in growing, and yet never come to suppuration; but if they have continued and gather to an head, it bringeth them soone to maturation, and afterwards cleseth them. It bringeth downe womens monthly sicknesse, and prouoketh vrine. An electuary or lochoch made therof, to licken, and suffered gently to melt vnder the tongue and go downe leisurely, is singular good for such as bee short-winded and labour for breath: also for pleurifies or pains of the side, for conuulsions and inward ruptures. If one drink the weight of three oboli 30 daies together, it will waite and consume the swelled spleene. The same serueth in a liniment to be applied with figs to the excrescences or risings of the flesh ouer the nail, called *Pterygia*. Being laid too as a cataplasm with wine, it fetcheth away the after-birth in women: and taken to the weight of a dram, in honied water, it purgeth flegmatick humors. The iuice of the root must be drawne before the fruit or seed be ripe: this iuice either alone, or incorporat with Erule meale, if the body be annoiued therewith doth illustrat the colour, make the skin soft and tender; and in one word it is such an embellishment, that it maketh any person better for the face: [* where by the way note, that it chaseth serpents away.] Moreover, the very substance of the root, if it be stamped with fat figs, doth lay the riuels and wrinkles of the skin plain and euene, if it be rubbed or annoiued therewith: but then the party must walk immediately vpon it, a good quarter of a mile; for otherwise it will fret and burne the skin, vnlesse presently it be washed off with cold water. Howbeit the black wild vine doth this feat more gently and with greater ease, for surely the white letteth an itch vpon the skin. There is therefore a black wild vine, which properly they call *Bryonia*, some *Chironia*, others *Cynceanthos* or *Apronis*, like in all respects to the former, but only in the colour [of the root grape or berry] for it is black, as I haue before said. The tender sprouts & fions that spring from the root, *Dicles* preferred to be eaten in a salad or otherwise, before the very crops and tender shoors of the true garden *Sperage*; and indeed they prouoke vrine and diminish the spleen far better: it groweth commonly in hedges among bushes and shrubs, and most of all in reed-plots. The root without-forth is blacke, but within of a pale yellow box colour, and this is of much more efficacy to draw out broken bones than the above-named white *Bryonia*. Moreover, this peculiar property it hath besides, To cure the farcines or sores in horse necks and for this, it is thought to be the only thing in the world. Said commonly it is, that if a man do set an hedge or hay thereof round about a grange or ferm house in the country, there will no kites nor hawks, nor any such rauening birds of prey, come neere, so as the pullen and other foul kept about the said ferme, shall be secure from their claws or tallons. If it be tied about the ankles of a man, or the patterns of laboring horses, vnto which there is a fall either of Phlegmatick humors, or of a bloud, causing the gout in the one and the pains in the other, it cureth the same. Thus much concerning the fundrie sorts of Vines, and their properties respectiue to Physicke.

As touching Muls or new wines, the first and principall difference of them lieth in this, that some by nature are white, others blacke, and others again of a mixt colour between them both. Secondly, some Muls there be, whereof wine is made, and others, which serue only for cuit; but if we regard the artificiall deuises and the careful industry of man about them, there be an infinit number of muls all distinct and different one from the other. Thus much may suffice to deliuer fully in generall terms concerning muls or new wines. As for their properties, There is no must or new wine, but it is hurtfull to the stomack, though otherwise pleasant to the veines and passages. Certes, if a man poure downe new wine hastily, without breathing or taking the wind between, presently as he cometh out of the bain or hot-house, hee doth enough to kill himselfe. Howbeit, of a contrary nature it is to the *Cantharides*, & saueh those that are in danger by drinking them. A singular counterpoison is new wine in the lees, against all serpents, but principally the *Hamorrhoids* and the *Salamanders*. It causeth head-ache, and is an enemy to the throat and windpipes: whosome it is for the kidnies, the liuer, and the inward parts of the bladder, for it easeth them all of pain. But a singular vertue it hath against the venomous worm or the *Buprestis*, about the rest: if one drink it with oile, and cast it vp againe by vomit, it is an excellent remedy for those who haue taken too much *Opium*: it helpeth those who are in danger of erused milk within the body: such also as are poisoned with hemlock, envenomed with the poison *Toxica* & *Dorycnium*. In sum, white new wine is not so powerful in operation as others.

Athers. Likewise, the Muls, whereof cuit is made, is pleasanter than the rest, & causes lesse headach.

As touching the fundrie kinds of wine, which are exceeding many as also the vertues, and properties of euery feuerall sort in manner by it selfe, I haue sufficiently discouered in a former Treatise. Neither is there any point more difficult to be handled, or that affordeth greater variety of matter. And a man cannot readily say, Whether wine be more hurtfull or wholesome for our bodies? considering the doubtfult euent and issue presently on the drinking thereof, for that sometime it is a remedy and a helpe, otherwhiles it proueth to be a mischief and a very poison. For mine owne part, according to my first design and purpose, I am to treat only of such things as Nature hath brought forth for the health and preperation of man. Wel I wote, that *Alepiadas* hath made one entire volume expressly, of the manner how to giue wine in drinke. Vpon this treatise or book of his, an infinit number there were who haue written their Commentaries. As for me, according to that grauity which becometh Romanes, and to their affection and loue to all liberrall Sciences, I will not discouife thereof as a Physician, but with great care and diligence write so distinctly, as a deputed iudge or arbiter delegat to determine of mans health, and the preperation thereof. To dispute and reason of euery feuerall kind, were a endless peece of work, and so intricate, as I wot not how a man should rid himselfe out of it, if he were once entered; so repugnant and contrarie are the Physicians one to another in that argument.

To begin first with the wine of *Surrentum*, our ancients haue held it simply for the best of all others. But our later and more moderne writers, haue made greater account of the *Albane* and *Falerne* wines. In summe, euery one hath iudged of the goodnesse of wine, according to his owne conceit and fantasie: a most vnequall course of proceeding, without all reason and congruities, to pronounce definitively vnto all others that for best, that pleased and contented his owne tast most. And yet let the case and say, they were all agreed and of one opinion as touching the most excellent wines; How is it possible, that the whole world should enioy the benefit thereof, since that great lords and princes themselves haue much adoe to meet with pure and perfect wines, without one sophistication or other? In good faith, the world is grown to this abuse, that wines be bought and sold now at an higher or lower price, according to the name and bruit that goeth onely of the cellars from whence they comewheras in truth, the wines were marred and corrupted at the first in the very presse or vatt, presently after the vintage and grape-gathering. And therefore it is, that now adaies (a wonderfull thing to be spoken) the smallest and basest wines are of all others least sophisticated and most harmelesse. Well, how fower it be, and admit the noblest kinds of wine are most subiect to those brungs and sophistication, which make indeed the ods that is, yet those wines becomenamed, to wit, the *Falerne*, *Albane*, and *Surrentine*, do still import and carrie away the victory and prize from all the rest, by the generall voice & constant sentence of all writers. As touching the *Falerne* wine, it is not wholesome for the body, either very new, or ouer old; a middle age is best, and that begins when it is fifteen yeeres old, and not before. This wine is not hurtfull to a cold stomacke; but I cannot say of a hot stomack. If it be taken alone and pure of it selfe in a morning, and drunke fasting, it doth much good to them who haue bin troubled with a long cough, or vexed with a quartan ague. And verily, there is not a wine that stirreth the bloud and filleth the veines so much as this. It steareth the laskes, & nourisheth the body. Howbeit generally receiued and beleued it is, That this wine dimmeth the eyesight, and doth no good to the bladder and neruous parts. And indeed, the *Albane* wines agree better with the sinews. And yet the sweet wines that come from the vineyards of the same tract are not so wholesome to the stomack: but the harsh and hard austere wines of this kind, be in that regard better than the *Falerne* wines above said. And in one word, these *Albane* wines help digestion but little, and in some fort stiffe and fill the stomacke. But the *Surrentine* wines charge not the stomacke any jot, nor yet fume vp in the head; nay, they restrain and repress the rheumaticke fluxions both of stomacke and guts. As for the wines of *Cæcubum*, they be now past date, and none of them are made any more. But those of *Setinum*, that remaine still and be in some request, doe mightily aid concoction, and cause the meat for to digest. In a word, *Surrentine* wines haue most strength, the *Albane* drink harder, and the *Falerne* be more mild and nothing so piercing as the rest.

The *Statane* wines come not far behinde these abouenamed. As for the *Signine* wine, out of all question it is simply the best to bind the body, & stop a vehement flux: thus much for wines and their properties in particular. It remaineth now to speake of their vertues in generall.

First and foremost, wine maintaineth and fortifieth the strength of man, engendreth good bloud, and causeth a fresh and lively colour. And herein verily consisteth the principall difference betweene our temperat climat within the heart (as it were) and middle part of the world, from those intemperat Zones on either hand. And looke how much the diftemperature of the two Poles, worketh in the inhabitants of those parts, and hardeneth them to endure and support all kind of travell: so much doth this sweet and pleasant liquor of the grape enable vs to abide and suffer the like labour. And because we are entred into this theame, note thus much moreover, That the drinking of milke nourisheth the bones of beere and ale, and such like, made with come; feedeth the sinewes and nervous parts: but of water, maintaineth the flesh and brainie muscles onely. Which is the cause, that such nations as drinke either milke, ale, beere, &c. or shere water, are nothing so ruddie of colour, nor so strong and firme to vndergoe painefull travail, as those, whose ordinarie & familiar drink is wine. And in truth, as the moderat vse of wine comforteth the sinews & helpeth the eyelight; so the over-liberal taking thereof offendeth the one, and enfebleth the other. Wine recreateth & refresheth the stomack; wine firreth vp the appetite to meat; wine allaieth sorrow, care, and heavinesse; wine provoketh vrin, and chaldr away all chilling cold out of the body. Finally, wine induceth sleep and quiet repose. Moreover, this good property hath wine, To stay the stomack & repress vomits, taken into the body: and without forth applied with wooll embred and bathed therein, to dissipat and resolute all swelling apofumescences. *Asclepiades* was so addicted to the praise of wine, that he bathed not to make comparisons & pronounceth, that the power and puissance of the gods was hardly able to match and counteruaile the might and force of wine. Moreover, this is to be noted, that old wine will beare a greater proportion of water than new, and provoketh vrin more although it withstand and allay thirst lesse. Sweet wines do not so much inebriate and ouerturne the brain, as others; but they floare aloft in the stomack; whereas austere and hard wines be lighter of digestion and sooner concocted. The lightest and smallest wine is that which soonest cometh to his age, and sheweth it most quickly. The wines which by age and long keeping, lay downe their verdure and become sweeter, are lesse hurtful to the sinews than others. The grosse, fattie, and blacke wines, are not so good for the stomack; howbeit, they be most nutritive for the thin and bruske harsh wine nourisheth the body lesse; but yet more agreeable and nutritive it is to the stomack. It passeth more speedily away by vrin, but sumeth vp so much the rather into the head. And take this for a generall rule once for all, not only in wines, but in any other liquors whatsoeuer, that be penetrative, subtil, and piercing, That they be alwaies offensive to the head, howsoeuer otherwise they be piercing and passe soone away. Furthermore, wines that are laid vp in snokie places, thereby sooner to seeme refined and old, are of all others most vnholefome. But this and such caits were devised by hucksters, vintners, & tauerneers, after the wines were laid vp in their cellars. And now adiaies good housekeepers also haue invented means to renew their wines, and make them seem fresh and new, after they haue by long lying gotten a fully rotten tast, and gathered a mouldy mother of themselves, which is called Carics in Latin. And verily, our ancestors by vsing this teame, in wines over stale and kept ouer their due age, haue giuen vs counsell and taught vs sufficiently, how to take away this vnplesant tast of wine, (.) by smokie for like as smoke catch away and consumeth the moisture and mouldiness in timber, which causeth rotteness, so it doth in wines. But we foolish, contrariwise are perswaded, that the bitterness of smoke, when it hath caught the wine, maketh it to appeare stale & old. Such wines as be very pale and whitish, prone the better and more wholefome by age and long lying; the more excellent that the wine is and of the kindlier grape, the thicker and grosser it waxeth by age; and in this gathering turneth to a kind of bitterness, which is hurtful to mans body. Also, as vnholefome it is to mix, season, and consect therewith some other wine, that is not so old, & so to keep or drinke them together. Each wine agreeth best with the stomack, and doth least harme, when it hath no other liquor nor tast, but the owne, and euery wine is most pleasant and delightfome when it is taken in due time, that is to say, neither old nor new, but of a middle age; which is the very floure. Such persons as would feed and desire to be corpulent, or to keep their bodies soluble, and haue the riddance of their bellie at command, shall do well to drinke often at their repast: Contrariwise, they who feed ouermuch, and desire to be gant and slender, and withall, to be costlie, ought to forbear drinking at meales, so long as they eat, but after meat they may drinke moderately. To drinke wine vpon an empty stomack fasting, is a new found deuise lately come

A vp, and it is most vnholefome for the body, and namely for those who are to goe into the field for to fight a battell: for it hindereth the forecast of the mind, and dulseth the vigor and quicknesse of the spirit; fitter indeed to bring and lull men asleep in the bed of securitie; certes, it was a practice long agoe among such as desired rest and peace, and who loued to sleepe in a whole skin, for to drinke wine fasting: for so we read in *Homer*, how *Helena* that faire ladie, presented a cup of wine before meat. And hereupon came the proverb, That wine doth ouershadow and darken the light of wisdom & vnderstanding; verily we that are men haue this property aboue all other liuing creatures, and we may thanke wine for it, That we drinke many times when we be not dry nor a thirst. And therefore passing good it is to drinke fair water otherwhiles between. In like manner such as vse ordinarily to be drunk, & are lightly neuer sober, shall not do amiss

B To take a good draught of cold water presently vpon their liberal pousing in of wine, for it will forthwith dispatch and disperse those fumes which cause drunkenness. *Hesiodus* giueth counsell to drinke wine somewhat delaied with water, for 20 daies before the rising of the Dog star, and as many after. True it is indeed, that Mere* wine not delaied, is a remedy against hemlock; *Coriander*, the poyson *Aconite* or *Libard* baine, the venomous gum of the plant *Chamaleon*, called *Ixia*, *Opium*, or the Juice of *Poppie*, and *Quickefilicula* also, for such as haue been stung with Bees, Wasps, and Hornets, the venomous spiders *Phalangia*, Serpents, and Scorpions, and generally, against all those poysons, which by reason of a cold quality mortifie naturall heat. But particularly it is a special counterpoison against the venomous worms called Hemorrhoids & Presters, as also the deadly Mushrooms.ouer and besides, singular good is wine against ventosities, gripings, and gnawings about the midriff and precordial parts about the heart: also for those, whose stomacks are ready euery while to ouerturne & cast; and where the belly or entrails be troubled with rheumatick fluxes. Semblably, wine a little delaied, is singular for the bloody flux; for such as be giuen to faint sweates, old coughs, and any violent fluxes either into the eyes or other inferior parts. But a fomentation of mere wine may be applied with a sponge to the left pap in the case of the Cardiacke passion, which is a feebleness and trembling of the heart. And in these cases white wine is better than any other, so it be of some reasonable age. Also it is found by experience, That horses and such beasts, either for the saddle and pack or draught, become very lusty, if their stoncs or genitors be bathed with wine hot: & when they be tired out, there is nothing (by report) better to refresh their courage, than to poure wine into them with an horne. Apes and Marmosets, and other four-footed beasts, whose feet are diuided into claws or toes, will not grow (men say) if they be vsed to drinke pure wine. But it is my purpose now to treat of the properties of wine, touching Physick and the cure of maladies. For gentlemen, well born and bred, who haue wherewith, and may haue what they will, the wines of Campania I count wholfomest, so they make choise of the smallest and the thinnest. But the common sort may be Physicians to themselves, and drinke euery man what wine he liketh most, and findeth best to agree with him. Howbeit to speake generally, the wholfomest wines both of the one sort and the other, and for all persons, be such as haue run through a strainer or *Ipcoras* bagard thereby lost some part of their strength. But this we must remember euery one of vs, That the liquor of wine gets all the force and strength that it hath by working, spurning, and seething (as it were) in the lees while it is Must. To mingle sundry kinds of wine together, can be good for none, either rich nor poore. Contrariwise, that wine is held most healthfull, that is of it selfe, and had nothing put thereto in the first vatt or vessel when it was new and meere Must of the grape, and the better will it bee, if there come no pitch into the barrells or vessels wherein it is tunned or filled. For as touching those wines, that are medicined with marble, plastre, and quicklime, what a man is he (were he neuer so healthy & strong) but he may be afraid well enough to drinke thereof? wel then, wines either tunned vp or delaied with fit a water, be hurtfull to the stomack, sinewes, and bladder, as much as any other. As for the wines dressed and consected with Parrotz, they are thought to be wholfoni for cold stomacks: but contrariwise, good they are not for such as are prone to vomit, no more than Must it selfe, for euit, whether it be sapo or passum wine, wherein rosin hath bin newly put, is not for any man to drinke; for it causeth headach, swimings and dizziness in the brain; and no maruel if this mixture be called *Crapula*, for it intoxicateth the braine. Howbeit, these wines thus brued and dressed with rosin, are good for the cough and all rheumes; likewise, for feeble stomacks and the flux thereof ensuing, as also in dysenteries or exulcerations of the guts, and their bloody flux, and last of all, for womens termes. In these kind

* Merum

of wines thus mixed and sophisticated, the claret or deep red are more astringent and hot than all others. Lesse harme yet commeth of those wines which bee prepared with pitch alone, and nothing elsse. Neuerthelesse, we must not forget, that pitch is nothing elsse but the liquor that runneth from burnt Parrozin. And in truth, these wines that stand vpon pitch, doe heat the stomacke, helpe concoction, and purge offensive humours: they be good for breast and belly: also, comfortable to the matrice, for they doe allay the paines thereof, if the women haue no leucoroe disposition; and doe cure Rheumes and Catarhes, which haue continued their course a long time: they heale inward v'cers, ruptures, spasms, and convulsions; impostumes bred within the interior parts, feebleness of the sinewes, ventosities, coughs, pursuencesse, wheezing, and shortnesse of breath; and finally, helpe dislocations, being applied with vnswathed and greafe wool, as it grew in the fleecce. But note, that for all these infirmities abouenamed, the wine is more effectual, which naturally hath the taft of pitch, and therupon is called Picatum, than any other, that by artificiall meanes is dressed and prepared with pitch. And yet the wines made of the Heluenake grapes, if a man drink ouer-liberally of them, are wel known to trouble the head, notwithstanding their taft of pitch naturally. To come now vnto the disease, which we call the feuer or ague, this is certaine, That wine ought not to be giuen in that sicknesse, vnlesse the patient be well slept in yerres and aged, the disease chronicke and of long continuance, or that the sicknesse begin to decline and weare away: for in hot, quick and sharpe feaues, which commonly be very dangerous, the sicke persons, be they young or old, ought to be refrained altogether from wine; except a man may evidently perceiue some remission or alleviation of the disease: and the same rather in the night, than by day time: for certainly the danger is lesse by the one halfe, if they drinke wine toward night, and in hope to procure sleepe. Moreover, women newly deliuered & brought to bed (whether they went the full time, or slipt an abortiue fruit vntime-ly) are not allowed in any case to drinke wine: neither those persons who haue weakened their bodies with the immoderat vse of women, and therupon fallen sicke: ne yet such as be subiect to the headach: no more than those, who during the fits of agues, feeble their legges and other extreame parts to be cold: or haue a cough ioined with their feauer. Moreover, wine is an enemy to all those who haue a shaking and trembling of their joints, or be pained either in their sinewes or thraor. Furthermore, in case the force of the disease be knowne to lie much about the

* Circa Jula.

* small guts and hypocondriall parts, the patient must altogether forbear to drinke wine. They are to abstaine likewise when there is any hardnesse felt in the midriffe and precordiall parts: and when the pulses beat mightily, and goe faster than ordinarie. Semblably, in case the cramp doe draw the necke farre backe with a cricke, so as the head cannot stirre forward: or take the whole bodie so, as it is not able for to turne any way, but seeme as stiffe as if it were all of one peece; no wine must be giuen vnto such a patient. In like sort, those are forbidden to drinke wine, who are giuen to * vexing; and much more they, who in an ague labor for breath, and draw their wind hardly. But most of all must the sicke be kept from wine when their eyes be set in their head, and their eye-lids stand stiffe and starke, with their eyes broad open: or be shut, by reason that they are weake and heauie. Also, they must auoid wine (if they bee wife) who in their sicknesse, as they winke or twinkle with their eyes, doe imagine that they sparkle & glitter againe: like as those who cannot lay their eyes together and close their lids, but sleepe open eyed. And euen so they ought to flie from drinking of wine whose eyes be red and bloud-shoten, or otherwise giuen to be full of viscous and gumme matter. Neither are they permitted to drinke any wine, who estfoones stut and cannot pronounce their words perfectly, whether it bee, that their tongue bee ouer-light and spongerous, or otherwise dull and heauie: no more than those, who hardly and with much difficultie, make water: who are affright sodainly at euery little thing that they heare or see: who are giuen to crampes and crickes: (such also as otherwise lie benumbed, as if they were dead asleepe. And last of all, as many as shed their sperme involuntarily in their sleepe. True it is, and no man maketh any doubt, That the one hope and right way to cure them, who in the Cardiacke disease, for very faintnesse are troubled with the trembling and shaking of the heart and giuen vnto diaphoreticall sweats, consisteth in the drinking of wine. And yet in the manner thereof, Physicians are not agreed: For some are of aduise, not to giue it but in the very fit and extremitie of the disease: others againe prescribe it at no time elsse, but when the violence of the fit is past, and the patient at some ease. They who are of the former opinion, haue a regard to their sweat, for to repress it: but these

* Especially if it proceede fro some hot or sharpe humor.

A haue an eye to the danger of the patient, being of this mind, that it is a more safer course to giue wine when the violence of the sicknesse abateth. And indeed of this judgement I see that most Physicians are. As touching the time to drinke wine, this is certaine, that good it is not but at meane: neither presently after sleepe, nor immediately vpon any other drinke, which is as much to say, as neuer but when a man is drie and thirsty. Neither must a sicke man be allowed it, but in case of necessity or desperat extremitie. In summe, we graunt it to men rather than to women: aged persons sooner than to young folke: and yet to a lustie young man, before a child: in Winter sooner than in Summer, and to conclude, to such as bee accustomed thereto more than to those who haue not drunke thereof beforetime. A measure also and mean would be kept, in the allowance of wine, according to the strength thereof, and the proportion of water mixed therewith: and the common opinion importeth thus much, That to one cyath of wine it is sufficient to put two cyaths of water ordinarily. But in case the stomack be weak & feeble, so as the meat digest not nor passeth away downward, meer wine is to be giuen to the patient, or at leastwise in greater proportion to the water.

But to retun again to those artificiall and made wines, I haue heretofore shewed many sorts therof: the making of them is at this day giuen ouer, as I suppose, and their vse needlesse and superfluous, considering that now we giue counsel & prescribe, to vie the very simples themselves in their owne nature, which go to their composition. Certes, beforetime the Physicians vpon a vain ostentation, because they would seem to haue their apothecary shops furnished with such variety, exceeded all measure in this behalfe: in so much, as they were provided of a wine, made forsooth of Nauewes, bearing the world in hand, that it was singular good for militarie men, if they found themselves ouerwearied either with the practise or the bearing of arms, or in riding their horses: yea, and to say nothing of all the rest, they had the wine also of Iuniper: but is there any man so foolish, as to think and maintain, That Wormwood wine should be more profitable to our bodies, than Wormwood the hearb it selfe? What should I stand vpon the wine of dates among others of this range, considering that it causeth head-ach, and is good for nothing els but * to ease the costiuencesse of the body, & for such as reach vp bloud? As for that which we called * Bion, I cannot see or say, that it is an artificiall wine: for surely, al the art and cunning that goeth to the making of it, lieth in this only, That it is made and huddled vp in haste: & yet profitable it is for a weake stomack readie to ouerturn, or that is not able to concoct and digest the meat within it, whole some for * women with child: comfortable to those who be feeble and faint: good for the pallie, the shaking of the lims, the swimming and giddines of the head, the wrings and torments of the belly, and the gout Sciatica: moreover it hath the name for to haue a singular vertue to helpe in time of plague, and to stand them in great stead who are pilgrims and travellers into far and strange countries. Thus much may suffice for Wines.

Moreover, say that wine be turned, corrupted, and charged from the owne nature, yet it leaueh not to retain certaine vertues and properties requisite in Physicke: for vinegre also is medicinal. Exceeding refrigeratiue it is, & cleeth mightily: howbeit, no lesse vertue and force it hath to discusse and resolue: an euident proofe whereof we may see in this, That if it be poured on the ground, it will some and cast a froth. Concerning the manifold operations that it hath in composition with other things, I haue written oftentimes already, & will write still as occasion shall serue. But vinegre, euen taken alone by it selfe, fetcheth the stomack & appetite again to meat, and slaketh the yex or hoecquet: and if it be smelled vnto, it stineth immoderat sweating. Being held in the mouth, it preserues folk from fainting with extreme heat, while they are in the bath or hot house. Of it and water together there is made Oxycrat, which is a drinke more mild than vinegre alone. And the same with water is comfortable to those who vpon the Suns heat haue gotten the headach or a day-feuer and be newly recovered: being vsed also in the same sort with water, it is counted most wholesome for the inflammation or rheum of the eyes. A fomentation with oxycrat or water and vinegre, is singular good vpon * burns, scald idgs, or rising of the pimples. In like manner it cureth the leprosie, scurfe, and dandriffe, running vcers and scabs, bitings of dogs, stinging with scorpions, scelopendres, and hardi shrews; and generally, it is good against all prickes of venomous beasts, or pointed darts, and any itch whatsoever. Likewise against the biting or prick of the * Cheeslip or Many-foot worrne. Applied hot with a sponge to the feat, it is singular for the infirmities of the fundament. But for this purpose there must be a decoction or fomentation made, with three sextars of vinegre, whereunto there should be put of Sulphur

* Contrarie to Disorders, who giue hic Celsus & dysuria, or bion. * Troubled with water, and persons, a corrupt and depraue appetite, longing after this and that, and not allowing the best things.

* Post ordinem. Some read bion, ruderis, after the sucking of Horse leeches.

* Malignitas, c. d. other will say.

or Brimstone two ounces, or a bunch of Hyssop, and then set ouer the fire for to boile together. In case of much effusion and losse of blood, which enfeeth and followeth those who are cut for the stone, or any thing els taken out of the body; ther is nothing better than to foment the place without forth, with the strongest vinegre that may be had, in a sponge, and then to take inwardly in drinke 2 cyaths of the same: for surely it cutteth and dissolueth the clutered blood lying within forth. Vinegre taken inwardly & applied outwardly, cureth the filthy tetter called Lichenies. Being ministred by way of clyster, it knitteth the belly, and staeteth all rheumatick fluxes that haue taken a course by the guts and entrails. And the same helpeth as well the fall and slipping downe of the Longeon or fundament, as the laxitie and hanging forth of the Matrice. An * old cough it retraineth: the rheumes also and catarrhes it representh, which light on the throat and windpipe: it openeth the passages in them who labor for breath, & canot take their wind but sitting vpright: it confirmeth also the teeth loote in the head: many it hurtheth the bladder, and doth harme in all infirmities of the sinewes. The Physicians were ignorant heretofore of the foueraign vertue that vinegre had against the sting of the serpent called Aspis, vntil by a meere chance they came to the knowledge hereof. And thus stood the case: It fortuned that a certaine fellow carying about him a bottle of vinegre, trode vpon the said adder or serpent, that turned vpon him againe and stung him: howbeit he felt no harme at all so long as he carried the vinegre: but so often as he fet the bottle downe out of his hands, the sting put him to sensible paine. By which experiment it was found and knowen, that vinegre was the only remedy, and so with a draught therof he had help out of hand, and was cured. But behold another prooffe and trial thereof. They that vse to suck out the poyson of venomd wounds giuen by serpents and such like, vse no other collution to wash their mouths withall, but only vinegre: certes, the force of vinegre is such, that it conquereth not only the strength of our viands & meats, but also many other things: for the very hard rocks, which otherwise it was vnpossible to cleaue beforewith the violence of fire, soone breake and giue way, when vinegre is poured aloft. This singular gift moreover it hath, that no liquor in the world giueth a better tast to our meats and fauces, or quickneth them more than vinegre doth: for which purpose, if it be ouerharp and strong, there is a means to mitigat and dull the force thereof, either with a toft of bread, or some wine againe, if it be too weake and apalled, the way to reuiue it againe, is with Pepper or the spice Lase: but nothing moderateth it better than salt. And to knit vp and close this discourse of vinegre, I cannot forget nor ouerpasse one rare and singular accident that befell of late: *M. Agrippa* in his later days was much troubled and afflicted with a grievous gout of his feet, and being not able to endure the intollerable paines therof, took counsell of a certaine leaud leech, some bold and venterous Emperick, who made great boast of his deep skill and admirable knowledge (for the Emperour *Augustus Caesar*, whose daughter he had espoused, he made not acquainted with the matter), who gaue him counsell to bath his legs with hot vinegre, and to sit therein about his knees, at what time as his disease tormented him most: true it is indeed, that he was eased of this paine by this means, for he lost the very feeling of his feet. Howbeit, *Agrippa* chose rather to be paralyticke in some sort, and to want both vse and fence of his legges, than to abide the extremite of his gout.

CHAP. II.

¶ Of vinegre Seytticke. Of Oxymel. Of the double cuit wine Sapa. The lees of wine: dregs of vinegre: and of the foresaid cuit.

The vinegre of Squilla or sea-Onions, called Scillinum, the elder it is and longer kept, the more is it esteemed. This vinegre, ouer and aboue the other vertues of common vinegre before rehearsed, hath this property. To helpe the stomacke, in case the meats list flourishing and corrupting therein: for no sooner doth a man tast thereof, but it dispatcheth and riddeth away the foresaid inconueniencence: moreover, it is good for them that are giuen to vomit, fasting, in a morning: for it hardeneth the throat & the mouth of the stomacke which is ouersensible, & knitteth the same. It causeth a sweet breath, confirmeth the flesh about the gums, fasteneth the teeth which are loose, and maketh a bodie look with a fresh and liuely color. Being gargized, it draweth away and doth euacuat those grosse humors which caused hardnesse of hearing, and openeth

A openeth the auditory passages of the ears, and so by consequence clarifies the sight of the eyes. Some raigie it is besides for those who haue the falling sicknesse, and who are troubled in mind by occasion of melancholy. It cureth the turning and dizziness of the braine, the suffocation or rising of the mother. It helpeth such as be fore and bruised with dry blowes, such as are false headlong from high places, and thereby haue clittered blood gathered within their bodies: as many also haue the infirmity or weaknesse of sinews, or otherwise be diseased in the kidnies: howbeit offendeth it is to those that haue any vicer either within or without.

Touching the syrup Oxymel, *Diocles* saith, That the ancients in old time prepared and tempered it in this manner. They tooke of honey ten pounds, of old vinegre five hemines, of bay salt one pound, of Sauerie three ounces, of sea water five sextars: These together in a kettie they did set to boile, and let them haue rennewals ouer the fire: then they lifted the pan from the fire, poured this liquor out of one vessell into another, & so kept it for their vse: but *Alepleia* des commeth after, disproueth all the manner of this composition, and withall condemneth the vse thereof: for the physicians before histime, feared not to prescribe it to be drunk euen in feuers, and yet both he and all, do confesse and agree, that this was a good drinke against the venomous serpent called Seps: also for them who were poysoned with Opium, [i.e. the iuce of Poppey] or with the gum Ixia, which commeth from the beare Chameleon. Moreover, they all commend it to be gargled hot for the squinancy, for the paine and deafnesse of ears, for the accidents and infirmities of the mouth and throat: like as at this day we vse in all these cases, the sharpe brine, or pickle called Oxaline; which if it be made of salt and new vinegre that is fresh and quick, it is better in operation.

As for the cuit named in Latine Sapa, it commeth neere to the nature of wine, and in truth nothing els it is, but Must or new wine boiled till one third part and no more do remain: & this cuit, if it be made of white Must is counted the better. Vse there is of it against the flies Cantharides and Buprestes against the worms breeding in Pine trees, named thereupon Pityocampa, against Salamanders, and generally all those beasts whose sting or tooth is venomous. If a woman drinke thereof, together with scallions or such bulbs, it sendeth downe the after-burden, and expelleth the dead infant out of the womb. And yet *Fabianus* mine author saith, That it is no better than a very poison, if a man drinke it fasting presently after he is come out of the bain.

A consequent and appendant to these foresaid things, is the lees of wine, that is to be considered according to the wine from whence it commeth: and verily the lees of wine are so strong, that oftentimes it ouercommeth and killeth those, who go downe into the vats & vessels wherein the wine is made. But to know and prevent the danger thereof, this experiment is found; namely, to let down a candle into the said vat: for so long as it will not abide light, but goe out still, dangerous it is for a man to enter into those vessels. And yet wine lees without any waiting at all, goe into the composition of many medicines. Take wine lees a certaine quantity, and of the floure de-lis or Ireos root a like weight, incorporate them together into a liment: singular it is to annoint the small pocks and such like cutaneous eruptions. The same either drie or wet, may be applied with very good successe to the places stinged with the venomous spiders called Phalangia: to the inflammations also of the gentoirs or priuy members; to the paps, or any other part of the body whatsoeuer. Now for the better preparing thereof, it ought to be sodden in wine, together with barley meale and the powder of frankincense; which done, to be burned and so dried. And to know whether it be sufficiently sodden or no, make this triall: If you touch it neuer so little at your tongues end and so tast thereof, when it is thoroughly cold, it will seeme to bite and burne it, if it haue had sufficient boiling as it ought: but if soone leseth the heat and force, if it be not kept in a place well enclosed by the said burning, it commeth to be much more stronger in operation. Sodden with figgs, it yeldeth an excellent decoction to reueas scotters, shingles, and such like wild fires; to scoure away also scurie and dandruff: & in that sort either applied as a cataplasme or fomentation, it cureth the leproie and running skals of the head. Being taken in drinke, especially raw, it is a foueraign countrepoyson for such as haue eaten venomous mushrooms. Boiled and watshed, it is mingled with colleries which serue for the eyes. A liment therof, cureth the accidents that befall to the eods and gentoirs. Taken in wine, it helpeth the strangury, and giueth them ease who otherwise could not pisse but by drop-meale. Lees of wine, after it hath lost the custick operation and life that it had, will serue very well for a good lie or water to cleanse the skin of our bodies, and to wash or scoure clothes: and

* For it cureth the cough at the beginning. Disparides.

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then verily, it hath the astringent power of Acacia, and serueth for the same vse.

The dregs of vinegre, must of necessitye be much more sharpe, biting, and viceratiue, than wine lees, in regard of the matter wherof it cometh: it driueth backe impostumes or biles, and keepeth them from supuration. A liniment of it, helpeth the stomack, belly, and entrails: it staierh the flux of those parts, and the ouerflow of womens months: it discauseth pusses and small biles, and squinances, if they be taken betimes before they fester and impostumat: and a cerot made with it and wax together, is good against *S. Anthonies* fire. The same drieth vp the milke in womens breast, who would not be nouces, or bee troubled with ouermuch milke. It taketh away with ease the illsaoured rugged nails, and giueth room for new to come vp in their place. Applied with grosse barley meal or groats, it is singular and most effectuall against the venome of the horned serpents, called in Greeke *Cerastra*: and with Gith or *Nigella Romana*, it is vsed for the biting both of crocodile and mad dog. The burning also of these dregs, quickeneth & fortifieth the strength thereof, & being thus burnt and incorporat with the oile of *Lentisque*, * it coloureth the haire of the head in one night red, if they be anointed withall: The same lapped in a fine linnen cloth, and put vp in forme of a pessarie, cleanseeth and mundifieth the secret parts of women.

To conclude with the grounds or lees of the cuit *Sapa*: vinegre dregs are knowne to be very good for to heale burnes; and the cure proceedeth better, in case they be mixed with the furry cotton or downe of reeds: the same being foddren, and the decoction thereof taken as drinke, cureth inueterat coughs. Saft of all, they vse to seeth or stew it betweene two platters with salt and greafe, wherewith they make a liniment or ointment to take down the swelling of the chaws and the nape of the necke.

CHAP. III.

¶ Of *Olive trees*: of the leaues of *Oliues*: of their flowers and their ashes. Of the white and blacke *Olive berries*: and of the mother or lees of *Oile-olive*.

NExt after the Vine, there is not a tree bearing fruit, of so great authority and account as the *Oliue*. The *olive leaues*, are exceeding restringent, good to cleanse, good also to restrain or stop any flux: being chewed and applied to vicers, they heale them: and reduced with oile into a liniment, they assuage the pain of the head. A decoction of their leaues, together with honey, is singular to bath and foment the parts cankered by the Chirurgical, according to the direction of the learned Physician: the same vsed by way of a collution, cureth the inflammation of the gums, whitflaws, and excrecences of ranke flesh in filthy vicers: with honey also it stauncheth the flux of blood, proceeding from any neruous parts. The juice of *olive leaues* is singular for the little vicers in manner of carbuncles, with a crust or rouse vpon them, rising about the eyes; and all other small wheals or blisters: as also in case the bal or apple of the eye be ready to start forth, and therefore it is vsed in collyries or eye-salues: for it healeth weeping eyes that haue run with water a long time, and the excoriations or frettings of the eyes-lids. Now this juice is drawn out of the leaues, first stamped, and then well sprinkled and wet with wine & rain water, & so pressed forth, which being afterwards dried, is reduced into crochiskes. The same rolled in wooll or bombast to the forme of a pessarie, and so put vp into the naturall parts of women, staies the immoderat flux of their flours. Good it is also for those, who rid corrupt blood by the inferior parts. Moreover, it easeth the swelling piles or bigs sticking out in the fundament; killeth the cholericke exulcerations called *S. Anthonies* fire; healeth corrosiue and eating sores, and alleieth the paine of night-foces or child-blaines, called by the Greeks *Epinyctides*. The same effects haue their flowers. The tendrons or young twigs of *Oliues* being in floure, if they be burnt, yeld a kind of ashes that may serue as a succedan in stead of *Spodium*: but the same must be burnt a second time, after they haue bene well drenched and foked with wine. These ashes applied as a liniment, or the very leaues well stamped and tempered with honey, are good for impostumes growne to supuration, and for the pusses or biles named *Pani*: but if they be mixed with grosse barley meal or groats, they are in a liniment comfortable to the eyes. Take the green branches of an *Oliue* and burne them, there will distill and drop from the wood a certaine juice or liquor, which healeth ringwormes, tetters, and shingles, scoureth away the scales of the skin and dandriffe, and cureth the running skalls of the head.

Touching

A Touching the gum that issueth from the *olive tree* it self, and namely that wild *olive* which is called *Ethiopia*; I cannot wonder enough at some, who giue counsell therewith to annoint the teeth which ake, considering that they themselves giue out, That it is a poison, and to be found as well in wild *olives* as others. The rind or bark pared from the root of a most tender and yong *olive*, reduced into an electuary, and often licked and let downe by leasure into the throat after the manner of a lioch, cureth those who reach vp blood, and cough out filthy and rotten matter. The ashes of the very *olive* it self, mixed with swines greafe, cure all tumors, draw forth corruption of fistulous vicers; and when they are thus mundified, heale them vp cleane. White *olives* agree very well with the stomack, but they are not so good for the belly. A singular commodity they yeeld before they be put vp in their compost or pickle, for to be eaten greene by themselves as meat: for they scoure away grauel with wine; & good they are for the teeth, whether they be worne, rotten, worne eaten, or loose in the head. Contrariwise, the blacke *olive* is not so friendly to the stomack, but rather for the belly; but offensive both to the head and the eyes. Both the one and the other, as well the white as the black, being punned and applied to burned or skalded places, do cure them: but the black haue this propertie, That if they be chewed, and presently as they be taken out of the mouth, laid to the burne or scald, they will keep the place from blistering. *Oliues* in pickle are good to cleanse foule and filthy vicers, but hurtful to those, who pisse with difficultie.

As touching the mother or lees of *olive*, I might be thought to haue written sufficiently, following the steps of *Cato*, who deliuered no more in writing; but I must set down also the medicinal vertues obserued therein: First and foremost therefore, it helpeth the soreness of the gums, cureth the cankers & vicers of the mouth; and of all other medicines it is most effectual to fasten the teeth in the head. If it be dropped or poured vpon *S. Anthonies* fire, and such other corrosiue and fretting vicers, it is of singular operation to heale them: but for kibed heeles, the grounds or dregs of the black *olive* is the better, as also therewith to foment small children. As for that of the white *olives*, women vse to apply it with wooll to their secret parts, for some accidents thereto belonging. Be it the one or the other, generally it is more effectual to fadden than otherwise. Boiling it ought to be in a copper or brasse vessell, vntill it come to the consistence of honey. Vsed it is with vinegre, old wine, or with must according as the cause requireth, in curing the infirmities of the mouth, teeth, and eares; in healing running skalls; and finally, in the cure of the genetours or priuie members, & of the fissures or chaps in any part of the body. In wounds it is vsed with linnen cloth or lint; but in dislocations, it is applied with wooll. And verily in these cases and in this practise, it is much employed, especially in the medicine be old and long kept: for being such, it healeth fistulous sores. And being injected by a syring into the vicers of the fundament & genetours, or otherwise by a metrenchyte into the secret fores within the naturall parts of women, it cureth them all. Also a liniment thereof is singular for to be applied to the gout of the feet: also in the rest, whether they be in the hands, knees, hucklebone, or any other joint, for they be not ferled or inueterat, but taken at the first. But in case it be foddren againe in the oile of green *olives*, vntill it come to the consistence of honey, and so applied, it causeth those teeth to fall out of the head without paine, which a man would willingly be rid of. It is wonderfull to see how it healeth the farcines and manges of horses, being vsed with the decoction of *Lupines* and the herbe *Chamaeleon*. To conclude, there is no better thing than to foment the goat with the lees of *olive*, raw.

CHAP. IIII.

¶ Of the wild *Oliue* leaues. The oile of the flowers of the wild vine *Oenanthe*. Of the oile *Cinnamon*. of *Palme*. *Christi*. The oile of *Almonds*. of *Bayes*. of *Myrtles*. of * *Ruscus* or *Chamaemylus*. of *Cypresse*. of *Citrions*, and of *Rosus*.

THe leaues of the wild *olive* haue the same nature that the leaues of the tame. As for *Antispodium*, or the ashes made of the tender branches of the wild *olive*, it is of greater force and operation in staying and repressing of rheume, catarrhes, and fluxes, than that abouenamed in the former chapter.ouer and besides, it assuageth the inflammations of the eyes, it mundifieth vicers, it doth incarnat and fill vp the void places where the flesh is gone, it gently

P 2

cateth.

* *Severus Samonius* calleth this ointment *Vingetum Cisterii*, alleging it to be for his author.

* *Butcher's broom.*

cateth away, and without mordication, the excrecence of ranke and proud flesh, drieth the sores, health and skinneth them vp. In other cases this oliue is vsed as the other oliues : & yet one peculiar propertie hath the wild oliue, That a spoonefull of the decoction of their leaues with hony, is giuen with good successe to them that spit and reach vp bloud, Howbeit, the ole made hereof is more aigre and sharpe, yea and mightier in operation than that of the other Oliues ; and a collution thereof to wash the mouth withall fetleth the teeth that be loose. The leaues of the wild oliue reduced into a cataplasme with wine, and so applied, do cure withlles about the root of the nails, carbuncles, and generally all such apostemations with hony the said cataplasme serueth well to cleanse and mundifie where need is. The decoction of the leaues, yea and the iuice of the wild oliue is put into many compositions and medicines appropriat to the eies. To good purpose also the same is dropped into the ears with hony, yea although they ran filthily after. A liniment made with the floures of the wilde Oliue, is singular for the swelling piles and the chilblanes that be angry in the night : and the same applied with barley meale to the belly, or with oile to the head for the ache thereof, occasioned by some rheume, is knowne to do very much good. The young tendrils or springs of the wild oliue, being boiled and laid to with hony, do re-ioyn and re-vnite the skin of the head which was departed from the bones of the skull. The same tendrils pulled ripe from the wild oliue, and eaten with meate, do knit the belly, and stay laskes : but torrifed, and so beaten to powder and incorporat with honey, they do mundifie the corrosiue and eating vlcers : they breake also carbuncles.

As touching oile of oliues, the nature and manner of making it I haue already treated of at large. But forasmuch as there are many kindes thereof, I purpose to set down in this place such as serue for physick only. And first to begin with the oile made of vnripe oliues, called in Latin Omphacium, and which commeth neere to a green colour, it is thought of all others most medicinale : moreover, the same is best when it is fresh and new (vnlesse it is in some case when it were requisite to haue the oldest that may be found) thin and subtil, odoriferous, and nothing at all biting, which be qualities al of them contrarie to that oile which we vse with our meats. This Greene or vnripe oile (I say) is good for the sores of the gumbes : and if it be held in the mouth, there is no one thing preferreth the whitenesse of the teeth better : it represseth also immoderat and diaphoretical sweats.

The oile Oenanthemum, made of the floures of the wild vine Oenanthe, hath the same operations that oile rosat hath. (But note by the way, that any oile, how soeuer it doth mollifie the body, yet it bringeth vigor and addeth strength thereto.) Contrary it is to the stomacke, it encreaseth filthinesse in vlcers, doth exasperat the throat, and dul the strength of all poisons, especially of ceruse or white lead, and plaste, namely if it be drunk with honied water or the broth of dried figs : but it is taken against Meconium or Opium, with water : against the Cantharides, Buprestis, Salamanders, & the worms Ptyocampe, if it be drunk alone without any thing els : but if it be vomited and cast vp againe out of the gorge, it hath no fellow in all those cases aboue named. Moreover, in lassitudes and extreme colds, oile is a present refreshing & remedy. Taken hot to the quantity of six cyaths, it mitigateth all wrings and torments of the belly, the rather if rue be foddren with it, and in that manner it expelleth wormes out of the guts. Drink it to the measure of one hemina with wine and hot water, or els with the iuice of husked barley, it looseth the belly. It serueth in good head for vulnerarie salues and plastres : it skoureth & cleanseth the skin of the face. Conueyed vp into the head of kine and oxen, vntill they belch & deliuer it againe, it doth allay & resolueth all their ventrosities : but old oile doth heat more, and is of greater force to resolute a body into sweats than the new, as also to dissipat all hard tumors and swellings. More healthfull also it is to those who lie of the lethargie, and especially when the disease is in declining and wearing away. Somewhat it is thought to clarifie the eies, namely if it be applied with an equal quantitie of hony that neuer came neere smoke. A proper remedie it is for the head-ache : likewise in ardent fevers it is very good with water, to allay their heat ; and if there cannot any old be gotten, it ought to be well foddren, that thereby it may seeme to haue age sufficient.

The oile of Ricinus or Tickseed, called Cicinum, taken as a drink with the like quantitie of M hot water, is singular to purge & euacuat the belly : & it is said to haue a special vertue to cleanse the midriffe and those precordial parts neere the heart. Soueraigne it is for all gours, hard tumors, the infirmities of the matrice, of the ears, and for all burns or scaldings. And if it be med-

A led with the ashes of shell-fishes called Burrets, it cureth the inflammation of the fundament, and any scab or mangle whatsoeuer. It giueth a fresh color to the skin of the visage, and causes the haire to grow plentifully where it is applied. The feed whereof it is made, there is no liuing creature will touch. Of the grapes which this Palma Christi or Ricinus carieth, there be made excellent wicks or matches for lamps and candles, which will cast a most cleer light, & yet the oile that is drawne out of the seed, giueth but a dim blaze or obscure flame, by reason of the exceeding grossefne & fumes thereof. Of the leaues tempered with vinegre, there is a liniment made, which is good for S. Anthones fire and of themselves alone being fresh and Greene, they be applied with good successe to the paps, and any violent fluxion whatsoeuer : the same, boiled in wine, and laid too, with grosse barley meale or groats and saffron, are singular for inflammation : and if they be applied by themselves without any other thing, to the visage, they do embelish and polish the skin passing wel within 3 daies. Oile of Almonds is laxatiue, it serueth to soften the body and make it tender, the skin which was riuelled, it causeth to look neat, smooth, and cleare, and being applied with hony, it taketh away freckles and spots out of the face. Boiled with oile rosat, hony, the * rind of pomegranats, it is comfortable to the eares, it killeth the worms therein, resolueth those grosse humors that were the cause of hard hearing, of the thumping, tinging and other inordinat sounds within the eares, and withall, easeth the head-ache and cureth the dimmes of the eies. Reduced into a cerot with wax, it healeth felons, and cleareth the

B skin of those who be tanned and sun-burnt with the head with it and wine together, it kills the running skail, and riddeth away the dandruffe applied with Melilor, it disscueth the swelling piles and bigges in the fundament : if the head be annointed with it alone, it procureth sleepe. Oile de baies, the newer that it is and greener of colour, the better it is thought to be : hot it is of nature, and therefore good in a palfie, crampe, icaticia, and for bruised places looking blacke and blew upon stripes and being heat in the rind or coat of a pomegranat, and so applied as a cataplasme, it helpeth the head-ache, old rheumes, and infirmities of the eares. Oile of Myrtles is made after the same manner as fringent it is, and serueth to harden any part of the body : it knitteth the flaggie gumbes, helpeth the tooth ach and bloody flux ; it cures the exulceration of the matrice and bladder, healeth all old vlcers which run and yeeld filthy matter, if it be brought into a cerot with the scales of brasse and wax. Also it cureth the meazles and angry wheales, & so it doth all burns and skalds. It healeth and skinneth any gall and raw place, it skoureth dandruffe, and represseth the breeding thereof : it cureth clifts and chaps, piles and swelling bigs in the fundament, it bringeth down and resolueth, it knitteth dislocations of joints, and taketh away the strong and rank fauor of the bodie. A countrepoyson it is against the Cantharides and the Buprestis : as also against all other venom which is corrosiue and hurteth by exulceration.

C Touching the ground-Myrtle Chammyrlyne, or Oxyrmyrline, it hath the same nature that the other Myrtle hath, and the oiles be of semblable vertues. The oile of Cyprisse also & likewise of Citrons, be not vnlike to the oile of Myrtles in operation, but the oile drawne from the walnut kernels (which we called Caryinum) is singular to bring haire againe, where it is fallen away by some infirmity : and instilled into the eares, it helpeth the hardnesse of hearing : if the forehead be annointed therewith, it cureth the head-ache. Otherwise, it is but dull in operation, and yet a tinkling smell it hath with it. If but one nut kernel be corrupt and rotten, it marreth all the oile that is made of the rest, were there a pecke of them. The oile which is made of the graine or seed of the plant Thymelaea, is of the same vertue that the oile of Palma Christi, or Tickseed aboue named. The oile of the Lentiske is passing good to make an ointment of, against lassitude and wearinesse : and verily it were aequiualent euery way to oile-rosat, but that it is found to be more affringent it is vsed much in repressing of immoderat sweats, and those angry pimples which rise after much sweate. Nothing is there so effectuall to heale the farcines or skab in horses, and such like beasts. The oile of Ben, mundifeth freckles, cureth felons and biles, take away spots and moles, and healeth the apostemations in the gumbes.

E As for Cyprois, what a plant it is, and how there is an oile made thereof, I haue shewed already. By nature it is hot, and softneth sinews which be stiffe and stark. The leaues serue to make a good liniment for to annoint the pitch of the stomacke : and their iuice applied in manner of a pessaire, fetleth the mother when it roseth euery way and is out of her place. The Greene leaues chewed and applied, cure the running skalls in the head, the cankers and sores in the mouth, all risings and apostemations, and likewise the piles. A decoction of the said leaues, is singular for

burns and skals, likewise for lims out of joynt, if they be bathed therein. The very leaues in substance stamped and incorporat with the juice of a pearce-quince into an ointment, set a reddish yellow colour vpon the haire of the head. The floures brought into a liniment with vinegre assuage the paine of the head: the same calcined and burnt into ashes within a pot of vnbraked raw earth, either alone or with hony, healeth corrosiue sores and putrified vlcers. These floures haue a certaine sauour with them, which procureth sleep. The oile called * Glucinum is affringent, and yet it cooleth after the same sort that the oile Oenanthium. The Balsame oile, called Balm, is of all others most pretious (as heretofore I haue said in my treatise of odoriferous ointments) and of great efficacy against the venome of all serpents. It clarifieth the eye-sight mightily, and dispatcheth mists and clouds which dimmed the same: it easeth all those who draw their breath with difficultie: it assuageth impostumations and hard swellings: it keepeth blood from cluttring, and is excellent to mundifie foule vlcers: singular comfortable to the eares in case of paine, hardness of hearing, & ringing within to the heau also for to assuage the ach for the nerves, against shaking, trembling, and convulsions, & withall a proper remedy for ruptures. It danteth and mortifieth the poison of Aconitum, if it be taken with milk. If the patient lying sicke of an ague, be appointed all ouer therewith, it mitigateth the fits comming with shacking and shivering. Howbeit, folke must beware and vse it with moderation; for being hot in the highest degree, it is caustick, and so doth on flame and burne: and therefore if a mean be not kept it bringeth a mischiefe for a remedie, and doth more harme than good.

Concerning Malobathrum, the nature and sundrie kinds thereof, I haue discoursed heretofore. Now for the vertues which it hath in Physicke; first, it prouoketh vrine being stamped, the juice drawne out of it with wine by way of expression, is excellent to be applied vnto the eyes, for to stay their continuall watering: the same laid to the forehead as a frontall, procureth sleep to them that would gladly take their repose. And more effectually it worketh in case the nose-thrills also be annoyed therewith, or if it be drunke with water. The leafe of * Malabathrum, if it be but held vnder the tongue, causeth the mouth and the breath to smell sweet-like as, if it lie among apparell, it giueth them a pleasant sauour. The oile of Henbae is emollientiue, howbeit an enemy to the sinewes: certes, if it be taken in drinke, it troubleth the braine. The oile of Lupines, called Therminum, is likewise an emollientiue, and cometh nearest of any to the operation and effects of oile-rosa.

Touching the oile of Daffodills, I haue spoken of it in the treatise of the floures thereof. Radish oile cureth the low sicke disease, and namely, when lice are engendred vpon some long and chronick disease: it clenseth the skin of the face from all roughnesse, and maketh it slick and smooth. The oile of Sefama, cureth the paine of the eares, and healeth vlcers which eat as they spread, even such as be morimalls and check the Chirurgians hand. Oile of Lillies, which wee haue named Lirion, Phacelinum, and Sirium, is most agreeable and wholsome for the kidnies: also to procure and maintaine sweat, to mollifie the matrice and naturall parts in women, & to promote digestion inwardly. The oile or ointment Selgicium (as we haue already said) is comfortable to the sinewes: like as the * gaffe-green oile, which the Inguinians (dwelling vpon the caufy or street-way Flamminia) vse to sel. * Eleameli, an oile which (as I haue declared before) is useful from oliue trees in Syria, carrieth a certaine tast of hony: howbeit their stomachs it maketh to rise at it, who like the thereof; and it is of power to soften the belly. It purgeth choler Eleameli, if two cyaths thereof be giuen to drinke in one heme of wine: howbeit these symptoms or accidents do follow them who drinke the thereof: They lie as it were in a dead sleepe, and must eftsoones be awakened. Our lustie drunkards who make profession of carousing, vse to take one ciath thereof before they sit down to drinke one another vnder board. The oile of Pitch is vsed euery where, for to heale the skurfe, mange, and farcins in beasles.

Next to vaines and oliues, Date trees are to be raunged in the highest place, and doe carry the greatest name. Dates, if they be fresh and new, doe inebriat and ouertum the braine; and if they be not very well dried, they do cause head-ache: neither are they (so far as I can see) any way good for the stomack: againe, they do exasperat the cough and make it worse, yet they be great nourishers, and cause them to feed who eat of them. Our ancients in old time drew a certaine iuice or liquor out of them when they were boiled, which they gaue vnto sicke persons in stead of an hysonnell or honyed water to drinke; and that for to refresh them, to restore their strength, and to quench thirst: and for this purpose, they preferred the Dates of Thebais in high Egypt before

A before all others. Being eaten as meat especially at meals, they are good for them who reach vpon blood. The dates Caryota serue to make a liniment for the stomack, the bladder, belly & guts, with an addition of Quince among. Being incorporat with wax & saffron, they reduce the black and blew marks remaining after stripes in the skin, to their naturall colour. Date stones with their kernels are burnt in a new earthen vessel which was neuer occupied before, and being thus calcined, and their ashes washed, they serue in stead of Spodium, and doe enter with other ingredients into collyries or eye-salues: and with some Nard among, they make fukes to paint and embelish the eye-browes.

CHAP. V.

Of the Myrabolan Date, and the Date Elate.

The best Palm or Date tree which beareth a fruit like to Myrabolanes, is that which groweth in Egypt. These Dates haue no stones, like to others. Being taken in vrine and wine, they stop the flux of the belly, and stay the extraordinary course of womens flues, and do consolidat wounds.

As touching the Date-tree, called Elate or Spatha, it affordeth for vse in Physick, the yong buds, the leaues, and the barke. The leaues serue to be applied vnto the midriffe and precordial parts, the stomacke, liuer, and such corrosiue vlcers, as hardly will be brought to heale and skinne vp. The tender rind thereof incorporat with wax and rosin, healeth all manner of scales, within the daies. The same boiled and applied accordingly, cureth the accidents befalling to the cods and generitors. The very perfume thereof colereth the haire of the head black: and the suffumigation fetcheth downe the dead infant out of the mothers belly. It is giuen inwardly in drinke for the infirmities of the kidnies, bladder, & precordial parts: howbeit, an enemy it is vnto the head and sinewes. A decoction or bathe thereof, if a woman sit in it, stayeth the immoderat fluxe both of Matrice and belly. Likewise, the ashes taken in whitewine, are singular for the pains and torments of the collicke: as also a collution therewith, is as effectually to cure the fall of the * Vvula and other defects incident to that part.

CHAP. VI.

The medicinable vertues considered in the floures, leaues, fruit, long bes, branches, bark, wood, iuice, root, and ashes of many trees of fine rull kinds.

It remaineth now to decipher the manifold medicines which apples & such like fruits tender skinned, do afford, according to the variety of trees which bring them forth. Of which, thus much in general is to be noted, That all fruits which ripen in the Spring, while they be soure and harsh, be enemies to the stomack; they trouble the belly, disquiet the guts and bladder, and withall, be offensive to the sinewes: but if they be full ripe or foddren, they are the better. But to grow vnto particulars. Quinces if they be boiled, baked, or roasted, are sweeter and more pleasant to the tast, than raw. Yet being throughly ripe vpon the tree, although they be eaten raw, they are good for those that spit and reach blood, and are diseafed with the bloody flux: such also as vpon the violent motion of vnbridled cholerick humors vnder upward and downward as also for them who be subiect to continuall loosenesse of the belly, occasioned by the feebleness of the stomack. Being once boiled or baked, they are not of the same operation: for they lose thereby that affringent vertue which their iuice had. In hot and sharp fevers they serue for to be applied to the breast. And yet if they be foddren in rain water, they will do well in those cases aboue recited: but for the paine of the stomack, it matters not whether they be raw, foddren, or baked, so they be reduced into the form of a ceror, & laid roo. Their down or mofiness which they beare, if it be boiled in wine, and reduced into a liniment with wax, healeth carbuncles. And the same maketh the haire to grow again in bald places occasioned by some disease. Raw Quinces, condised and preferred in hony, do stir the belly, & moue to siege. They impart vnto the hony a pleasant tast, when by it is more familiar and agreeable to the stomack. But such as being parboiled before, are then kept and condised in hony, be thought good for the stomacke, in the opinion of those who ordaine and prescribe to drump them first, and then to take them in manner of a meat or confectiue. Seeing they are incorporat with Rose leaues boyled, for the infirmities of the Stomacke.

* Vvulae vi-
ty. Some read
vuluerum, i. of
the matrice &
naturall parts
of women.

* Some read
Aconitum.

* Fatium Indi-
cum.

* Eleameli.
* Called like-
wise Oltum Sy-
riacum.

M

before.

The juice of raw Quinces is a soueraigne remedy for the swollen spleen, the dropie, and difficulty of taking breath, when the patient cannot draw his wind but vpright. The same is good for the accidents of the breasts or paps, for the piles, and swelling veins. The floure or blossom of the Quince, as well green and fresh gathered, as drie, is held to be good for the inflammation of the eies, the reaching and spitting of blood, and the immoderate flux of womens monthly terms. There is a mild juice drawn also from these floures, stamped with sweet wine, which is singular for the flux proceeding from the stomack, and for the infirmities of the liuer. Moreover, the decoction of them is excellent to foment either the matrice when it beareth down out of the body, or the gut Longeon, in case it hang forth. Of Quinces also there is made a soueraigne oile, which is commonly called Melinum; but such Quinces must not grow in any moist tract, but come from a found and dry ground: which is the reason, that the best Quinces for this purpose be those that are brought out of Sicily. The smaller Pear Quinces called Struthia, are not so good, although they be of the race of Pome Quinces. The root of the Quince tree tied fast vnto the Scrophules or Kings-cuill, cureth the said disease: but this ceremony must be first obserued, That in the taking vp of the said root, there be a circle made round about it vpon the earth with the left hand, and the party who gathereth it is to say, What root he is about to gather, and to name the Patient for whom he gathereth it: and then, as I said, it doth the deed surely.

The Pome-Paradis, or honey Apples called Melimela, and other fruits of like sweetnesse, do open the stomack, and loosen the belly, they set the body in a heat, and cause thirstinesse, but offend the teeth by the finew.

The * round Apples bind the belly, stay vomits, and prouoke vrine. Wildings or Crabs are like in operation to the fruits that be eaten soure in the Spring, and they procure costinesse. And verily for this purpose serueth all fruits that be vnripe.

As touching Citrons, either their substance, or their graines and feed within, taken in wine, are a counterpoison. A collation made either with the water of their decoction, or their juice pressed from them, is singular to wash the mouth for a sweet breath. Physicians giue counsell to women with child for to eat the feed of Citrons, namely, when their stomacks stand to coles, chalk, and such like stuffe: but for the infirmity of the stomack, they prescribe to take Citrons in substance: howbeit, hardly are they to be chewed but with vinegar.

As for Pomgranats, needlesse altogether it were now to iterate and rehearse the * nine kinds thereof. Sweet Pomgranats, all the sort of them, which by another name we called Apyrena, are counted * hurtfull to the stomack: they ingender ventositie, and be offend the teeth and gums. But such as in pleasant taste are next vnto them, which we called Vinosa, hauing smal kernels within, are taken and found by experience to be somewhat more wholesome: they do stay the belly, comfort and fortifie the stomack, so they be eaten moderately, and neuer to satisfie the appetite to the full: & yet some there be who forbid sick persons once to taste of these last named: yea, and in no hand will allow any Pomgranats at all to be eaten in a fever, forasmuch as neither their juice and liquor, nor the carnosus pulp of their graines is good for the patient. In like manner they giue a charge and caveat not to vse them in vomits, nor in the rising of choler. Certes, Nature hath shewed her admirable worke in this fruit: for at the very first opening of the rind, she presently maketh shew of a perfect wine, without appearance of any grape at all, nor so much as of Must, which ordinarily is the rudiment of wine. All Pomgranats, as well sweet as tart, are clad with a very hard coat & rough rind. And verily the coat which the four kind hath, is much used in and in great request: and namely the Curriers know full well how to dresse their skins therewith: and this is the cause, that the Physicians name it in Latine * Malicorium. And they would bear vs in hand, That the same doth prouoke vrine: as also, that the decoction thereof in vinegar, with gal-nuts among, doth confirm and keep the teeth fast, which do shake and are loose in the head.

Women with child, and giuen to longing after a strange and vnreasonable manner, finde much good and contentment hereby: for no sooner taste they of it, but the childe doth stir and sprunt in their wombe. The Pomgranat diuided into quarters or parcels, and laid to steepe and infused in raine water, for three daies or thereabout, yieldeth a good and wholesome drinke for them to take a actually cold, who are troubled with loosenesse of the body, occasioned by a flux from the stomack; and with casting and reaching vp blood. Of the tart and soure Pomgranat, there is a singular composition, which the Greeks call Stomatice: for that it is a most soueraigne medicine for the infirmities incident to the mouth: and yet it is as wholesome for the accidents of the

A nostrils and ears, as also for the dimnesse of the eies, for the troublesome ouergrowing & turning vp of the skin and flesh about the roots of the nailes, for the genitoirs or priue members, for corrosiue vlcers which they call Nomæ, and for the proud flesh and all excrescences in fores. Against the poison or venom of the sea-hare, there is an excellent composition made with Pomgranats in this manner: take the grains or kernels of Pomgranats, being despoiled and turned out of their outward rind or skin, stamp them well, and presse out their iuice and liquor from them: seeth the same vntill a third part be consumed, together with Satron, Roch-allon, Myrrh, and the best Attick honey, of each halfe a pound. Others do compound and prepare a medicine after another sort in this wise: they take and pun many soure Pomgranats, and draw out of them a iuice, which they seeth in a new cauldron or pot of brasse, neuer vied before, to the thicknesse

B of honey: this they vse in all infirmities of the fundament and priuy parts; for all griefs and maladies which be cured with the medicinable juice Lycium: with this they cleanse ears that run with filthy matter; restrain all violent fluxes of humors newly begun, and especially taking a course to the eies; and rid away the red pimples and spots that arise in any part of the body. Whosoever carieth in his hand a branch of the Pomgranat tree, shall soone chase away any serpents. The pill or rind of a soure Pomgranate boiled in wine, and so applied, cureth kibes. A Pomgranat stamped and then sodden in three Hemines of wine vntill one remain, is a singular remedy for the torments of the Collick, and driueth worms out of the belly. A Pomgranate torried in an oven within a new earthen vessell neuer occupied before, well stopped and covered with a lid, and so being calcined and drunk in wine, stayeth the flux of the belly, and assuageth the wrings in the guts. The first knitting of this fruit, when the tree * begins to floure, is called by the Greeks Cyrtinus. Of which there be observed strange properties, approved by the experience of many men: for if any person, man or woman, vnbraced, vnclad, vnpointed and vnburtoned, with girdle loose, hose vnartered, & shoes vnbuttoned, and hauing not so much as a ring about any finger, come and gather one of these tender buds or knots, with a fingers only, to wit, the thumb and the fourth ring-finger of the left hand; and after this ceremony performed proceed forward to another, namely, to touch lightly with the same bud the compas of the eies round about, as if the prick should sacre or hallow them; and withal, when this is done, cough the same into the mouth, and swallow it down whole, so as a tooth touch it not: there goeth an opinion, That he or she for the certain shall feele no impediment or infirmity of the eyes that year throughout. The same knots or yong Pomgranats, if they be dried and beaten to powder, are very good to keepe downe all excrescences of ranke flesh, and be wholesome for the gummies and teeth: moreover, the very juice drawn out of them after they be sodden, do fasten the teeth in the head, although they were loose and ready to fall out before. The very * yong Pomgranats themselves alone newly knit, and making their vpon the tree, if they be stamped to the form of a liniment, are singular for any corrosiue vlcers, & such as tend to putrifaction. Likewise, they be excellent good in that sort prepared and applied, for the inflammation of the eies, & of the entrailes, and in manner for all those occasions wherein the outward rinds and pills do serue. And here before that I proceed any farther, I cannot sufficiently admire and wonder at the careful industry and diligence of our antients before time, which they employed in the consideration of

D Naturæ works, searching as they did into euery secret, and left nothing behind them vnassayed and vntried: inasmuch, as they took regard of those little pretty floures appearing vpon these knots or buds before said, such I meane as break forth and spring, before the Pomgranat it selfe is formed, and maketh any appearance, which smal blossoms, as I said before, * are called Balau- flia. For euery these, as little as they be, our ancestors haue found by their experiments to be aduerse vnto scorpions. And true it is, that being taken in drinke, they do restrain the extraordinary flux of womens flours: they heale the cankers and sores in the mouth, the diseases of the Tonils or Amygdals, and of the Vvula: they do helpe the spitting and reaching vp of blood; they cure the feeblenesse both of belly and stomack, with the fluxes thereupon ensuing: they are singular besides for the grieuances of the priuy members, and for all running vlcers spreading in any part of the body whatsoeuer. Moreover, they made proofe of the said floures dried, and this high magistery they found, That being beaten to powder, they cured those of the bloudie flux, who lay at the very point of death on that disease, as also that there was no better thing in the world to stay any lask or flux of the belly. Nay, they said not here (so inuentiue were our forefathers) nor thought much to make trial of the very kernels or stones, within their grains, to see

* Obiculata.

* Anem, and y t heretofore
see named before
tu.
* Dusioides
which the
January.* For Corium
signifies a skin
leather.* Flours incipi-
ant: rather
descentis, ac-
cording to Ge-
tius for then the
fruit is said to
knit when a
tree sheds the
blossoms.* Ipse corpuscu-
la. Some reade
Vvula, mea-
ning the ves-
sels containing
the graines.* Here is Pliny
out of the way

see if they could meet with any goodnesse therein, for to deliuer vnto posterity and the age following. And in good faith, they found, That euery those as contemptible as they seem, being tormented and so pulverized, doe help and comfort the stomacke, if either the meat be strewed or sprinkled, or the cup spiced with the said powder. And in truth, if they be drunk with rain water, they bind the body: the root of the Pomgranat tree, if it be boiled, yeldeth a liquor or iuice which being taken in drink to the weight of a Roman victorial (i. halfe a denier, or half a dram) killeth the worms in the belly. The same thoroughly sodden in water, is of the same operation that Lyeum is for any purpose that it shall be put vnto.

Finally, there is a wild Pomgranat, so called for the resemblance that it hath to the planted Pomgranat: the roots are red without forth, * which being taken to the poise of one denier or dram in wine, do procure sleepe. The graines or seeds in drink, drie vp the watery humours that be gotten between the skin and the flesh, in that dropie which is called Intercus. To conclude, a perfume made with the rind or pill of a Pomgranat, chafeth Gnats out of the place, where it burneth.

CHAP. VII.

¶ Of Peares, and the properties of forced in them. Of some Fig-trees, and their Figs, Of the wild Fig-tree, Of Eriues, and other plants, with the medicines which they afford.

ALL Peares whatsoeuer, are but a beaue meat, euen to them that are in good health. And sick folke are debarred for eating them, as well as for drinking wine. And yet if the same be well boiled or baked, they are marvellous wholesome and pleasant to the taste, especially those of Crustumum. There is no kind of Pear at all, but if it be sodden or baked with hony, agreeth with the stomack. Of Peares there be vially made certaine cataplasmes, which are singular good to discusse all pusses, risings, and pimples vpon the body: and their decoction serueth wel to resole all hard tumors. Peares in substance be a good counterpoison against venomous Taditoos and Mushtons; for either they drie them down by their very weight and ponderosity, or els chafe them out of the stomacke, through a certain secret antipathy in Nature, that their iuice hath. The wild choke Peares be very late ere they ripen. The manner is to cut them into certaine slices or ioundles, and so to hang them vp a drying, for to stay the laske and knit the belly; which their decoction also will do sufficiently, if the patient doe drinke it. The leaues likewise, together with the Peare, are vsed to be sodden for the same purposes. The ashes also of the Peare tree * wood, in case of pestilent Mushtons is of more efficacie than the Peare it selfe. Poor iades that carry Apples and Pears vpon their backs in paniers, are shewly loden: and wonderfull it is to see, how heauy they do weigh, and how a few of them will make the poore beasts to shrink vnder their burden: but what is the remedy? Let them eat some of those Peares before, or do but shew them vnto them, they will vndergoe (as tolke say) their load more willingly, and go away with it more roundly.

The milke or white iuice that the Fig-tree yeldeth, is of the same nature that vineger: and therefore it wil cruddle milk as well as rennet or rindles. The right season of gathering this milky substance, is before that the figs be ripe vpon the tree, and then it must be dried in the shadow: thus prepared, it is good to breake impostumes, and keepe vlcers open: also to bring down the monthly termes of women, either applied with the yolk of an egge, or taken in drinke with * Amyl or * Starch powder. If the same be tempered with the floure of Foenigreek seed and vineger, and so applied in manner of a liniment, it helpeth the gout. Also it is depilatory, and fetcheth off haire: it taketh away the skurfe of the eie-lids. In like manner it killeth tetters, ring-worms, & any wild feabs. It openeth the body, and makes it soluble. This fig-tree milke is naturally aduersive vnto the venomous stings of Hornets, wasps, and such like. But particularly to the prick of Scorpions. The same if it be incorporat with hogs greafe, taketh away warts. Fig tree leaues & green figs vnripe, reduced into a liniment, do discusse and resole the Scrophules, called commonly the kings euil, yea, and all such nodosities as are to be mollified. The leaues also alonewill do as much. There is another vse of them besides, namely, to rub therewith tetters and bald places, which through some infirmity haue lost haire: & generally all those parts that had need to be blistered: the tender tops & twigs of fig-tree branches are singular to cure the biting

A of mad Jogs, if they be applied to the skin where it is broken. The same brought to a liniment with honey, healeth the wens or impostumations which be called Ceria, yielding forth an humor like to hony out of the comb. And if they be tempered with the leaues of the wild Poppy, they draw forth broken spils or shauered bones. Fig-tree leaues stamped with vineger, do restrain the venom, occasioned by the biting of mad dogs: the white tendrils or sprigs of the blacke fig-tree made into a cerot with wax, and so applied, do cure felons and the biting of hardithrewes. The ashes made of black fig-tree leaues, heale gangrenes, and consume all excrescence of dead or proud flesh. Ripe figs prouoke vrine, make the belly soluble, moue sweate, and bring forth small pocks and meafels: in regard of which operation thus to open the pores, they be vnhol-some to be eaten in Autumne or at the fall of the leafe: for when by their means our bodies be fet into a sweate, they are more subiect to take a through cold. Neither be they wholesome for the stomack: but the best is, their offence continueth but a while. Mary, they are well knowne to be enemies to the voice. The figs which be of a later breed (as it were) and come last, are wholesomer than those which ripen betimes: (whereas verily, if they be brought to their maturitie by medicining, i. by capriciation, then they are neuer good;) and these figs increase the strength of young folk: preferre elder persons in better health, and make them looke more yong and with fewer wrinkles. They do quench and allay thirst, and coole vnkinde heat. And therefore such must not be denied vnto the patient, in feuers proceeding from the constriction of the pores, which agues the Greeks call Stegnas. Dry figs offend the stomack: but for the throat and wa-fant they are exceeding good. These dried figs are by nature hot in operation, and therefore in-gender thirst. They fet the belly into a loosenesse: in which regard they are not good to be eaten in any flux or Catarrhis, taking a course either to it or the stomack: wholltime they be at all times for the bladder for such also as be short winded and purtie. Semblably, they open the ob-structions of liuer, kidneys, and spleen, and cure their infirmities. Nutritiue they be, and there-fore much eating of them causeth a man to grow corpulent, and nathelesse to be strong and lu-sy withall: which is the cause, that professed wrestles and champtions were in times past fed with figs. For Pythagoras, a great master and warden of these exercises, was the first man who brought them to eat flesh meat. Moreover, figs be restorative, and the best thing that they can eat who are brought low by some long and languishing sicknesse, and now vpon the mending hand and in recouerie. In like manner they are singular for the falling euil and the dropie. Figs D applied as a cataplasme, are excellent either to discusse or els bring to maturity any impost-humes or swellings: but they doe the feat more effectually, if either quicklime or sal-nitre be mixt therewith. Boiled with Hyssop they cleanse the breast, break and dissolve the flegmatick hu-mors either fallen to the lungs, or there ingendered, & so by consequence rid away an old cough. Sodden in wine, & so applied as a liniment, they cure the infirmities incident to the seat or fun-dament, they mollifie and resole the swelling tumors of the paps, they discusse and heale fel-lons, pusses, biles, & risings behind the ears. A fomentation made with their decoction, is good for women. And the same being sodden with Feni-greek, are excellent for the pleurisie and Peripneumony, i. the inflammation of the lungs. Boiled with Rue, they assuage the ventosities or collicke in the guts. The same being incorporat with verdi-grease or the rust of brass, cureth E the morralls of the legs, and with Pomgranats they heale the rising & exulceration of the flesh and skin about the naile roots. But made into a cerot with wax, they heale burnes, scaldings, & liced heels. Seeth Figs in wine with wormwood and barley meale, and put nitre to them, they are passing wholesome for those who are in a dropie. Chew them, they * binde the belly. Make a cataplasme of Figs and salt together: the same is singular for the sting of Scorpions. Boyle them in wine, and so apply them, you haue an excellent remedy to draw forth carbuncles to the outward parts, and bring them to an head. Take the fattest & fullest Figs you can get, lay them vpon the ugly and ill-fauored tumor called Carcinoma, the Canker, so it be not yet exulcerat. I assure you it is a foueraigne remedy, and hardly can be matched againe: and so it is also for the festering and eating vicer Phagedena. There is not another tree againe growing vpon the face of the earth that yeldeth blatter or sharper ashes than the wood of the Figge-tree doth: it-her to cleanse vlcers, or to incarnat, consolidat, and restrain flux of humors. It is taken in drinke for to resole clutered blood within the body. Semblably, if it be giuen to drinke with water & E oil, of each one euery, it serues wel for those who are dry beaten & bruised, who are fallen from some high place: such also as haue spasms & inward ruptures. And thus they vse to giue it in a

cramps, sine.

* I doubt that
this mis-
take here-
is carried away
with the simi-
litude of two
Greek names
to wit, i. i.
the red wan-
ding Poppy,
and i. i. the
Pomgranat.
For surely the
properties by
him assigned
to his wild
Pomgranat, in
some few ac-
cords with
those of Pea-
res, v. i. i. i.
or Curr-Rose.

* Pyrus ligni.
Quere, if he
meane not the
stone kernels
of some Peares,
which he vses
either whiles to
call Lignum.

* Amyl, Dis-
tills Amyg-
lis i. Almonds.

* I assure you
this is the
fig-tree, or v. i.
I assure you
this is the
fig-tree.

* I assure you
this is the
fig-tree, or v. i.
I assure you
this is the
fig-tree, or v. i.
I assure you
this is the
fig-tree, or v. i.
I assure you
this is the
fig-tree, or v. i.

cramps, and namely, in that vniuersall convulsion, which holdeth the body so stiffe, that it can stir no way nor other, as if it were made of one intire piece without any joint. Likewise, both taken in drink, and also infused or injected by clystere, it helpeth the fluxe, occasioned either by a feeble and rheumatick stomacke, or els by the vicer of the guts. If a man rub the body all ouer with it and oile together, it fettereth it into an heat, were it before benumbed. A liniment made of it, and wrought with wax and oile of Rosat together, skinneth a burnt or scalded place, most finely, leauing no skar at al to be seen. Temper it with oile, and therewith annoint their eies who are pore-blind, and blind, or otherwise thort-sighted, it amends their eie-sight: & to conclude, rub the teeth often therewith, it preferueth them white, neat, and from rotting. Thus much of Fig-tree ashes.

Moreover, it is commonly said, That if one come to a Fig-tree, bend a bough or branch thereof downward to the ground, and bearing vp his head without stooping, reach and catch hold of a knot or joint with his teeth, and so bite it off, that no man see him when he is doing of it, and then slap the same within a piece of fine leather, tied fast by a thred, and hang it about his necke, it will dispatch the kings-euill and swelling kernels or inflammations behind the eares.

The bark of the Fig-tree reduced into powder, mixed with oile, and so applied, healeth the vicers of the belly. Green Figs taken raw, stamped and incorporat with niter and meale, take away all warts, whether they be smooth or rough. The ashes made of those shoots that spring from the root, is a kind of Antispodium, and may go for Spodium indeed. If the same be twice calcined and burnt, and then mixed with ceruse or white lead, and so reduced into trochiskes, they make a good collyric or eie-salue, to cure the roughnesse and exulceration of the eies.

As many vertues as the mild fig-tree hath, yet the wild is much more effectuall in operation: howeouer the yeeldeth milke or white iuice than the other doth. For a branch onely of it, is as good as rennet or rindles to make milk turn and run to a cheefe curd. Howbeit, that milky liquor which it hath, if it be gathered and kept vntill it be dry and wax hard, serueth to season our flesh meats, and giue them a good taste. For which purpose it is wont to be mixed and dissolved in vineger, & then the flesh must be well rubbed and panded therewith. The same is vually mingled with caustick and corrosiue medicines, when there is an intention to raise blisters, and make an issue. It causeth the belly to be laxatiue, and openeth the matrice, if it be vied with Amyl powder. Being taken in drink with the yolk of an egg, it prouoketh womens fleurs. Applied in a liniment with the floure of Feni-greece, it easech the pains of the gout: it clenseth the leprous, and foul wild scab: it killeth ring-worms and fell tetters: it scoureth away freckles and such flecks as disfigure the face: likewise it cureth the parts stung with venomous serpents, or bitten with mad dogs. Moreover, this iuice of the wild Fig-tree, applied vnto the teeth with a lock of wooll, allaieth their ach: so it doth also if it be put into them that be worne-eaten and hollow. The tender yong branches, together with the leaues, if they be mingled with Erulle, are good against the poison of venomous fise-fishes. But then according to some Physicians, there must be wine added to this receipt. The said tender branches being put into the pot with Beuf, and so boiled together, saue much fewell, for lesse fire by far will serue to seeth the meat. The green figs of this wild fig-tree brought into a liniment, do mollifie and disperse the kings euill, and all other tumors and apoplexies. And in some measure the leaues also haue the same operation: Chuse the softest and tenderest of them, let them be stamped and mixed with vineger, they will cure running scails and sores, ease bloody fals and chilblanes, yea, and scoure away filthy scurf or dandruff. The said green figs, together with the leaues, incorporat with honey, doe cure the wens or exulcerat bunches, which yeeld matter out of them resembling honey: likewise they heale the biting of mad dogs. The greene and fresh figs newly gathered, if they be laied roowith wine, doe heale filthy eating vicers: and mixed with Poppie leaues, they draw and fetch away broken bones out of the body. The greene Figs of the wild Fig-tree, doe scatter and disperse inflammations, onely by their perfume, if they be burnt. They are a counterpoison, in case one haue drunk Bulls blood, or cerusse: the same also put away the danger of milk crudded within the stomacke, if they be taken in drinke. Likewise, foddren in water, and reduced into a liniment, they cure the rifings & tumors behind the eares. The tender branches & the least green Figs of this wild Fig-tree, being taken in wine, are very good for the sting of Scorpions: with this charge, that the milky iuice thereof be infilled into the wound, and the leaues laied aloft. The same also serueth for the hardi shrew. The ashes of the small tendrons being burnt, duely applied,

A applied, bring the Vvula againe into the right place, and assuage the paine therof. The ashes of the very tree it selfe, being incorporat with honey, doe cure the rhagadies, fissures, and chaps in the feet, or elsewhere. The root boiled in wine, easech the tooth-ache. The winter wild fig-tree, (which beareth fruit late in the yere) if it be foddren in vineger, and so stamped and brought into a liniment, is singular to kill tetters and wild scals. But to prepare this medicine, the wood & boughs of the tree must be despoiled of the bark, and then shauen or scraped so fine as any powder or saw dust, that they may be reduced into an ointment. Yet there is one medicine more belonging to the wild fig-tree, which is admirable, and may make a man to wonder at it: if a yong boy not yet vndergrowne nor 14 yeares of age, break a branch or bough of the wild fig-tree, and with his teeth do pill the said branch, and fetch off the rind before it haue gathered any downe B or mofse about it; then the marrow or pith within the said branch, if it be taken forth and tied fast about one that hath the kings euill (so that all this be done in a morning before the Sun-rising) doth repercuss and smite back the said disease, so that it shall not arise and grow. Moreover, this wild fig-tree hath one singular property besides, That if a collar made of the branches thereof be put about a buls neck, it will make him perforce to stand still and not to stir, how fell and fierce fouer he be otherwise: such a wonderfull vertue it hath to bridle and keep vnder his courage.

Moreover, since that the Greeks do terme this wild fig-tree in their language Erineos, which putteth me in mind of a certain herb called Erinos also in their tongue, I cannot wile nor chuse but for affinity and neighborhood sake, describe the same in this place, and set downe the properties and vertues therof. An herb it is, one good handfull high, rising vp commonly with five or six little stalks or branches, much like vnto Basil, bearing a white floure, a black seed, and the same small: which seed beaten to powder and medled with the best Atticke honey, cureth the rheume which faileth into the eies and causeth them to weep and water continually: as touching the herb it selfe, if it be applied vied accordingly, with a little sal-nitre put thereto, it is a passing good remedy for the paine of the eares. The leaues are a counterpoison.

To come now to the Plum-tree: the leaues thereof boiled in wine, are good for the infirmities incident to the amigdales, the gums, and the Vvula, in case the mouth be oftentimes washed with a collation made of their decoction. Plums themselves make the body soluble, & very commodious they are to the stomack; but this benefit continueth but a small while.

D Peaches are much better than Plums; and so is their iuice, principally if it be drawn in wine or vineger: and verily for a fruit, there is not in the world any more harmlesse than it. You shall not see a fruit againe, to haue lesse smell, & more iuice within than the Peach; and yet as liquid as it is, it causeth them to be dry and thirsty whe they eat therof. The leaues of the Peach-tree pummed and applied, do stanch bleeding. The kernels of Peaches, incorporat in vineger and oile to a liniment, and laied too as a frontal, allay the head-ache.

Bulleis, Skegs, and Stone (which are the berries, as it were, or fruit of the wild Plum tree) or the very bark and rind growing to the root, boiled in one hemine or small pint of some hard and crabbed wine, vntill a third part onely remaine, do vield a decoction effectual to allay the pains of the cholicke, and to stop the flux of the belly: of this liquor, a cyath is a sufficient draught to be taken at a time. As well in this wild kind as in plumed Plum trees of the hortyard, there is to be found a certain skinny gum, in Greek called Lichen, which hath a wonderfull operation to cure the rhagadies or chaps, yea, and the swelling pils or knobs that appeare in the fundament.

In Egypt and Cypris both, there groweth the Sycomore, which is a kind by it selfe between a fig tree and a mulberry tree, as I haue before said; the fruit or berries whereof be full of liquor, which so soon as the uppermost rind or pill onely is pared away, appeareth in great abundance: cut and gash them deeper in, they seeme drie, after a wonderfull and incredible manner. This iuice issuing out of them, is a singular defensatiue against the poison of Serpents: a wholesome medicine for the bloody flux; and a notable carminatiue to disperse and resolueth pusses, biles, and all impollutions. It fondereth and healeth vpwounds, it allaieth head-ach, and assuageth the wens or pains of the eares. Such also as be spleneticke or diseased in the spleene, finde much ease and comfort by drinking therof. Moreover, a liniment made therewith, is good to chaufe and heat those, who chill and quake for extremity of cold: howbeit, last it will not, but breed worms very quickly. Certes, the iuice of our mulberries which we haue, is of no lesse operation and effect; for if it be taken in wine, it is a singular counterpoison for them who haue drunke ci-

The like is
from allium
dumosum
as mentioned
by Galien, and
it is used by
Physicians.

ther the iuice of Aconit. [Libard-banc] or swallowed a venomous spider. The same doth loo-
fen the belly, euacuat slimy and roping fleame, and expelleth the broad wormes and other such
vermin ingendred in the belly. Of the like efficacy is the bark, if it be puluerized and so taken
in drink. The leaues boiled in rain water, together with the barke of the blacke fig-tree and the
vine, do make a lauature or water to colour the haire [blacke.] The iuice of mulberries doth
work speedily, and prouoke to the siege: and the very fruit or mulberry it selfe, for the present is
comfortable to the stomacke; it cooleth for the time, but bringeth thirst with it. If a man eat
them alone, or last, and lay no other meat vpon them, they swell in the stomack and be very fla-
tuous. The iuice drawne out of vnripe mulberries, are of vertue to bind the belly. In sum, they be
strange and wonderfull properties worthy to be obserued in this tree, which seemeth to haue
some sense and vnderstanding, as if it were a liuing and sensible creature, wherof I haue already

*Tingent capi-
lum: for the
black colour
was in most
request in
those times.

* Lib. 6. c. 5. 5.
* Diamantus
the compound
syrup of mul-
berries.

* Pendo x d.
gram.

* Somewhat
under two
wine quarts
with vs.

* written more at large in the description of it, and the nature thereof. There is a notable * com-
position made of mulberries, respectiue to the mouth and throat, called thereupon Panchrestos
Stomatice, and by another name, Arteriace: the receipt and making wherof, is in this manner;
Recipe, of the iuice drawne out of Mulberries, three sextars, seeth it ouer a gentle and soft fire [or
rather let it stew in balneo Maria:] vntill it be reduced to the consistence of hony: afterwards put
thereto of veruice made of dried grapes, the weight of two * deniers or drams; of myrrhe, the
poise of one denier; of saffron likewise, one dram or denier. Let these ingredients (I say) be first
beaten to powder (such I mean as need puluerising) and so mingle them together with the fore-
said decoction, and put it vp for your vse. A better and more pleasant medicine there is not, for
the mouth, the windpipe, the vula and the stomack. There is another way of making it in this
sort, Take of the iuice aforesaid, the quantity of * two measures called sextars, of Atticke hony
one sextar, seeth them together as before. Many maners besides are reported of this tree, of
which I will giue you a little taste: Spie where the little mulberries that shall be are newly knit,
to wit, when the tree first buddeth and before the leaues be fully out; gather their young knots of
the fruit toward, which the Greeks call Ricinos, but in any case with the left hand; take heed al-
so that they touch not the ground, how fouler you do: and if when you haue obserued these cir-
cumstances, you wear them about your wriests, hang them about your necke, or otherwise tie
them about you, be sure they will flanch blood, whether it gush downe from your nostrils, flow
out of a wound, run out of the mouth, or issue by the hemorrhoid veins. And in truth, folke vse
to keepe these little buds or knots very carefully for this purpose. The same vertue and operati-
on the branches haue (as they say) but then they must be broken from the tree at the full of the
moon, when they begin to knit & giue some hope of fruit: & if the same touch not the ground,
then they haue a speciall property respectiue vnto women, for to restrain the immoderat flux of
their monthly terms, being tied or fastened to their arms. And it is thought, that they work this
effect, if the woman her selfe do gather them at any time when fouler: provided alwaies, that the
branch in any wise touch not the ground, and that shee wear it fast about her in manner afore-
said. The leaues of the mulberry tree stamped greene, or beeing dry and boiled, serue in a cata-
plasm to be applied vnto those places which are stung by serpents: the same good they do al-
so, if they be taken in drink. The iuice of the bark which grew to the root, if it be drunk either in
wine or oxeuice [vinegar and water together] is singular against the pricke of scorpions. But
here I must set downe the compositions that our antients deuised and made of mulberries: first
and foremost, they tooke a quantity of the iuice pressed out of mulberries, as well ripe as vnripe,
which they sod in a brasie pan, vnto the consistence or thicknesse of hony. Some vsed to put
therunto, myrrh and Cyresse, setting all to fire and take their fermentation in the sun, vntill it
grew to hardnesse in the foresaid vessell, stirring it thrice a day with a spatule: This was the sto-
maticall medicine of the antients, which they vsed also in healing & skinning vp wounds. And
yet there was another kind made after this sort: they pressed forth the iuice of the vnripe mul-
berries, but first they let the said fruit to be very well dried, & this serueth them in lieu of sauce,
which gaue an excellent tast to their other meats. In physick also, they imploied it much, name-
ly, about corrosiue and eating vicers, and for to euacuat tough fleame out of the breast: they vsed
it also as need required, as an astrictiue, to corroborate the noble and principall parts within the
body. It stood them also in good stead for collutions, to wash the teeth withall. Moreouer, a
third kind of iuice they had, which they drew from the leaues and roots after they were well boi-
led: and with this iuice & oile together, they were wont to annoint any burnt or scalded place

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of

A of the body: for which purpose, the leaues also they applied alone without more ado. As touch-
ing the root of the Mulberry tree, it yeeldeth in haruest time (by way of incision) an excellent
iuice for the tooth-ach, for biles, and impostumes, especially such as are growne to suppuration
and be at tooth to break: the same purgeth the belly. The leaues of the Mulberry tree infused &
soked in wine, fetch off the haire from those skins which are to be coured and dressed.

Cherries loosen the belly, and be hurtfull to the stomack, yet, if they be hanged vp and dried,
they do bind the belly, and prouoke wine. I find a notable experiment in some authors, That if
a man eat Cherry-stones and all in a morning, new gathered from the tree with the dew vpon
them, they will purge so effectually, that he shall find himselfe cleane rid from the gout of the
feet, if he were diseased that way.

B Medlars, all of them, except those great ones called Setania (which indeede are more like to
Apples) do close vp the stomack, and bind the belly. In like manner Soureifes, if they be dried;
for being fresh and new gathered, they be good to scoure and send excrements speedily out of
the stomacke and belly both.

CHAP. XVIII.

¶ Of Pine-nuts, or Pine-apples: of Almonds, Filberds, and Hazell-nuts: of Wal-nuts, Fi-
sticks, Chestnuts, Carobs, and Cornells. Of the fruit of the Arbut or Straw-
berry tree, and the Bay.

C The Pine apples or nuts, which haue rosin in them, if they be lightly bruised, and then sod-
den to the half in water, with this proportion, to wit, one sextar of water to euery such ap-
ple, do yeeld a decoction singular good for such as reach and spit vp blood; so that the pa-
tient drink two cyaths thereof at one time. The decoction likewise of the Pine-tree barke boi-
led in wine, is giuen to drink for the pains and torments in the belly. The kernels of the Pine-
nuts quench thirst; they pacifie and still the frettings and gnawings of the stomack: they redifie
the corrupt and putrified humors there ferled and bedded: they strengthen weak bodies in man-
ner of a restorative, and are right good & agreeable to the reins and bladder: howbeit they seem
to exasperate the throat, & to encrease a cough. Being taken inwardly, either in water, wine, sweet
cuit, or the decoction of * dates or tamarinds, they purge cholerick humors: when the gnawing
gripes within the stomack be exceeding violent and painfull, it is good to mix therewith Cuc-
cumber seed and the iuice of Pourcellane: likewise in case either bladder or kidnies be exulce-
rated: for diureticall they be also, and prouoke wine.

Relaxantia de-
cisa.

Touching the bitter Almond tree, the decoction of the roots thereof, doth supple the skin
and lay it euene and smooth without wrinkles: it imbelieth the visage with a fresh, luely, and
cheerfull colour. The bitter Almonds themselves bring folk to sleep, and get them appetite to
their meat: they moue wine, and stir the ordinary course of womens monthly fleurs: they serue
in a liniment for the head-ach, especially in feuers; but if the said head-ach come by occasion of
drunkenesse, or a surfeit of wine, they would be applied with vinegar, oile of rose, and a sextar of
water. They haue a property to stanch bleeding, mixed with Amylliflour and mints. They are
good in a lethargy, and the falling sicknesse, if the head be therewith annoiued all ouer. They
cure the angry night-foes, called chilblanes and bloudy-falls: applied with cold wine, they cure
vicers which grow to putrification, and with hony, the bitings of mad dogs: they take away the
scales and dandruffe about the face, if so be there haue bin vsed before, some convenient fomen-
tation to prepare the skin for this medicine. An Almond milk drawn with water, and taken as a
drinke, easeth the pains of the liuer and kidnies. Bitter Almonds reduced into a loch with Ter-
pentine, worke the same effect, so that the Patient be often licking thereof. For those who be
troubled with the stone and grauell, with difficultie also of pissing, they be very effectuall if
they be taken with sweet wine cuit: also beaten with honied water, they be singular to cleanse the
skin, and make it look neat and faire. Reduced into the form of a loch with hony, they be whol-
some for the liuer, good to ripen and dispatch a cough, & excellent for to mitigate the paines of
the cholique: and this electuarie must be taken, to the quantity of one hazell nut at a time,
with a little sauge put thereto. It is said, that our lusty toffe-pots and swil-bols, if they eat foure
or five bitter almonds before they sit them downe to drinke, shall beare their liquor well, and ne-
uer be drunke, quaffe they and poure they downe as much as they will: also, that if foxes chance

to eat of them, and cannot come by water neere at hand to lap, they wil die thereof. Sweet almonds are not so medicinable as the bitter, and yet they be purgatiue, alteratiue, and diureticall. If they be new and fresh, they charge and stuffe the stomacke.

Hazel-nuts and Filbirds, otherwife called the Greeke nuts, being taken in vineger with wormwood seed, cure the yellow jauniffe, as it is commonly said: & a liniment made with them doth help the diseases incident to the feet, and particularly the piles and swelling bigs there appearing. The same medicine is good for the cough, and such as spit and cast vp blood.

As for Walnuts, the Greeks haue giuen them a * name importing as much as the heauiness of head, and not without good cause, for the very shade of the tree and the sent of the leaues, do pierce and enter into the head: so do the kernels also in lesse while, if they be eaten: now the newer they be, the more pleasant tast they haue: the drie are more oily and vicious, hurtfull to the stomack, hard of digestion, causing head-ach, naught for them who haue a cough, and for such as would vomit in a morning fasting: good only in that troublefom running to the stoole and straining for nought, by reason of their property to euacuat steame. The same being eaten before meat, do dull the force of any poisons: they help the squinancy also, applied with Rue and oil. Aduerse & contrary they are to the nature of onions, & do keep down & repress their strong smell which riseth from them, after a man hath eaten them. Applied with a little hony, they are thought to be very good for the inflammation of the ears; & with Rue, for the breests and paps; as also for dislocations and parts out of ioint. But if they be vsed with onions, salt, and hony, they are singular for the biting both of dog & man. The shel of a wal-nut, is thought to be of a caustick quality, and good to burn or scare an hollow tooth: the same being burnt, pulverized, and incorporat with oile or wine, serueth to annoint the heads of yong babes for to make the hair grow thick: & in that manner it is vsed to bring the haire again of elder folk, when through some infirmity it is shed. The more Walnuts that one eateth, with more ease shal he driue worms out of the belly. VVal-nuts that haue bin very long kept, do cure carbuncles, gangrenes tending to mortification, and reduce the black and blew spots (remaining after stripes) to their own color. The bark of the wal-nut tree, is a foueraign remedy for the bloody flux, and the fowle tetters or ringworms. The leaues bruised & stamped with vineger, & so applied, put away the pain of the ears. After that *Mithridates* (that most mighty and puissant king) was vanquished, *Cneus Pompeius* found in his secret closet or cabinet, among other precious jewels, the receipt of a certain antidote or preseruatione against poison, set down vnder the hand of the sayd prince, in a priuat note-book of remembrances, in this manner following: Take a dry walnut kernel, as many figs, of rue, 20 leaues: stamp al these together into one masse, with a graine or corn of salt among. Vnder which receipt, was thus much subscribed, VVho soeuer vie to eat of this confection in a morning next his heart, there shall no poison hurt him that day. It is said moreover, that the kernels of walnuts chewed by a man or woman fasting, doe cure the biting of a mad dog, so that the place be annointed and dressed therewith.

But to return again to Hazle-nuts and filberds, they do cause head-ach, they breed winde in the stomack: and a man would not think nor beleue, how soon they wil make one fat, but that experience approueth it. If they be roasted or torrifed, they cure a rheume; and if they be beaten to powder, and giuen to drink in honied water, they rid away an old cough that hath stucke to one a long time: some put thereto certain pepper cornes, and others drinke them in wine cuit that is sweet. Fisticke is vsed in the same sort, and haue the same operation and effects as the Pine-nut kernels haue: ouer and aboue, they are foueraigne for the sting of serpents, whether they be eaten or taken in drinke.

Chestnuts be exceeding astringent, and mightily stay all fluxes both of the stomack and the belly: for such as scoure ouermuch and haue a great lask vpon them: also for them who reach vp blood, they be passing wholesome, and withall, nutritiue and breeding good flesh.

Carobs, which be fresh and Greene, are hurtfull to the stomacke, and doe loose the belly; yet the same, if they be drie, do bind, and are more wholesome for the stomacke: diureticall they be also, and prouoke vrie. As for those Carobs or Cods of Syria, some vie to seeth three of them in a sextar of water untill halfe be consumed, and drink that iuce or liquor thereof for the paine of the stomack. If a man take the green twigs of a Corneil tree, there wil (by the meanes of a red hot plate or slice of yron set vnto them) sweate or fry out a certain liquid humor, which must be recieued so, as no wood touch it: the rust of yron besmeared with this liquor, cureth foul tet-

* *Walnut, of which
the head
like as in La-
tin, Nux, a no-
vel nutem*

* *Alon cine, &
not alone cine*

A tars and ringwormes called Lichnes, if they be taken at the first before they haue run far. The Arbut or Strawberry tree, otherwife named Vnedo, beareth a fruit hard of digestion, and offensive to the stomack. The Lawrell, both leafe, bark, and berry, is by nature hot, and therefore it is agreed among all writers, That their decoction, especially of the leaues, is comfortable to the bladder and natural parts of women: the same being applied as a liniment, be singular good for the prick or sting of wasps, hornets, and bees, and likewise against the poisons of serpents, especially of the viper, and Sepe otherwise called Dipfas. Boiled with oile, they are good to bring down womens fleurs. The tender leaues of the Bay stamped, and mixed with grosse barley meale or groats, cure the inflammations of the eies: with Rue, they help the hot tumors and swellings of the cods: but incorporat with oile Rosat, or with oile of Ireos or floure-de-lys, they assuage the head-ach. VVho soeuer doth chew and swallow downe three bay leaues, for three daies together, shall be deliuered by that means from the cough. The same, if they be beaten to powder & reduced into an electuary or loch with hony, are good for such as be purifie and labor for wind. The bark or rind growing to the root, is dangerous for women great with child, and such must take heed how they meddle with it. The very root it selfe, breaketh or dissolueth the stone, and is wholsom for the liuer, if it be taken to the weight of three oboli in odoriferous wine. The bay leaues giuen to drink, do prouoke vomit. Bay berries bruised and so applied, or otherwife pulverized and taken in drinke, draw down the issue of womens terms. Take two Bay Berries, rid or cleanse them from their huske and drinke them in wine, it is a singular medicine for inueterate coughs, & the difficulty or straitnesse of breath, when a man is forced to sit vpright for to fetch and deliuer his wind: howbeit, if the Patient be in a feuer, it is better to take these berries in water, or els by way of a loch or electuary, after they haue bin sodden in honied water or sweet cut. And in this manner they be good in a phthisick or consumption of the lungs, & all catarrhs which fall to the pectorall parts; for they ripen steame, and send it out of the chest. Four Bay berries drunk with wine, are a good remedy for the sting of scorpions. The same being brought to powder and reduced into a liniment with oile, & so applied, do heale the bloody-falls called Epin: rid away freckles and pimples, cure running scalls and vlcers, cankers and sores in the mouth; and cleanse the body of scurfe, scalls, and dandruffe. The iuce drawn out of Bay berries, killeth an itch that fretteth the skin, & besides, the lice that crawl and swarm all ouer the body. The same, mingled with old wine and oile rosat, & so dropped into the ears, cureth their pain and deafnesse: and who soeuer be annointed all ouer therewith, need feare no venomous things, for they wil flee from them. The same iuce, especially if it be drawn from the berries of that Lawrell which hath the smaller and thinner leaues, may be taken in drinke, and so it is effectuell against all stings. The berries drunk in wine, with stand the venom of serpents, scorpions, and spiders. Brought into a liniment with oile and vineger, and so applied, they help the spleen and liuer; but with hony, they heale gangrenes. Such as be wearied with trauel, or otherwife stiffe and benumbed with cold, find much good by being annointed with the said liniment or iuce, if some fat-nitre be put thereto. Some are of opinion, That if a woman in labor drinke the quantity of one acetable of the Lawrell root in water, shee shall haue the more speedy deliuerance: and for this purpose (they say) that a fresh and green root is better than a dry. Others prescribe, E to giue in drinke ten bay berries against the prick of scorpions. Also when the Vvula is false, some giue counsell to take three ounces of the leaues and berries, and seeth them in three sextars of water to the thirds, & to gargarize with this decoction hot also for the head-ach, to take some odde number of bay berries, and stamp them with oile into a liniment, & therewith to annoint the fore-head & temples, as hot as the patient can well abide it. The leaues of the Delphick Lawrell beaten to powder, and held to the nose and smelled vnto euer and anon, serue for a good preseruatione in time of the contagious pestilence; and the rather, if they be burnt, their perfume doth rectifie the infection of the aire. The oile of the said baies of the Isle Delphos, is good for to make those cerots which put away lassitude & wearinesse, to discusse & resolu the cold humors which cause quivering and quaking, to mollifie and stretch the sinews, to allay the paine of the sides in a pleurisie, and last of all, to driue away the cold fits of agues. Semblably, if the same be warmed in the rind of a Pomgranat, & instilled into the ears, it eases their pain: the leaues boiled in water to the consumption of a third part, keepe vp the Vvula, vsed by way of a gargarisme: but the said decoction taken inwardly, allaieth the pains of belly and guts: the tenderest leaues that may be had, stamped with wine into a liniment, do repress & keep down wheals

and itching, if the body be annointed therewith euery night. Next vnto this, the other kinds are to be ranged according to the validitie of their operation. As for the Lawrell Alexandrica or Idæa, if a woman in trauell of child-birth take three deniers weight of the roote, and drinke the same in three cyaths of sweet wine, she shall be quickly deliuered and brought to bed: the same drink sendeth forth the after-birth, and prouoketh womens monthly terms.

Daphnoides, or the wild Lawrell (or call it by any other of those names before rehearsed) hath many good vertues: it purgeth the belly, if you take the leafe either green or drie, to the weight of three drams with salt, in hydromel or honyed water: being chewed, it draweth downe flegmatick and watry humors. The leafe also moueth to vomit, and is offensieue to the stomack. The berries likewise be purgatiue, if a man take five or ten of them at once.

CHAP. IX.

¶ Of the tame or gentle Myrtle tree planted. Of Myrtidannum, and the wilde Myrtle.

OF garden Myrtles, the white is not so medicinable as the black: the fruit or berries of the Myrtle, help those that reach vp blood: taken with wine, they put by the danger of venomous muſthrums: chew them in your mouth, your breath will be the sweeter for it two daies after. It appeareth by the Poet Menander, that the good-fellows Synaristense were wont to eat Myrtle berries: the weight of one denier in wine, is good for the bloody flux. If they haue a little siuering or waulm ouer the fire in wine, they make a good water or liquor to cure vntow and vlcers to heale, especially such as be in the extreme parts of the body. Of them and barley groats, there is made a cataplasme for bleered eies: for the fainting also and trembling of the heart, being applied to the left pap or breast. In like manner, the same being vied with pure vinelaied wine, is singular for the prick of scorpions: for the infirmities of the bladder, the head-ach, and the apoplemsations betwene the angle of the eies and the nose, if they be taken before they yeeld fithy matter: and so they cure other tumors or swellings: and if their pepins or kernels be taken forth, and then incorporat with old wine, they be singular for the small pocks and meazles. The juice of Myrtle berries bindeth the belly, but prouoketh vrine. A liniment also is made thereof with wax, for the said pock and meazles: also against the sting of the venomous spiders Phalangia. The said juice doth colour the haire blacke. Of the same Myrtle there is an oile made, more lenitiue and mild than the iuice or liquor aboue-named: & yet there is a wine of Myrtles more kind & gentle than it, which will neuer ouerturn the brain or make one drunk. The same, if it haue lien and be stale, bindeth the belly and staith a laske: it strengtheneth the stomack also, and represseth vomits: it assuageth the griping pains in the guts, and restoreth appetite to meat: the powder of drie Myrtle leaues, restraineth sweats, if the body be strewed therewith, though it were in a feuer. The same powder is good for the feebleness of the stomack, and the flux from thence proceeding: it reduceth the matrice into the right place, when it beareth down out of the body: it cureth the infirmities of the feet, healeth running scalls and vlcers, wariseth S. Antonies fire, and the shingles, being vied thereto in some fomentation; retaineth and staith the haire ready to shed; scoureth away dandruffe, drieth vp wheals, pocks, and meazles; and last of all skinneeth burnes and scaldings. The powder entreth into those vnginous or oleous plaisters which the Greeks call Liparas. And such a kind of plaister in like manner as the oyle of these Myrtle berries, is most effectually in those sores which light vpon moist parts, as for example the mouth and the matrice. The leaues in substance, beaten to powder and tempered with wine, are a counterpoison against venomous muſthrums; but incorporat with wax into a liniment, they do ease the gout of any joints, and drie back rifings and impostumations. The same leaues boiled in wine, are given to drink for the bloody flux, and the droppe. VVhen they be dried and brought into powder, they scue to cast and strew vpon vlcers; also to restrain any bleeding. They scoure away freckles, and such like spots of the skin: they heale the rising, overgrowing, and parting of the skin about the naile roots, also whitflaws, chilblanes, piles, & swelling bigs in the fundament; the accidents befalling to the cods; filthy maligne and morimall vlcers, and last of all, burns (applied in manner of a cerot.) For the ears running with fithy matter, there is good vſe of the leaues burnt; also of their iuice and decoction. The same are likewise burned, to scue for certain antidots or counterpoisons. In like manner, to the said purpose the tender sprigs of the Myrtle with the floure vpon them, are gathered and calcined within an oven,

A ouen, in a new earthen pot, well couered and cloſe luted: after which they be reduced into pouder, and mixed with wine. The ashes of the leaues burnt, healeth burnes. To keepe the share or groine from swelling, although there be an vlcere there, it is sufficient, if the party haue about him a shoot or branch only of the Myrtle, provided alwaies, that it touched neither yron nor the earth.

As touching Myrtidarum, how it is made I haue shewed already. Applied vnto the matrice or natural parts of a woman either by way of fomentation or liniment, it doth much good. And much better, if it be made with the bark, leafe, and berry of the Myrtle. Moreover, of the softest leaues braied and stamped in a mortar, there is a iuice pressed forth, by pouring green wine by little and little among, and otherwhiles raine water: which is vied much for the vlcers and sores. B of mouth, feat, matrice, and belly: to dye the haire black: to wash and bath the arm-holes with: to scoure away spots and freckles: and in one word, when and whereſoeuer there is need of a friction.

Alum per-
fajouet,

The wilde Myrtle or Oxymyrſine, called also Chamæmyrſine, differeth from the ciuill and gentle Myrtle, in the rednesse of the berries, and the final growth. The roote is highly esteemed: for boiled in wine, and so taken in drink, it cureth the paine in the raines, the difficulty of vrine, especially when it is thick, and of a strong sauer. The jaundise also it helpeth, and cleanseth the matrice, if it be brought in o powder, and mixed with wine. The yong and tender buds eaten after the manner of Sperage crops with meat, first roasted in the embers; the feed likewise taken in wine, oyle, or vineger, break the stone. The same feed stamped and drawne with vineger and oyle roſat, allaieth the head-ach; but in drink it cureth the jaundise. Cassar called Oxymyrſine (with the sharp prickie leaues like the Myrtle, and wherewith beesomes be made) by the name of Ruſcus, and saith it hath the same properties. Thus much for planted trees, and their medicinal vertues: proceed we now forward to the wild.



THE TWENTY FOVRTH BOOK OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS

SECVNDVS.

The Proeme.

CHAP. I.

¶ Medicinable vertues obserued in wild trees.

NATURE, that sacred and blessed mother of all things, willing and desirous that man, whom she loueth so well, should find euery place stored with proper and conuenient remedies for all maladies incident vnto him; hath to disposed of her workes, and taken that order, that the rough woods and forests, even the most hideous parts of the earth, and fearful to see vnto, bee not without their plants medicinable. Nay, the very wilds and deserts are enriched and furnished therewith: inſomuch, as in euery coast and corner of the world there may be obserued both sympathies and antipathies (I meane those naturall combinations and contrarieties in those her creatures.) From whence proceed the greatest miracles which are to bee scene in this round Fabricke and admirable frame,

frame. For first and formost, the Oke and the olive tree beare such mutual rancor and malice (as it were) and are so stiffly bent to war one with another, that if a man replant one of these trees in the trench or hole from whence the other was taken vp, it wil surely die. Also, if an Oke be set neare unto a walnut-tree, it wil not liue. The Colewort and the Vine hate one another to the very death; in such sort, that if a Vine stand neare unto it, a man shall sensibly perceiue the same to shrink away and recule backward from it; and yet this wort, which maketh the Vine thus to retire and flie, if it chance to grow ouer-against Origan or Cyclamine, will soome wither and die. Moreouer, it is commonly said, That trees in the forest fully grown, which haue stood many a yeare, and namely such as are ready to be fallen and laid along for timber, proue harder to be hewed, and sooner way dry, if a man touch them with his hand before hee feel the edge of the axe to their butt. And some say, that pack-horses, asses, and other labouring beasts which haue Apples and such like fruit aloof, wil quickly shrink and complain vnder their burden, yea, & presently run all to sweat (carry they but a very few to speak of) vnlesse the said fruit, wherewith they are to be charged, be first shewed vnto them. Asles finde great contentment and good by feeding vpon Fenel-geant or Ferula plants; and yet to horses, garrons, & other beasts of cariage and draught, they are present poison, if they eat them: which is the cause that the Asse is a beast consecrated vnto the god *Bacchus*, as well as the foresaid plant Ferula.ouer and besides (see the admirable operation in Nature) the very insensible and luellesse creatures, yea, the least that be, meet euerly one of them with some contrary thing or other, which is their bane and poison: for as our cooks know well enough, the inner bark of the Linden tree sliced thin into broad flakes and fine boulded floure together, doe drink and suck vp the salt of viands, ouermuch powdered, and make it fresh again. Likewise, salt giueth a good relish to any meat that is ouer sweet, and tempereth those that haue a luthious and wallowish tast. If water be nitrous, brackish, & bitter, put some fried barley meal into it, within two houres and lesse it will be so well amended and sweet, that a man may drink thereof: and this is the reason that the said Barly meal is put ordinarily in those strainers and bags through which wines do passe, that thereby they may be refined and drawn the sooner. Of the same operation also and effect there is a kind of chalker in the Island of Rhodes: and our clay here in Italy will do as much. Thus you see what enmity & discord there is in some things. Contrariwise, we may obserue in others, how wonderfully they accord and agree together: for pitch will dissolve, spread, and be drawne out with oile, being both as they are of a fatty nature; oile alone will incorporat and mingle well with lime; & they haue water, the one as well as the other. Gums are sooner dissolved and more easily tempered with vinegar than with any thing els; & ink with water: besides an infinit number of other such, that I shall haue occasion to write of continually in their due places. And indeed, this is the very ground and foundation of all our Physick. For (to say a truth) Nature ordained at the first such things and none but such, for to be the remedies of our diseases, which we feed & liue daily vpon: euen those which are soon found and as soon prepared, which be ready at hand, common-euery where, and cost vs little or nothing at all. But afterwards the world grew to be so full of deceit and couengeage, that some fine wits and nimble heads deuised to set vp Apothecary shops, promising and bearing vs in hand, that euerly man might buy his life and health there for money. Then anon a sort of compositions, mixtures, and confections were set on foot; then there was no talk but of strange and intricat receipts, and these were bruited abroad for the only medicines of wonderful and vnspcakable operations. So that now adaees we vse no other drugs but those that come from Arabia and India. And if a man aile neuer so little, or haue the least pish or wheale about him, he must haue some costly Physick forsooth for it: & a plaister that came from as far as the red sea: whereas in truth, the right remedies appropriat for euery maladie, be no other than such as the poorest man that is sedeth vpon euery night ordinarily at his supper. But if we went no farther than to the garden for medicines, and fought after herbs, shrubs, and plants only, for to cure our sicknesse, or maintain our health, certes there were not a baser occupation in the world than the profession of Physick, and Physitians would be bought let by: but will you haue the truth? To this passe we are come, the old world we haue bidden farewell vnto: the ancient manners and rites of Rome citie are dead and gone: our state is growne so much in greatnesse, as there is no goodnesse left. Our victories and conquests be these, and nothing else, which haue vanquished & subdued vs: for subiect we must acknowledge our selues to strangers and forraine Nations, so long as Physicke (one of their Arts) is able to command our commanders,

A ders, and ouerrule our Emperors. But the discourse of this matter in more ample manner, I will referre to some other time and place.

CHAP. II.

¶ Of Lotos.

As touching the herbe * Lotos, the Egyptian plant likewise of that name: as also, of another tree about the Syrtis so called, I haue written sufficiently in their due places: as for this Lotos, which our countrymen call in Latine the Greekeish Bean, hath a property for to bind and knit the flux of the belly, with the fruit or berries which it beareth. The shauings or scrapings of the wood therof, boiled in wine, and so taken inwardly, cure the bloody flux and exulceration of the guts; repress the immoderat flowing of womens moneths; help the dizziness and swimming of the braine; and those who be subiect to the falling sicknesse: the same decoction also * keepeth the haire from shedding, if the place be bathed therewith. But wonderful it is, that these small shauings should be so bitter, as nothing more, when the fruit it self is as sweet as any other. Moreouer, of the fine dust sawed or filed from this wood, sodden in Myrtle water, then kneaded or wrought into past, & foreduced into feuerall trochisks, there is a soueraigne medicine made for the bloody flux: if the patient drinke the weight of one Victoriat or halfe dram of these troches in three cyaths of water.

* Called other-
wise *Colecastis*,
and the Egyp-
tian Beans.

* *cohibent ca-
pillum, Dissol-
uunt Sordida,
et assensum, con-
louerunt, thum
yellow.*

CHAP. III.

¶ Of Mast.

As Cornes or Mast of the Oke, beaten to powder, & incorporat with Hogs lard faired, heale all those hard and swelling cankerous vlcers, which they call in Greeke Cacoethe. In all these trees bearing Mast, the very substance of the wood is more forcible than the fruit; the outward bark more than the wood; and the inner rind or tunicle vnder it, more than the bark or all the rest. This membrane or pellicle if it be boiled, is singular for the flux of the stomach, proceeding of weaknesse. The very Mast or Acorne it selfe reduced into a liniment and applied, staith the bloody flux; and the same resisteth the venom of serpents stings, restraineth rheums, and catarrhs, and namely, that flux of humors which causeth apostemations. As well the leaves, the mast or berries of this tree, as the bark or juice drawn from it, after boiling are excellent against the poisons called in Greeke Toxicia. The bark sodden and brought into a liniment with Cow-milk, is very good to be applied vnto the place where serpents haue bitten or stung; it is giuen also in wine for the bloody flux: of the same vertue & efficacy is the holm-oke

CHAP. IIII.

¶ Of the [Scarlet] graine of Holme-oke: of Galls and Mistello: of certaine little balls growing vpon the Oke: of Mast: of the root of * Cernus: and of Corke.

The * Scarlet graine growing vpon the Oke-helm, is very good to be laid to fresh wounds with vinegar. It is applied with water for the flux of watery humors vnto the eyes: & dropped likewise into them when they be bloud-hot. Now there is a kind of it growing commonly in the region of Attica and throughout Natolia, which very quickly turneth to be a grub or Magot (wherupon it is called Scolicion) and is rejected, as being of no worth. Many more sorts there be of it, whereof the chiefe and principall I haue shewed already.

* The great
Holm-Oke.
* *Cestum Jilica*
our Kermes or
Kutchinets
some thinkes

As touching the Galls, I haue likewise made of it as many kinds: for some be solid and massive, others lull of holes, as if they were bored through. You shall haue of them white, and black: some great, & others small: but how different soeuer they be in substance, colour, or quantity, they be all of like nature. The best are those of Comagene. Galls are good to eat away the superfluous excrecences in the body. They serue very wel for the infirmities of the gums and f. vlvula; for the cankers & exulcerations breeding in the mouth. Being first burnt, & then quenched in wine, they are singular for the fluxes occasioned by a feeble stomach. Applied in manner of a liniment, they help the bloody flux. Incorporat in hony, they cure whitflaws, risings, & parings of the flesh and skin about the nail roots; the roughnesse of the nailles, the running scals and

and vlcers in the head: the knobs or swelling piles in the fundament, and in one word, all those corrosiue and eating vlcers, which consume the flesh to the very bone. Boiled in wine, and so infused into the eares, they cure the infirmities of that part. So do they likewise help the eies, if they be annointed therewith. Applied with vineger, they disscuſſe ſiegmaticke wheales and ſuch like breakings out, as alſo the flat biles and impositions called Pani: the round kernell within them if it be chewed, allaieth the tooth-ach. The same is good to skin raw and galled places, & any burn or scalded place. Take vnripe Gal-nuts, & drink them with vineger, they wil consume and wear away the swelled spleen. Burn the same, and quench them with salted vineger, a fomentation thereof, stiaeth the immoderat flux of womens fleurs, & redueth the matrice (fallen downe) into the right place. All the sort of these Gals do colour the haire of the head blacke.

Concerning Misseleto: That the principall and best is found vpon the Oke, how it is cut and in what manner birdlime is made therof, I haue already shewed. Some for to make the said glew or birdlime, stamp Misseleto first, and then seeth it in water, * vntill it swim aloft. Others vse to chew the grains or kernels onely which they beare, and spit out their outward pills or skins. But the very best is that, which hath no husk or skin at all: which also is the * smoothest: without-forth of a light tawnie or yellowish red: within, as greene as a leake: for indeede, there is not a thing more glutinous or glewly than it. This Misseleto is a great emollientiue, for it softneth, disscuſſeth and resoluth alſo hard tumors: it is exicatiue besides, and drieth vp the Scrophules or swelling kernels, knowne by the name of the kings euill. If it be incorporat with rosin & wax, it mitigateth all sorts of impostumes or flat biles whatsoever. Some put thereto Galbanum alſo, in equal quantity or weight: and so vse it in the same manner for to heale wounds. It pollifeth and maketh smooth the rough & vneuen nails, if it be laid too for seuen daies, and the medicine not removed before: but the nails ought to be well washed with salinities. Some obserue certain superstitious ceremonies herein, and are of opinion, That it will worke the better & with more efficacy, in case it be gathered from the Oke, the first day of the new Moon: alſo if it be not cut downe with any bill, hook, knife, or edged yron toole. Moreover, they do hold, That if it touch not the ground, it cureth those who are troubled with the falling sickness. Semblably, if women do but carry it about them, it helpeth them to conceiue. Finally, if it be chewed and so applied vnto vlcers, it is most effectually to heale them perfectly.

As for the little round bals or apples found vpon the Oke Robur, if they be incorporat with Bears greafe, they cause the haire to come thick again, where it is shed, in case the bare or bald place be annointed therewith.

Of the great Oke Holm Cerrus, thus much I haue to say, That the leaues, the bark, and mast thereof do disscuſſe and drie vp all gathering of impostumations, enen such as grow to supuration or mattering; and stay the flux of humors which feed them. A decoction thereof doth corroborat any member or part of the body which growth to be sencelesse or benumbed, if the same be sionented therewith. Alſo for to dry, bind, & confirm any which is feeble & weak, it is singular good to fit in a bath of this decoction. The root of this Cerrus is powerful against the prick of scorpions.

The bark of the Corke tree beaten into powder and taken in hot water, is excellent for to repress any flux of blood, whether it be vpward or downward. The ashes of the said bark giuen in wine hot, is greatly commended for the reaching and spitting of blood.

CHAP. V.

¶ Of the Beech and Cyperſſe trees. Of the great Cedars and their fruit called Cedrides: of Galbanum.

THE leaues of the Beech tree being chewed, do much good to the gums and lips, in any accidents that befall vnto them. The ashes of Beech mast is singular for the * stone, if it be applied as a liniment. The same alſo bringeth haire againe, when by occasion of sicknesse it is shed and fallen away, if the place be annointed with it and honey together.

Cyperſſe tree leanes stamped and so applied, are a conuenient remedie for the sting of Serpents. Also laid vnto the head with dried groats of Barley, they ease the pain thereof, occasioned by the heat of the Sunne. In like sort, the same cataplasme cureth ruptures. For which cause a drinke made of them is very good. A liniment alſo of Cyperſſe leaues and waxe mingled together.

* Dant inuett
Some read De-
ne nubit inu-
et hanc, so
long vntill it
ferrie all to the
bottom, which
may stand wel
with the first
reading in this
sense, so long
as it swimmes
aloft.
* Scavillum

* Calculi. Some
reade, occurrer,
eyes: others,
calles, hard
knobs or callo-
sities: & both
to better fence
in mine opi-
nion.

of Plinies Naturall History.

A ther, asuageth the swelling of the cods. Tempered with vineger, they will make the haire cole black. Moreover, if they be stamped with two parts of soft dough or the tender crums of bread, & so incorporat together with Ammonean wine, they allay the paine of the feet or the sinews. The little bals or Apples hanging vpon Cyperſſe trees, are souveraigne for to be taken in drinke against the sting of serpents, and for the casting vp of blood out of the body. Brought into an ointment, they serue for the swellings or impostumes gathered to a place. Take them whiles they be young and tender, stamp them with vines greafe and Bean flour, they do much good to those that are bursten and for that purpose a drinke made of them, is passing effectually. With ordinary meale they serue in a cataplasme to be applied vpon the swelling kernels behinde the eares, as alſo the kings euill. There is a iuice drawn out of these apples after they haue bin stamped together with their grains or seed within: which if it be mingled with oile, helpeth them to their cleare sight again, whose eies are ouercast with a web & dimmed. The same effect it hath if it be taken in wine to the weight of one Victoriat or halfe dram. But Cyperſſe apples rid and cleafed from their grains within, and reduced into a liniment with fat dried figs, and so applied vnto the cods, cure their infirmities, and namely, resolueth the tumors incident to those parts: but incorporat with leauieth, they dispatch the Scrophules or kings euill. The root and leaues punned together, and then taken in drinke, do comfort the bladder, and help such as are diseased with the strangury: they serue alſo against the prick of the venomous spiders Phalangia. Their small shauings or scrapings if a woman take in her drinke, procure her monethly terms, and are singular for the sting of scorpions.

The great Cedar, called by the Greeks Cedrelate, as one would say, the Fir-Cedre, yeeldeth a certain pitch or parrosin named Cedria, a singular medicine for the tooth-ach, for it breaketh them, fetcheth them out of the head and catcheth all their pain. As touching the liquor that runneth from the Cedar, and the manner how it is made, I haue written already: this * kind of pitch were excellent for the eies but for one discommoditie, in that it causeth head-ach. It preserueth dead bodies from corruption, a world of yeeres: contrariwise, liuing bodies it doth putrifie and corrupt. A strange and wonderful property, thus to mortifie the quick, and quicken (as it were) the dead. It marreth and rotteth apparell, as wel linnen as woollen: and it killeth all liuing creatures. And therefore I would not aduise as some haue done, to tast this medicine and take it inwardly for the squinancie or crudities of the stomack: neither would I behold, but fear rather, to prescribe it in a collution with vineger to wash the mouth withall for the toothach, or to drop it into their eares who be hard of hearing or otherwise haue vermine within them. But a monstrous and beastly thing it is which some report of it, That if a man do annoint therewith the instrument or part seruing for generation, at what time as he is minded to know a woman carnally, it will bring her to an * abortiue flip, if she were conceiued before, or hinder conception, if she were cleare. Howbeit, I would not make doubt to annoint therewith the head & other parts, for to kill lice, or to rid away the scurfe or scally dandruffe among the haire, either in head or face. Some giue counsell for to drinke it in sweet wine cuir, vnto them who are poisoned with the sea Hare. For mine own part, I hold it a safer way and an easier to annoint therewith the leprosie. But some of the foresaid authours haue applied it to filthy, putrified, and stinking vlcers, & the excrescences therein: as alſo to rub or annoint therewith the eies against the pin and web, & such accidents as dim and darken the sight. Moreover, they haue prescribed to drinke a cyath of it for to cure the vlcer of the lungs, and to expell wormes and vermin out of the belly. Of this pitch or rosin there is an oile made, which they call Pistellaeon, and the same is far more strong in operation for all the infirmities aboue named, than the simple rosin it selfe. Certaine it is, that the fine dust scraped or filed from the Cedar wood, chaſeth away serpents: so do the berries alſo of the Cedar beaten to powder and reduced with oile into a liniment, in case a man annoint his body all ouer with the same.

As touching Cedrides (i.) the fruit of the Cedar, it is souveraigne for the cough, and prouokes vine, bindeth the belly, & health ruptures. It cureth spasmes, convulsions or cramps: yea, and helpeth the infirmities of the matrice, if it * be applied accordingly. Alſo it is a counterpoison against the venomous sea Hare: and a medicine for other maladies aboue named, and namely for apoplexies and inflammations.

Of Galbanum I haue written heretofore. Good Galbanum should be neither moist nor dry; but such in all respects as I haue described already. Being taken of it selfe alone in drinke, it cureth

* Cedrium

* Arborum
fieri Gracorum
Sedres idem
est.

* Admoneone
radix, i. a-
ken in drinke.

reth an inueterat cough shortnesse, and difficultie of winde, ruptures, crampes, and convulsions. G
Outwardly applied, it is singular for the Sciatrica, pleurisie, or pains of the side, angry biles, and
fellons. It is good also to be vsed, in case the flesh (corrupted by meanes of corrosiue vlcers, as
woules and such other) is departed and eaten from the bone: moreover, for the wens called Sero-
phules or the kings cull: the knots and nodosities growing vpon the ioints, and the tooth-ache:
it serueth also in a liniment with hony for to annoint fad heads. With oile of Roses or with
Nard, it is good to be infused or dropped into ears that run with matter: the very perfume alone
or smell thereof is good to raise them who are taken with the epilepsie or falling sicknesse: also
to recover women, lying as it were in a trance or dead, vpon a fit of the mother: & to bring them
again who are gon in a swoone. If a woman fall to trauell before her time, it is good to fetch out
that vnrimely fruit of hers (if it be loth to come away) either by way of cataplasme or suffumi-
gation. The same effect it hath, if the branches or small roots of Elettore ore le well annointed
therewith, and so put vp as a pessary. The smoke of it frying in the fire (as I laid before) driueth
serpents away: and more than so, serpents will not come nere to them that are besmeared with
Galbanum. And say that one be stricken with a scorpion, a plaster of Galbanum will heale the
wound. If a woman haue bin long in labor of childbirth, and cannot be deliuered, let her drinke
in one cyath of wine, as much Galbanum as the quantity of a Bean, she shal fall to her busines
and be deliuered anon. The same is a good medicine to reduce the mother into the right place,
if it be versed or turned. If Galbanum be taken in wine with Myrrh, it sendeth out the dead
infant in the mothers womb. Also with Myrrh and * wine, it is good against all poisons, and e-
specially those which be called Toxica. Incorporat Galbanum with oile and * Spondylium to-
gether, it will kill any serpents, if they be but touched therewith. Howbeit, there is an opinion
of Galbanum, that * in difficultie of vrine it is not good to be vsed.

CHAP. VI.

¶ Of Gum Ammoniack: of Storax: Spondylium: Spagnos: Terebinth: Chamapitys: of Pitius-
sa: of Rosinus: of the Pitch tree: and the Lentiske.

Since we are fallen into the mention of Gums, it will not be amiss to treat of Ammoniack;
being as it is so like in nature (as I haue said) to Galbanum: for it hath vertue to mollifie, to
heat, diffusie, and dissolue. Vsed in collyries, it is a proper medicine to clarify the sight:
and serueth well to take away the itch, the spots or cicatrices, the pin and web also of the eyes. K
It allaieth the tooth-ache, but more effectually, if it be set a burning, & the fume received into the
mouth. Taken in drinke, it helpeth those who hardly fetch and deliuer their winde. It cureth the
pleurisie, Peripneumony or inflammation of the lungs, the infirmities of the bladder, pissing of
blood, the swelled spleen, and the Sciatrica. And in that manner it easeth the belly, and maketh
it soluble. Boiled with the like weight of pitch or wax and oile rosat together, and so reduced
into an ointment, it is good for all gouts, and especially that which lieth in the feet. It tripeneth
the biles called Pani, if it be applied to them with hony: and fetcheth away any corns by the
roots. In which sort it doth soften any hardnesse. Incorporat with vineger and Cyprian was or
els with oile: of at, it maketh an excellent plaster for to mollifie the hard spleen. Moreover, if it
be reduced into an ointment with vineger, oile, & a little sal-nitre, it is singular to annoint those
that haue a lassitude or wearinesse vpon them.

Touching Storax and the nature thereof, I haue said enough in my Treatise of strange and
strange trees. But ouer and aboue the qualities or properties before required, I take that for
the best Storax, which is fattest, pure, and cleane, and whereof the pieces or fragments do break
white. This drug cureth the cough, the forenesse of the throat, and the accidents of the breast:
it openeth the obstructions of the matrice, & mollifieth the hardnes thereof. Whether it be taken
inwardly in drinke, or outwardly applied, it prouoketh womens flours, & mouth to the siege.
I reade in some authors, that if one drinke Storax Calamita in small quantity, it will procure
gladnesse and mirth of heart: but if it be taken in greater quantity, it breedeth heavinesse of the
mind. Infused or poured into the eares, it rideth away all the singing therein: and in a liniment
it reloueth the wens called the Kings cull, and the nodosities of the sinews. Soueraign it is a-
gainst those poisons which hurt by meanes of their coldnesse, and therefore it is good for them
that haue drunk the iuice of Hemlock.

L. H. W. I.

A Likewise of Spondylium, a kind of wild Parsnep or Madnep, I haue spoken thereof hereto-
fore, together with Storax. An embrochation made of it, to be infused vpon the head, is excel-
lent for such as be in a frensie or lethargy: also to cure the inueterat pains of the head. Taken in
drinke with old oile, it helpeth the infirmities of the liuer, the jaundise, the falling sicknesse, the
stairnesse of breath (whereby one cannot take his winde but sitting vpright) and the rising or
suffocation of the mother, in which cases, a suffumigation thereof is good. This Spondylium is
effectual to mollifie the belly, and make the body soluble. Reduced into a liniment with rue, it
serueth fitly to be applied vnto vlcers that spread and eat as they go. The iuice of the floures is
of great effect, if it be poured into the eares that run with filthy matter: but when this iuice is a
prelling or drawing forth, it had need to be kept well couered, for feare of flies and such like,
which are very greedy thereof, and loue a life to settle vpon it. The root of Spondylium, or a
piece thereof scraped, if it be put in maner of a tent into a fistula, eateth away all the hardnes
and callosities thereof. Being dropped into the eares, together with the iuice, it is exceeding good for
them. The root giuen alone in substance, cureth the jaundise, the infirmities of the liuer & ma-
trice. If the head be all ouer annointed therewith, the haire will curl and frizle.

Concerning the sweet Mosse, called of the Greeks * Spagnos, Spachos, or Bryon, growing
(as I haue shewed before) in France, it is good for the naturall parts of women to sit out the
decoction of it, in manner of a bath: likewise if it be mingled with cresses, and so stamped to-
gether in salt water, it serueth well to be applied as a cataplasme to the knees and thighs, for any
tumors or swellings in those parts. Taken in wine with dry per-rosin, it causeth one most speedi-
ly to make water. Stamped with Iuniper, and drunk with wine, it doth euacuat the aquosities
in the droipe.

The leaves and the root of the Terebinth tree, applied in form of a cataplasme, are good for
the collection of humors to an impostumation. A decoction made with them, doth comfort
and fortifie the stomack. In case of head-ache, of stopping and difficultie of vrine, it is passing
good to drinke the seed or grains of the Terebinth tree in wine. The same gently easeth and so-
luteneth the belly: it prouoketh also carnal lust. The leaves of the * Pitch tree & * Larch tree bru-
sed and sodden in vineger, do ease the tooth-ache, if the mouth be washed with the decoction.
The ashes made of their barks, skin the places that be chafed, fretted, and galled between the
thighs, and heale any burn or scald. Taken in drinke, they bind the belly, but open the passages
of the vrin. A perfume or suffumigation thereof, doth settle the matrice, when it is loose and out
of the right place. But to write more distinctly of these two trees, & the leaves of the Pitch tree
haue a particular property respectiue to the liuer, and the infirmities thereof, if one take a dram
weight of them and drinke it in mead and honied water. It is well known and resolu'd vpon, that
to take the aire of those woods and forests only where these trees be cut, lanced, and scraped, for
to draw pitch and rosin out of them, is without all comparison the best course which they can
take who either be in a consumption of the lungs, or after some long and languishing sicknes,
haue much ado to recover their strength. Certes, such an aire is far better, than either to make
a long voyaige by sea into * Egypt, or to go among the cottages in summer time for to drinke
new milk comming of the fresh and green grasse of the mountains.

E As for Chamapitys, it is named in Latine by some Abiga, for that it causeth women to slip
their conception before time: of others, *Thusa terra* [i. ground Frankincense]: this herb putteth
forth branches a cubit long, and both in floure and fauer resembleth the * Pine tree. A second
kind there is of Chamapitys, lower than the other, seeming as though it bended and stooped
downward to the ground. There is also a third sort, of the same odor that the rest, and therefore
so named. This last Chamapitys, riseth vp with a little stalk or stem of a finger thicknesse; it
beareth rough, small slender, and white leaues, and it groweth commonly among strockes. All
these three be herbs indeed, and no other, and should not be ranged among trees: yet for names
sake, because they carry the denomination of Pitys [i. the Pitch-tree] I was induced the rather
to treat of them in this present place, & to stay no longer. Soueraign they be all against the
pricks or stings of Scorpions: applied in manner of a liniment with dates and quinces, they be
wholesome for the liuer: their decoction together with barley meale, is good for the infirmities
of reins and bladder. Also the decoction of these heabes boiled in water, helpeth the jaundise
and the difficultie of vrine, if the Patient drinke thereof. The third kind last named, taken with
hony, is singular against the poison of serpents: and in that maner only applied as a cataplasme,

R

it

* Pine. Rather
as in vineger
after a few
* Cow posidon
or No in spe-
* Cow posidon
1. forth the
contrary.

* Pice.
Larix.
It seems that
Pitys rocks
mean, which is
the Pine, for
Picea and
Pine, which is
the Pitch tree,
for Larix.

* i. Into a
more grosse
aire.

* or rather, the
Pitch tree.

it clenseth the matrice & natural parts of women. If one drink the same herbe, it will dissolve and remove the cluttered thick blood within the body: it prouoketh sweat, if the body be therewith annointed; and it is especially good for the reins. Being reduced into pills, together with figs, it is passing wholsome for those that be in a dropsie; for it purgeth the belly of waterish humors. If this herb be taken in wine to the weight of a victorial piece of silver, i. halfe a Roman denier, it warieth for cuer the paine of the loins, and stoppeth the course of a new cough. Finally, if it be boiled in vinegar, and so taken in drink, it is said that it will presently expel the dead infant out of the mothers wombe.

For the like cause and reason, I will do the herb Pityusa this honor as to write of it among trees, since that it seemeth by the name to come from the Pitch tree: this plant some do reckon among the * Tithymals: a kind of shrub it is, like vnto the Pitch tree, with a small floure, and the same of purple color. If one drink the decoction of the roote, to the quantity of one hemina, it purgeth downward both fleam and choler: so doth a spoonfull of the seed therof, put vp into the body * by suppositories. The decoction of the leaues in vinegar, doth cleanse the skin of dandruffe and scales: & if the decoction of rue be mingled therewith, it is singular for sore breasts, to appease the wrings and torments of the cholicke, against the sting of serpents, and generally for to discusse and resolue all apostemations and botches a breeding.

But to returne againe to our former trees, how Rosine is ingendered in them, of their severall kinds, and the countries where they grow, I haue shewed before, first in the treatise of wines, and afterwards in the discourse and histories of Trees. And to speak summarily of rosins, they may be diuided into two principall kinds, to wit, the dry and the liquid rosin. The dry is made of the Pine and the Pitch trees; the liquid commeth from the Terebinth, Larch, Lentisk, & Cypresse trees; for these beare rosin in Asia and Syria: & whereas some there be of opinion, That the rosins of the Pitch and Larch trees be all one, they be much deceived; for the Pitch tree yeldeth a fatty rosin, and in manner of frankincense, vntuous: but from the Larch tree there issueth * a subtill and thin liquor, running like to life hony, of a strong and rank vnpleasant smell. Physitians seldom vse any of these liquid Rosins, and neuer prescribe them but to be taken or slipped off with an egge. As for that of the Larch tree, they giue it for the cough and exulceration of some noble parts within: neither is that per-rosin of the Pine tree much vsed: as for the rest, they be not of any vse vnlesse they be boiled. Touching the diuers manners of boiling them, I haue shewed them sufficiently.

But if I should put a difference between these rosins according to the trees from whence they come, the right Terpentene indeed which the Terebinth yeldeth, liketh and pleaseth me best, being of all others lightest and most odoriferous. If I should make choice of them in regard of the countries where they are found, certes they of Cypresse and Syria be best, and namely those that in colour resemble Attick hony, and for the Cyprian rosin, that which is of a more fleshy substance and drier consistence. Of the dry per-rosins, those are in most request, which be white, pure, transparent or cleare, quite through. In general, those that come from trees growing vpon mountains, be preferred before them of the plains: also regarding the North-east rather than any other wind. For salues to heale wounds, as also for emolliente plasters, rosins ought to be dissolved in oile for drinks or potions, with bitter almonds. As touching their medicinable vertues, they be good to cleanse and close vp wounds: to discusse and resolue any apostemes which bee in gathering. Moreover, they be used in the diseases of the breast (and namely true Terpentene) by way of liniment; for then it is singular good, especially if it be applied also for the pains of the lims, and for those that be plucked with the cramp, in case the grieved parts bewel rubbed therewith in the fngs, which they know well enough who buy laues and sell them for gain, after they haue trimmed and set them out for sale: for they especially are very curious to annoint their bodies all ouer with this Terpentene, for to loosen the skin when they be hide-bound, lank, and carrien lean, to giue more liberty and space for euery part to receiue nutriment, and so to make their bodies seeme fat and faire liking. Next vnto the right Terpentene, is the rosin of the Lentiske Tree: this hath an altringer or binding qualitie; but of all others it prouoketh wine most: all the rest doe mollifie the belly and make it soluble, concoct and digest all crudities, M stent the innerate cough, and draw downe all the superfluous burdens of the matrice: for which purpose last named, their fume receiued by a suffumigation, is very effectuall. They are more particularly as good as a counterpoison against the venomous gum Ixia, growing vpon

* i. Spurge.

* In balenien-
less wetted
Cum Phospha-
balenien, i. a
kind of Date,
as some think
Tamatindis.

* Which is
thought to be
our Terpen-
tine.

A The plant Chamelcon. Incorporat with buls tallow and hony, they cure the biles called Pani, and such risings in the flesh. The Lentisk rosin, is singular good for to lay euen and streight the haies of the eie-lids when they grow into the eies. In fractures and broken bones, it is most necessary, as also for the ears running with filthy matter: likewise to kill the itch in the priuy members. Finally, the per-rosin of the Pine tree, is a most soueraigne medicin to cure all the wounds of the head.

CHAP. VII.

¶ Of Stone-pitch: of Tarre: of Pitch twice boiled: of Pissifphalt or Mummie: of Zopifsa: of Torch-wood, and the Lentiske.

B FROM what tree Pitch commeth, and the sundry waies of making it, I haue declared heretofore: also that there be two principall kinds thereof, to wit, the thick or salt Pitch, and the thin or liquid: of the former sort, the best for vse in Physick is the Brutian Pitch, for that (being of all others fattiest & fullest of gum) it yeldeth a twofold commodity both for medicines, and also to trim and rosin wine-vessels, for which purposes, that which inclineth to a red-dish yellow is counted the chiefe. But whereas some do say moreouer, that the better Pitch commeth from the male tree, I cannot conceiue what they should mean thereby, neither do I think it possible to discerne any such difference. True it is, that Pitch by nature is hot, & a good incarnatiue: a speciall and particular property it hath against the venom inflicted by the sting or tooth of the horned serpent Ceraustes, if it be made into a cataplasme with fried barley groats: and being applied with hony, it healeth the squinancy, cureth cataris, and restraineth sneezing: with oile of roses, it serueth well to be poured into running ears, out of which there doth issue filthy matter: or being applied in manner of a liniment with wax, it is passing good to heale the ill-fauored retters called Lichenes, and it looseth the belly: licked or let downe leisurely in manner of a loch, it is a good means to void and reach vp from the breast, tough flame: and to annoint the tonsils or almonds in the mouth with it and hony together, is a proper medicine: being in that manner prepared and vsed, it clenseth vlcers: and if it be incorporat with raisins and swines greafe, it doth incarnat and fill them vp again with new flesh: caruncles also it doth mundifie; so doth it fores that begin to putrefie & gather corruption: but if they be such as spread & be corrosiue withal, then there would be an addition of the Pine tree bark, or brimstone. Some haue preferred, for the consumption of the lungs, and a cough of long continuance, to drinke the quantity of one cyath in Pitch. The fissures and chaps as well about the feet as in the feet, it cureth: for the flat biles named Pani, it is very good: as also to take away the rough nails that be so troublesome. The very odor or perfume thereof, helpeth the hardnesse of the matrice, and setteth it again, being either saln down, or turned out of the due place: likewise it helpeth such as be surprised with the lethargy. Moreover, if it be boiled in the wine of a yong boy vnder 14 yeares of age with barley meal, it is a good maturatiue, and bringeth the wenches called the Kings euill to suppuration. As for dry pitch or stone pitch, it helpeth much to make the haire grow again, where it is shed by some disease. The Pitch called Brutia, or of Calabria, E boiled in wine to a waulm or two, with the fine floure of the bearded wheat Far, and so applied in a cataplasme as hot as may be suffered, is singular good for womens paps. Concerning liquid Pitch or Tar, as also the oile which they call Pissifoleon, and how it is made, I haue already written at large. Some boile it a second time, and then they name it Palimpissa. With this liquid Pitch it is good to annoint the squinzy that groweth inwardly: as also the vula within the mouth: the same is singular for the pain in the ears, to clarifie the sight, to cleanse the mouth furled as it were, so as it hath no tast of meat: likewise for those who are short winded: for women who are diseased in their matrice: to ripen & rid away old coughs, and to ease them that can doe nothing but spit & reach out of the chest: for spasmes, cramps, shakings, and trembling: moreover, it helpeth them whose heads or bodies are drawn backward: it cureth palsies, and any pains or griefs of the sinews. There is not a better thing to kill either the mange in dogs, or the scab and farcines in horses asses, and such like traouelling beasts.

Moreover, as touching Pissifphalt, which is of a mixt nature, as if pitch and Bitumen were mingled together, it groweth naturally so, in the territory of the Apolloniars; yet from there be who make an artificial pissifphalt, and meddle the one with the other, and hold it for a remedy

to cure the farcins and scabs of cattell; as also when the young sucklings doe hurt the teats of their dams. Of this kind, that is best which is of it selfe, and come to maturity and perfection: is the fame in boiling swimmeth aloft. * *Zopifia*, is that Pitch, which (as I said heretofore) is scraped from ships, and is consected of wax well foked in the salt water of the sea: the best is that which commeth from ships that haue bin at sea and made some voiaiges: it goeth into emollient plaisters, for to resolue the gathering of impostumes. As for *Tada* or Torch-wood, if it bee sodden in vinegar, it maketh a singular collution for to wash the teeth whit when they ake.

Let vs come now to the Lentisk tree: the wood, the seed or fruit, the bark and gum thereof, do prouoke vrine, and bind the belly a fomentation made with their decoction, is excellent good for eating and corrosiue vlcers: it serueth in a liniment for al sores in moist & flegmatick parts: likewise to cure *S. Anthonis* fire, and to wash the gums withall: chew the leaues thereof and crush them with the teeth, the same will ease their aches: wash them with their decoction, and they wil set them fast in the head. The same are good to colour the haire black: the gum which this tree doth yeeld, is soveraign for the infirmities of the feet, especially such as require either drying or heating. The very decoction of Mastick is comfortable to the stomach, it causeth it to rise, & is besides diuretick. Applied vnto the head as a liniment, incorporat with the fried groats of barley, it cureth the ach or pain thereof: the tender leaues be applied to right good purpose, for the inflammation of the eyes. Moreover, this Mastick, which is the gum of the Lentisk tree, is vsed ordinarily to lay the hairs of the eyelids euen, & to extend or make plaine and smooth the riuelled skin of the face: therefore it is vsed in sope, and wash-bals. Moreover, there is a good vse thereof, for spitting and reaching vp of blood, & for an old cough. In one word, it serueth all those turns whereto the gum Ammoniacke is vsed. It healeth all places galled and chafed, where the skin is rubbed or fretted off: and if the cods and members of generation be fomented either with the oile made of the seed of the mastick tree mixed with waxe, or with a decoction of the leaues boiled in oile or els in water, it will skin any raw part thereof. To knit vp this discourse, I am not ignorant that *Democritus* the Physitian, who had in cure *Confidia*, the daughter of *M. Seruilius* late Consul of Rome, for an infirmity or malady of hers (for that this damosell could not abide to heare of any vnepleasant Physick) caused her to be fed a long time with the milk of goats which were kept wih the Lentisk tree leaues, and did eat nothing els, and so he cured her of her malady.

C H A P. VIII.

Of the Plane tree, the Ash, and Maple: of the white Poplar and Elme, the Tillet or Linden tree, the Elder, and the Juniper.

THE Plane tree is an enemy to Bats or Rernencie: their little bals which they beare, if they be taken to the weight of foure Roman deniers in wine, do cure all poisons of serpents and scorpions: likewise they heale any burn. Being braied or stamped with strong & sharp vinegar (which if it be Squilliticum is the better) they stanch any bleeding whatsoever. Incorporat in hoily, they mundifie and cleanse all cancerous vlcers, the red pimples and specks, with all black spots and marks in the skin which haue remained a long time. The leaues and bark reduced into a liniment, their decoction also, help to rid away any gathering of humors to an head, and namely if they matter and run. The decoction of the barke sodden in vinegar, is a singular remedy for the tooth-ach, like as the tenderst leaues boiled in white wine, for the infirmities of the eyen. The ashes which come of the foresaid little bals, do heale vp any burn, occasioned either by fire or extreame cold. The bark taken in wine, represteth the venome of the scorpions sting, so that it shall go no farther.

As touching the Ash tree, of what effectual operation it is against serpents, I haue declared heretofore: it beareth a seed inclosed within certain * cods, which being taken in wine, is an ordinary remedy for the obstructions & infirmities of the liuer, as also for the pain in the sides. The same also do euacuate the aquities or waterish humors (spread between the skinn and the flesh in the dropic Leucoplegmatia: the leaues do take down by little & little and make lean a body ouer-groffe, and do ease it of the troublefome cariage that it hath of so much fat, if the same be stamped and giuen in wine: but herein good regard ought to be had of the strength of the party, after this proportion: If it be a child, five leaues of the ash are sufficient to be infused

* Called Lin-
gum Jun-
per. Which are
named Keyes.

A in three cyaths of wine; but elder folk and of a stronger complexion, may abide seuen well enough in five cyaths, and drink the infusion. But before I do leaue this tree, it would not be forgotten that the small chips and shauings, yea, and the saw dust or filed powder of this wood, are thought to be hurtfull vnto some, and they are forbidden to meddle withall. The root of the Maple tree, stamped into a cataplasme, is singular to be applied for the griefs of the liuer, and worketh mightily.

As touching the white Poplar or the trembling Asp, I haue shewed heretofore how the performers vse the berries or * grapes thereof in their sweet ointments. The bark infused and taken in drink, is good for the sciatica and the strangury. The iuice drawn out of the leaues, dropped hot into the ears, easeh their pain. VVho euer carieth a twig of Poplar in their hands, shall not need to feare any furbating of the feet, or galling between the legs. The best blacke Poplar and of greatest operation in Physick, is that reputed which groweth in the Island Creta; the fruit or grain thereof if it be drunk in wine, is singular for those who be taken with the falling sicknesse. This Poplar yeeldeth a certain small gum or rosin, which is much vsed by Physitians in emolliente plaisters: the leaues sodden in vinegar, make a proper cataplasme to be applied vnto the gout: the liquor or humor that issueth out of the pores or concuities of the blacke Poplar, taketh away warts and wheals, it skiuneth also galled & raw places in any part of the body: these Poplars as wel white as black beare vpon their leaues certain warts like to drops of water standing vpon them, out of which the Bees do gather that cereous substance named Propolis. The drops also of water, which the said Propolis doth yeeld, if they be mingled with water, is a very effectual remedy for many things.

C Now for the Elme: the leaues, the bark, and the woody substance of the branches, haue a glutinous nature to consolida, vnite, and heale wounds: the thinner rind or tunicle verily which lieth between the outward bark and the tree, doth assuage the prolesie, called of some *S. Magnus* cuill: so do the leaues also, applied with vinegar. The bark of the Elm puluerized and taken to the weight of a Roman denier in one hemine of cold water, is a very purgative, and doth euacuate flegmatick and waterish humors particularly. The liquor that issueth from the tree as a jelly, is singular good for apostemations, wounds, and burnes; but if the places were fomented before with the decoction, it would be the better. The Elm beareth certaine small bladders or huskes, wherein there is ingendred and contained a waterish humour, which is very proper to imbelish the skin, & beautifie the face. The first tender sprouts of the leaues boiled in wine, do assuage all tumors, & draw filthy matter and corruption forth of fistulous sores: the same do the inward thin rinds within the bark. Many are of opinion, That the very bark chewed only, and applied to green wounds, is singular good to heale them. They affirme moreover, That the leaues bruised and applied to the feet, allay their swelling, so there be water sprinkled among. Furthermore, the water or liquor which runneth from the heart or pith of the wood when the tree is lopped or disbranched (as I haue said before) if the head be annointed or bathed withall, causeth the haire to grow again if it be lost, and keepeth it on it if it be ready to shed and fall.

As touching the Tillet or Linden tree, the very wood thereof is vsed for all things in a manner that the wild olive is imployed vnto, if the same be lightly bruised or stamped: howbeit, the leaues only are occupied, which, if they be chewed and so applied, do cure the cankers breeding in the mouth of small infants. Being boiled and their decoction inwardly taken, they prouoke vrine: outwardly applied, they do stay the inordinat and excessive flux of womens flours; but giuen in drink, they euacuate the same superfluous blood.

There is a second kind of Elder more wild of nature, which some of the Greeke writers call * Chamaeae, others Helion, and it groweth much lower than the other. The decoction of the leaues as well of VVallowort as Elder, boiled in old wine, is contrarie and nowtome to the stomacke, and purgeth downeward waterie humors: euen so doth the decoction either of the seed or the root, if it be taken inwardly to the quantity of two cyaths: the same is excellent to coole any inflammation; and namely, to take out the fire of any new burn or scald. The yong and tender leaues, as well of Elder as VVallowort, reduced into a cataplasme and laied too with barley groats, doe cure the biting of a dogge. The iuice both of the one and the other, infused and conueighed accordingly into the head, is a soveraign lenitive for all impostumes of the braine, and especially those which are growing in the fine membrane or pellicle called Pia Mater, which immediately lappeth and enfoldeth the braine. The fruit or berries of the Elder or

* And yet
heretofore he
saith that it
is the better
the one nor
the other.

* Extrabum-
pas, & alibi.

* I Ground.
Elder, Wilt,
wort, & Dane-
wort.

of Walwort, are weaker in operation than the other parts of the tree or plant: howbeit, they serue wel to colour the haire of the head black. The same also taken in drinke, to the measure of one acetabell, be diureticall and prouoke vrin. The softest and tenderest leaues are eaten ordinarily in a salad with oile and salt, for to purge steame and choler. In summe, the lesser plant, which is the VV alwort, is in all things more effectuall than the elder it selfe; for if the root thereof be sodden, and a draught of two cyaths be giuen to them who are in a dropsie, it will purge mightily and euacuate watery humors. A decoction of the roots and leaues of Danewort, is singular to mollifie the matrice and naturall parts of a woman, if she sit ouer the same and take the vapour thereof into her body. The tender sprigs of the milder Elder, boiled between two platters, do make the body soluble, and moue to the seege. The leaues drunke in wine, resist and kill the poisoned sting of serpents. The tendrons of the elder, incorporate with goats tallow, and reduced into a liniment, are singular good for the gout, if they be applied to the grieved place: the water of their infusion, if it be cast or sprinkled in any room of the house killeth fleas: and if the place be likewise sprinkled with the decoction of the leaues, it will not leaue a flec aloue. There is a kind of disease [much like to purples or meazles] when the body is bepanited all ouer with red blisters: a branch of the Elder tree is excellent good to lath the said wheales or risings, for to make them fall again and go down. Take the inner bark or rind of the Elder, beat it into powder, and do drinke it in white wine, it is a sufficient purgation.

The Iuniper of all other trees, passeth either for to heat any part, or to extenuat & make subtil any humors: in operation much like to the Cedar. Of it there be two kinds; the greater, and the lesse: a perfume made with the one as well as the other, drieth away serpents: the seeds or berries of Iuniper, assuage the pains of stomack, breest, & sides: the same serue wel to break wind and resolute all ventosities, yea and to euaporat all cold and chilnesse: they ripen any cough, and mollifie a hardnesse: a liniment made therof applied outwardly, causeth any tumor to go down and represseth the rising thereof: likewise if the berries be drunke in some grosse or thick red wine, it will stay a lask: like as they will abate the swelling of the belly, if they be laid too by way of a cataplasme or liniment. The Iuniper berry is reckoned among the ingredients which go into antidots, or preseruatiues against poison, such I mean, as be penetratiue and of quick operation. It is diureticall and moueth vrin. In case the eyes do water much by reason of a continuall rheum taking to them, it is good to apply a liniment vnto them made therewith. Foure Iuniper berries are giuen in white wine, or 20 of them boiled in wine, for convulsions, crampes, ruptures, wrings, and torments in the belly, for the grieues of the matrice and the Sciatica. To conclude, some there be, who fearing to be stung with serpents, vse ordinarily to rub or anoint their bodies with a liniment made of Iuniper seed or berries.

CHAP. IX.

¶ Of the Sallow, Willow, or Withy: of the twig Withy or Osifer Amerina. Of twigs or binding rods. Of Heath or Lings.

The fruit which the willow or Sallow yeeldeth, if it be sufficed to hang, before it doth ripen is conuerted into a certaine substance resembling a cobweb; but being gathered ere it be thus transformed, it is singular good for such as reach or cast vp blood. The ashes of the rind pulled from the first branches that the willow putteth forth, and tempered with water, taketh away corns and callosities of the feet: they serue also to rid the spots and specks which disfigure the visage, the rather if they be incorporate with the juice of the willow. Now there be found in the said willow, 3 sorts of juice: the first sweateth out of the tree it self in manner of a gum: the second issues forth by way of incision, when the tree is in the bloom; prouided alwaies that the cut or gash in the bark, be made three fingers broad: this liquor is singular good to cleanse the eyes, and to rid away such impediments as hinder the sight; likewise to incrustate or thicken where need requireth to prouoke vrin, and draw forth all inward impostumes outwardly: the third juice is that which distilleth from the branches presently after the bill or cutting hook, when the tree is lopped, or the boughs cut from the body. Take any one of these juices, and heat the same well with oile of Roses in the rind of a Pomegranat, excellent it is for to be dropped into the ears: likewise the decoction of Sallows, or the leaues stamped and incorporate with wax, and so applied, do the like as also laid too in manner of a cataplasme, they ease the pain of

A of the gout. The decoction of the leaues and bark boiled in wine, is passing wholsom to foment the nerues withall. The blooms or chattons of the willow, stamped together with the leaues, cleanse the branny scales that appeare in the face. The leaues of the willow punned and taken in drinke, do coole them that are giuen too much vnto lasciuious lust, and ouer hot in the action of Venus: and if they vse to take the same often, they will disamble them altogether for the act of generation. The seed of the black Osifer or willow called Amerina, mixed in like weight with white litharge of filer, and brought into a liniment, is a depilatory, and fetcheth off the haire if the place be annointed therewith presently after the baine.

There is a kind of tree named Vitex, not much different from the willow, in regard of the vse that the twigs be put vnto, and also of the leaues which resemble those of the willow in outward shew, but that their smell is more pleasant and odoriferous: the Greeks, some call it Lygos others Agnos, i. chaff, for that the dames of Athens, during the feast of the goddesse Ceres, that were named Thesmophoria, made their pallets and beds with the leaues thereof, to coole the heat of lust, and to keep themselves chaste for the time. And two sorts there be of it. The greater riseth vp to a tree in manner of a willow: the other, which is lesse & lower, brancheth thick, bearing white leaues, and those full of down and cotton. The former of these two, which is called the white Agnus Castus, putteth forth white flowers & purple one with another: whereas contrariwise, all the floures of the lesse, which is called the black, be purple only. Both the one and the other loue to grow in plains and moors. The seed of Agnus Castus, if it be taken in drinke, hath a certain rellish or salt of wine, and it is commonly thought that it cureth feuers: & who-soeuer is annointed therewith, being incorporate into a liniment with oile, shall loon sweat; and by that means it is good to rid away wearinesse. Agnus Castus, as well the one as the other, prouoketh vrin, and the monthly terms of women. Both of them fume vp into the head as wine doth: and no maruell, for they haue the very smell of wine. They be singular to fend all ventosities downward. They stop the flux of the belly, and be excellent good for those who are in a dropsie, or troubled with the spleen. They haue this special property besides, to breed good store of milk in milch nurces. Aduerse they be to all poisons of serpents, such especially as doe mischief by their cold quality. The lesse is more effectuall against serpents. And for this purpose they vse to giue either one dram of the seed to drinke in wine or Oxycrat, which is vineger and water; or els two drams of the most tender leaues. There is neither of them both, but as well the seed as the leaues, reduced into a liniment, be singular good for the pricke of spiders. And there is not any venomous creature that wil come neere those who are but annointed therewith: nay they wil flee from the very perfume thereof, for the couch which is made of the leaues: they abate the heat of wanton lust: and in that regard especially they be contrary to the venomous spiders Phalangia, which by their sting do prick a man forward that way, and cause his flesh to rise. The floures and yong tendrils of Agnus Castus incorporate in oile of rose, do allay the head-ache, occasioned by drinking ouerliberally: but if the said head-ache be exceeding great, it is good to foment the head in a decoction of the seed of the said Agnus: for it will resolute & dispatch the extremity thereof. The same likewise by way either of suffumigation or cataplasme, mundifieth and cleanseth the matrice. And being taken as a drinke with pennyroial and hony, it is a purgatiue, and fourth the belly. Mixed with Barly meale, and applied pulsette wise, it mollifieth those botches & byles which hardly grow to ripenesse. The seed tempered with salt petre and vineger, healeth tetters, ringwormes, and red pimples: and with hony cureth the cankers or sores of the mouth, yea, and any wheals and breaking forth whatsoeuer. The same reduced into a liniment with butter and vine leaues, warrieth the infirmities incident to the cods; and if the seat be annointed with it & water meddled together, it taketh away the chaps & fissures in that part. Brought into a cerot with salt, nitre, & wax, it is singular good for all dislocations: both the seed and leaues of Agnus, enter into many cataplasmes or mollitiue plasters, deuised for the sinewes and the guts: the seed boiled in wine, maketh a good decoction, which if it be dropped vpon the head by way of obsecration, is right foweraign for lethargy and frensie both. It is said, that who-soeuer beareth in his hand a twig of Agnus, or gird himselfe about the middle therewith, shall not be galled or fretted between the legs.

As touching Heath or Lings, which the Greeks call Erice, it is a shrub not much different from Tamariske, in colour and forme of leafe, such as it is, resembling Rosemary. The leafe of this plant (they say) is an enemy to serpents.

As for Broom, it serueth also very well to make halters and cords of. The floures please bees passing well. I am in doubt and not able to say, whether this Genista or Broome, be that which the ancient Greek writers called Sparton; for I haue shewed, that they vsed therof to make their fishing nets; and I wot not well whether *Homer* meant it, when he said, that the ship-sparks were vnwilted and loose. For this is certain, that neither the spart of Africk, ne yet the Spanish spart was as yet in any vyle: and at what time as barges and vessels were fowed together with seame, it is wel known, that the stiches were made with linnen thred, & not with spart. The feed that it beareth, which the * Greeks giue one and the same name to, growing within smal cords in manner of Phaeols, is as strong a purgatiue [of Melancholy] as Ellebore; if it be taken when one is fasting, to the weight of a dram and halfe, in four cyaths of honied water: the branches & leaues (such as they be) of Genista or Broome, being stamped after they haue lien infused in vineger, yeld a certain iuice singular good for the Sciatica, if it be drunk to the quantity of one cyath. Some chuse rather to steep it in sea-water, and to draw forth the iuice, and so minister it with a clyster for the said purpose. The said iuice incorporat with oyle, serueth for an ointment also to be applied outwardly for the Sciatica. Some vse the seed for the strangury. The substance of Broome stamped with swines grease, helpeth the ach or pain in the knees.

To come now to Tamarisk, which the Greeks call Myrice, *Lenaxus* affirmeth, That it is vsed in manner of the Amerian willow for becomens; and more than so, that if it bee sodden in wine, stamped and reduced into a liniment with hony, it healeth cankerous vlcers: and in very truth, some hold, That the Myrice and Tamariske be both one. But doubtlesse, singular it is for the spleen, in case the patient drink the iuice pressed out of it in wine. And by report, there is that wonderfull antipathy and contrariety in Nature between Tamariske and this one part alone of all the other bowels, that if the troughs out of which swine drinke their swill, be made of this wood, they will be found when they are opened, altogether without a spleen. And therefore some Physitians do prescribe vnto a man or woman also diseased in the spleen, and subject to the operations therof, both to drinke out of cups or cans of Tamarisk, and also to eat their meat out of such treen dishes as be made of that wood. One renowned writer aboute the rest, and for knowledge in great credit and authoritie among Physitians, hath affirmed and auouched constantly, That a twig of Tamarisk slipped or broken from the plant, so as it touched neither the ground, nor any yron tooke, assuageth all belly ache, in case the patient weare it about him so, as that his girdle and coat hold it fast and close to the body. The common people call it The unlucky tree, as I haue heretofore said, because it beares no fruit, & is neuer with vs set or planted. In Corinth and all the territory or region round about, they name it Brya, and make two kinds therof; to wit, the wilde, which is altogether barren, and that which is of a more tame and gentle nature. This Tamarisk in Egypt and Syria beareth in great plenty a certain fruit, in substance hard and woody, in quantity bigger than the Gal-nut, of an vnpleasant and harsh taste; which the Physitians do vse in stead of the Gal-nut, and put into those compositions which they name Antheras. Howbeit, the very wood of this plant, the floure, leaues, and barke also, be vsed to the same purpose, although they be not so strong in operation as the said fruit. The rind or barke beaten to powder, is giuen with good successe to them that cast vp blood; also to women who haue a great shift of their flours; likewise to such as be troubled with a continual flux, occasioned by the imbecility of the stomack. The same bruised and applied as a cataplasme, represseth and smiteth backe all impostumations a breeding. The iuice pressed out of the leaues, is good for the same infirmities; moreover, they vse to boill the leaues in wine, for the same intent. But of themselves alone being brought into a liniment with some hony among, they are good to be applied vnto gangrenes. The foresaid decoction of the leaues beeing drunke in wine, or the leaues applied with oyle of Roses and wax, mitigat the said gangrenes, namely, when the flesh tendeth to mortification. And in this manner they cure the night-foes or chilblanes. Their decoction is wholesome for the paine of teeth or eares: for which purpose serueth the root likewise and the leaues.ouer and besides, the leaues haue this property, That if they be brought into the form of a cataplasme with barley groats and so applied, they keep down and restrain corrosiue vlcers. The seed if it be taken to the weight of a dram in drinke, is a preseruatiue and counterpoison against spiders, and namely those called Phalangia. And if the same be incorporat with the tallow or grease of any fawlings or beasts, kept vp in itall, itie, or mow, into a liniment, it is singular good for any vncom or fellon. Of great efficacy it is also against the sting of all serpents, except the

A the Aspis, The decoction likewise of the feed clysterized, is singular for the jaundice, it kills lice and nits, and staith the immoderat flux of womens months. The ashes of the very wood of the tree, is good in all those cases before said: which if they be mingled in the stalle of an ox, and so taken of man or woman, either in meat or drinke, it will disable them for hauing any mind to the sports of Venus euer after. And a burning cole of this wood, when it is quenched in the stalle or beasts piss, they vse to saue & lay vp in the shade for that purpose: but if one list to kindle lust, * then they set it on fire againe. To conclude, the Magitians say, That it would do as much if the wine only of a gelded man were taken for the said purpose.

* *Scusam vritur.*

CHAP. X.

B ¶ Of the Blood-rod, Of Siler, Of Priuet, The Alder tree, and Ivy, Of Ciffhus and Ciffos, Of Eritranos, Of Chamacifos or Ground Iuie, Of Smilax or Bindweed, Of Clematis.

THE Plant called the Sanguin-rod, is as vnhappy as the foresaid Tamariske. The inner bark thereof is singular good to open againe those vlcers, which are healed aloft only and skinned before their time.

The leaues of * Siler, brought into a liniment and applied as a frontal to the forehead, allay the paine of the head. The seed thereof druen into powder and incorporat with oyle, is good for the lousie disease, and keepeth the body from lice. The very serpents cannot abide this plant or shrub, but flee from it: which is the cause, that the peasants of the country make their walking staves therof.

* Some think it is the broad-leaved Oslifer.

Our Ligustrum or Priuet, is the very same tree that Cypros is in the East parts. To good vse it serueth among it vs here in Europ: for the iuice of it is wholesome for the sinews, the ioynts, and any extreme cold. The leaues applied with some corns of salt, heale all inueterat vlcers in any part whatsoeuer, and particularly the Cankers in the mouth. The graines or berries that it beareth, are good to kill lice: also for any gal, where the skin is fretted off between the legs; and so be the leaues likewise. The foresaid berries do cure the pip in Hens and Pullen.

As for the Alder tree: the leaues if they be applied hot as they be taken out of scalding water, do cure without faile any tumor or swelling.

As touching the Ivy tree, as kinds therof and no fewer I haue already shewed; and of al these there is not one, but the vse of it in Physick is doubtfull and dangerous. For first and forme, Ivy, if it be drunke in any quantity, howsoeuer it may purge the head, surely it troubleth the brain. Taken inwardly, it hurteth the sinews: applied outwardly, it doth them much good. Of the very same nature it is, that vineger. All the sorts of Iuies be refrigeratiue. In drinke they prooue vrin. But the soft and tender leaues, sodden in vineger and oile roseat, and then stamped, and so tempered with more oile of rose put too afterwards, until they be reduced into an ointment, are a singular remedy for the pains of the head; and especially for the braine and the thin pellicle Pia mater, which inwrappeth the brains: to which effect the forehead ought to be annointed with the foresaid liniment, the mouth to be fomented and washed with the decoction, and the whole head afterwards well rubbed also with the aboue said vnguent. They are good for the spleen, both taken inwardly in drinke, and outwardly applied as a liniment. The decoction of the same leaues may be drunk very well against the fit of an ague, to drive away the shaking cold; also for the smal pocks and meazles; for which turn likewise they seruie, if they be pulverized and taken in wine. The berries of the Ivy cure the oppilation and hardnesse of the liuer, either giuen in drinke, or applied outwardly. So do they open also the obstructions of the liuer, if a liniment be vsed only. Applied accordingly to the natural parts of women, draw down their monthly sicknesse. The iuice of yvie (and specially of the white, which is planted in gardens) cleaseth the nothribs of the foule vlcers and vermine therein breeding, it rectifieth also the filthy smell proceeding from thence. If the same be conueighed vp into the nose, it purgeth the head; but more effectually, if sal-nitre be put thereto. Moreover, it is to right great purpose dropped into the ears with oile, in case they either run matter, or be pained. It redueth eczietics or wounds and vlcers newly skinned, to the naturall colour of the other skin: the iuice of the white Ivy is of more force and better operation for the oppilations of the spleen, & the swelling hardnesse thereof, if it be made hot with a red hot yron, than otherwise: whereof fixe berries in two cyaths

* Golden ber-
ry Ivy.

cyaths of wine, is a sufficient dose. Moreouer, three berries of the same white Iuy drunke at a time in Oxy mell, do expell the worms in the belly: during which cure, it were not amisse to apply them outwardly also. As for the Iuy, which I called * Chrylocarpus, if one take twelue of the golden yellow berries thereof beaten to powder, and put them to a sextar of wine, three cyaths thereof giuen to drinke, according to *Erasistratus*, purge by vrine the watery humors between the skin and the flesh, which ingender the dropie. The same *Erasistratus* was wont to take five such berries stamped into powder and mixed with oile of rose, which after they were made hot in the rind of a Pomgranat, he vied to drop into the eare of the contrary side, for the tooth-ach: the berries of Iuy which yeeld a iuice as yellow as Saffron, if a man take before he sit down to drinke, may be assured, that he shal not be drunk at that sitting. Likewise, they ease them much who are giuen to cast and reach vp bloud, or be subiect to the collicke and wrings of the belly. The white berries of the black Iuy if a man take in drinke, dull the vigor of his generall feed, and disable him for getting children: any Iuy whatsoever, being boiled in wine, & sobrought to a liniment and applied, doth cure all vlcers, euen morimals, and such as be vtoward for to be healed. The liquor issuing out of Iuy, is depilatory, but as it taketh away haire, so it riddeth lice and vermin. The floures of any kind of Iuy, taken (as much as a man may comprehend with 3 fingers) twice a day in some green and hard wine, help the dysentery or bloody flux; yea, and any other laske. The same reduced into a liniment with wax, are very good to skin and heal burns or scaldings. The berries of Iuy, colour the haire of the head black. The iuice of the Iuy root drawn with vineger and taken in drinke; is singular against the poison of the venomous spiders Phalangia. Moreouer, I find in some writers, That the drinking out of a cup or dish of Iuy wood also, as well as of Tamarisk, cureth those who haue hard Splens. The same authors prescribe to bruise the berries, afterwards to burn them, and with the ashes to dresse and bestrew the place that is burnt or scalded, so that it be first washed & bathed in hot water. There are Physitians who giue order to cut and lance the Iuy tree, for to draw a iuice or liquor from the place of the incision, which is to be vsed for rotten and worm-eaten teeth: and by their saying, the faulty teeth will breake and crumble into pieces if they be anointed therewith: provided alwaies, that the found and good teeth standing next, be wel defended with wax for catching harm by this medicine: moreouer, they seck and lay for the gum of Iuy, which they would perswade vs assuredly vpon their word to be singular for the teeth, being applied thereto with vineger.

For the vicinity and likenesse of the name of Iuy in Greck which is Cissos, I may take occasion to speak in this place of another shrub or plant called Cisthos, bigger than Thyme, & leaved like Basil. Of it be two kinds; namely, the male, with a red Rose colored floure; the female with a white: both sorts are good for dysenteries or bloody fluxes, and all loosenesse of the belly, if there be drunke twice a day in some green & hard wine, as much of their floures as may be held at three fingers ends: which if they be made into a cerot with wax, heale old vlcers, burnes, and scaldings: and alone of themselves cure the cankers or sores in the mouth.

Vnder this plant specially grows Hypocisthis, wherof I haue written in my treatise of Iuies.

Likewise, there is another plant like vnto the Iuy, and the Grecks call it Cissos Erythranos: which being taken in drinke, helpeth the Sciaticea, and is good for the loins: but they say it is so vehemement and forcible in operation, that together with vrine it will euacuat bloud.

Moreouer, there is an Iuy which creepeth and traileth alwaies close by the ground, and the same the Grecks call Chamæcissos. This herb being stamped and taken in wine to the quantity of one Acebale, cureth the infirmity of the spleen. The leaues incorporat with swines greafe serue to cure burnes.

Furthermore, the Bindweed Smilax, known also by the name of Nicephoros, resembleth Iuy, but that it hath smaller leaues. They say, that a chaplet or guirland made of this Smilax, is singular for the headach; provided alwaies, That the leaues which goe to the making of it, bee in number odde. Some haue said that Smilax is of a sorts: the one, which continueth a weed of yeres, grows in shadowie vallies, climbing trees, & tufted in the head with clusters (as it were) of berries in manner of grapes; a fouraigine plant against all poisons, as if the iuice or liquor of the berries be oftentimes dropped into the eares of yong babes or little infants, no poisons (by report) will euer hurt them afterwards. As for the other Smilax or Bindweed, it loatheth places well toiled and husbanded, wherin it vsually groweth: but of no vertue it is & operation: the former Bindweed is that, the wood wherof we said would giue a found, if it were held

close

A close to the eare. Another herb there is like to this, which some haue called Clematis. This plant creepeth & climbeth vpon trees, hauing many ioints also or knots. The leaues are good to muniifie the foute leprosie. The seed drunke to the measure of one acebale, in a hemin of water or mead, maketh the belly loose. The decoction thereof is giuen likewise to the same effect.

CHAP. XI.

* The vertues and properties of Canes or Reeds, of the Papyr reed, of Ebene, Oleander, Samach, otherwise called Rhiz Erythros, Attader, Alysson, Soporoti or Fallers-weed, Apocynon, Rosemary, Cachry, Saurine, Selage, and Samulus. Also of Gummes.

B Heretofore haue wee shewed 29 sundry kinds of Reeds, all indued with their medicinable vertues: and in no plants more appeareth the admirable power of dame Nature, the only subject matter handled in all these books of ours. For in the first place, there presenteth it selfe vnto vs the root of Reeds or Canes, which being bruised and applied accordingly, draweth forth of the body any spils of Fearnie sticking within the flesh: so doth the Fearnie root by the Reed. And forasmuch as we haue set downe many sorts of Canes, that amongst the rest, which cometh out of India and Syria, and whereof perfumers haue so great vse in their sweet ointments and odoriferous compositions, hath this property besides, That if it be boiled with the grasse called Dent de Chien, Quoiach grasse, or Parsley seed, it is diureticall and prouoketh vrine. Applied outwardly, it draweth down the desired sickness of women. Taken in drinke to the weight of two oboli, it cureth those who are subiect to convulsions or cramps: it helpeth the liuer and the reines: it is a remedy also for the dropie. As for the cough, a very persuneth thereof will stay it, and the rather, if it be mixed with Rosin. The root foddren in wine with Myrrh, cleneth feurle and dandruffe, it healeth also the spreading vlcers & running seals of the head: there is a iuice besides drawn from it, which becometh like to Elaterium, or the iuice of the wilde Cucumber. Moreouer, in any Reed, the chief and most effectual part thereof is that holden to be, which is next to the root. The ioints also and knots be of great efficacy. The Cyprian Canes are named Donax, the rind whereof, if it be burnt and brought into ashes, is singular for to bring haire againe in places where it is shed: it healeth likewise vlcers growing to putrefaction. The leaues thereof are vsed, to draw forth any pricks or thorns. The same be of great vertue against S. Anthones fire, the shingles, and such like, yea & against all impostumations: the common and ordinary Reeds haue an extractiue or drawing faculty, if they be stamped greene: which is not meant of the root only, but also the very substance of the reed it self, which they say is of great operation. The root being reduced into a liniment, and applied with vineger, cureth all dislocations, and easeeth the pains of the chine bone. The same punned green and new, stirrth to lust, if it be drunke in wine. The down or cotton growing vpon the cane, if it be put into the eares, causeth hardnesse of hearing.

There groweth in Ægypt a certain plant named Papyrus, which resembleth much the Cane or Reed: a thing of great vse and commodity, especially when it is dry; for it serueth as a sponge both to suck vp the moisture in Fistulae, and also to enlarge them. For swelling as it doth, it keepeth the vlcer open, and maketh way for the medicines to enter accordingly by that means. The paper made thereof when it is burnt, is counted to be caustick. The ashes of it being drunke in wine, cause sleep: and applied outwardly, taketh away hard callosities.

Touching Ebene, it groweth not (as I haue already said) so neare vnto vs, as in Ægypt. And albeit my meaning and purpose is not to deale with any medicinable plants growing in the strange & unknown countries of another world, yet in regard of the wonderfull properties that Ebene hath, I will not passe by it in silence. For first and foremost, the fine dust or powder filled from it, hath the name to be a singular medicine for the eies: as also, that the wood thereof being ground vpon an hard stone, together with wine cuit, dispatcheth away the cloudy mist which ouercaeth the eies. As for the root, if it be vsed likewise and applied with water, it consumeth the pin and web, and other spots in the eies. The same being taken with equal quantity of the herb Dragon in honey, cureth the cough. In sum, Physitians repute and range Ebene among the medicines which be corrosiue.

Oleander, called in Greck Rhododendros, which some name Rhododaphne, and others Nerion,

As concerning gums, I haue heretofore declared how many kinds thereof are to be found. To speake of them in generall, The better that any gum is, the more effectfull be the operations thereof: hurtfull they are to the teeth: they haue a property to thicken or coagulate blood, and therefore be good for those who cast and reach vpon blood: likewise they be singular for burns, as also for the wind pipe and instruments of respiration. The superfluous and corrupt vaine within the body, they prouoke and giue passage vnto. They dul & diminish the bitterness of other medicines wherein they be mingled, how soeuer otherwise they be astringent & do fortifie other qualities. That which cometh from the bitter almonds, and is of a stronger operation to thicken and incrassat, hath vertue also to heat the body. The best gums be those of Plum-trees, cherry trees, and vines: they haue all of them a drying and astringent quality, if any part be annointed with them and dissolved in vineger, they kill the tetter or ringwormes in children, & heale them vpon. Being drunk to the weight of foure oboli, in * new wine, they be good for any inueterat cough. Moreover, they be thought to make the colour more fresh, liuely, & pleasant: to procure and stir vp the appetite to meat; also to help those who be pained with the stone, in case they be drunk in sweet wine cuir. And to conclude with some particularity, The * gum of the Egyptian thorne is soueraigne for wounds, and all accidents of the eyes.

CHAP. XII.

¶ Of the Arabian Thorne: of * the white Thistle Bedeguar: of Acanthionum and Acacia.

Touching the Arabian Thorne or Bush, and the commendable qualities thereof, I haue sufficiently spoken in the treatise of perfumes and odoriferous confections: yet thus much moreover I haue to say of the medicinale vertues, that it doth thicken and incrassat thin and rheumatic humors, it restraineth all catarrhes and distillations, it represseth the reaching vpon blood, & stancheth the immoderat flux of womens monthly terms: for which purposes the root is more effectfull than any other part of the plant.

The seed of the white Thistle is singular for the sting of scorpions: a garland made of it and set vpon the head, assuageth the paine thereof. Much like vnto this, is that Thistle which the Greeks call Acanthion, but that the leaves be much smaller, and those are sharpe pointed and prickly all about the edges, and couered with a downe resembling a cobweb, which the people of the East countries do gather, and thereof make certain cloth for garments, resembling silke. The leaves or roots drunk in substance, are supposed to be a singular remedy for the crampe or convulsion which draweth the neck and body backward.

Moreover, there is a kind of Thorne, whereof cometh Acacia, and it is the juice thereof. It is found in Egypt to issue from certain trees, which be white, black, and green: howbeit, the best Acacia by far, is that which the former (that is to say, the white and the black) do yeeld. There is made likewise a kinde of Acacia in Galatia, which is most soft and tender; and the tree that affordeth it, is more prickly and thorny than the rest. The seed or fruit of all these trees, is like vnto Lentils, but only that the grain is less and the cod or huske wherein it lieth, smaller. The right season to gather this fruit is in Autumne, for if it be taken before, it is too too strong. For to draw this juice which we call Acacia, the cods wherein the grains lie, ought to be thoroughly steeped first in rain water: some after, when they be punned or stamped in a mortar, the sayd juice is pressed forth with certaine instruments seruing for the purpose: which done, they let it remaine within mortars in the sun, and there take the thickening and foat length: reduce it into certain trochisks, and reserve them for vse. There is a juice likewise drawne out of the leaves, but the same is not so effectfull as the other. The curriers vse to dresse their skins with the seed or grains thereof, in lieu of Galls. The juice which the leaves of the Galatian thorne aboute doth yeeld (and namely, the blackest) is reiected for naught, like as that also which is of a deepe red colour. Contrariwise, that which is either pur or ash-colored and rustie to see too, as also that which will be soone dissolved, is of exceeding efficacy to thicken and coole withall, and is preferred before all other in colyries or eye-salues: now for these vses, some are wont to wash the troches afore said, others torrefie and burn them. They are good to colour the haire of the head black: they heale S. * Anthones fire and corrosiue sores; yea and all grieuances of the body that consist in moisture: they cure any impostumes, joints that are bruised, kided heels, and the turning

A ning vp of the skin and flesh from the naile roots. They repress the exceeding flux of womens monthly fleurs: the matrice and tiwell if they be split and sahn out of the body, they reduce into their place again. In sum, for the eyes, for the sores and infirmities of the mouth, and naturall parts seruing for generation, they be soueraigne.

CHAP. XIII.

¶ Of the common Thorne: of the wild, or wood Thorne: of Erythraeum: of Spina Appen. dix: of * Pyxanthus, and * Palurus: of Huluer or Holly: of Teugh: and Brambles: with the medicinale vertues of them all.

THE common Thorne also, wherewith the Fullers vse to fill their vats and caudrons, hath the same operation that * Struthium, and is put to the same vse. Many there be verily in all parts of Spaine, who vse it both in sweet Pomanders, and also in ointments, calling it: A. palathus: and without all doubt, there is a kind of wild white thorne of this race growing in the easterly countries (as I haue said) among the woods, and riseth to the full height of a good tree. Yea and a shrubby plant there is, lower than the other, but as full of prickles, growing in Nisyrus and the Islands of the Rhodians, which some call Erythraeum, others, Adipatheon, or Dipacon, or Dracheton: the best is that which groweth nothing like to the Ferula, and being despoiled of the rind, is of a reddish colour inclining to purple. It is found in many places, but not euer where odoriferous. Of what force it is, when the rainbow seemeth to rest vpon it, I haue shewed already. It healeth the filthy cankers or sores of the mouth, and the sinking vlcers or alepokes in the nostrils: likewise the sores, botches, and carbuncles in the priuy parts, the crenices also and clifts in the fundament, or else where, applied vnto the place affected: but if it be drunk, it abateth all swelling of ventosities: the bark or rind thereof, disparteth those obstructions and impediments which cause the strangury or pissing by drop-meale. The decoction is a singular remedy for them that either pisse or vomit blood. The foresaid rinde stoppeth the flux of the belly. The like effects is that thought to work which groweth in the woods (and is called A. palathus of the Leuant.)

There is a kind of thorny bush called * Appendix, for that there be red berries hanging thereby, which be likewise named Appendices. These berries, either raw by themselves, or else dried and boiled in wine, do stay the flux of the belly, and besides assuage the torments and wrings thereof. As for the berries of Pyxanthus, they be drunk to right good purpose against the sting of serpents. Palurus also is a kind of thorny bush: the people of Africk call the seed of it Zura, which is found to be most effectfull against scorpions; and for those who are troubled with the stone, and the cough. The leaves haue an astringent or binding qualitie. The root resoluth and disparteth biles, impostumes, and botches: and if the same be taken in drink, it procureth vrin: if it be sodden in wine, and the decoction drunk, it stoppeth a laske, and is a defensive against the poison of serpents: the root especially is giuen in wine: some there be who stamp the leaves, putting salt thereto, and being reduced into the forme of a cataplasme, apply the same to the gout. The leaves be good to stay the immoderat flux of womens termes, the looseness of the belly occasioned by a feeble stomach, the bloody flux, and the inordinat motions of cholericke humors both vppward and downward. The root boiled and brought to a liniment, draweth forth what soeuer sticketh within the body. Soueraign it is and of exceeding great operation, in case of dilocations and swellings.

As touching the Holly of Huluer tree, if it be planted about an house, whether it be within a city, or standing in the country, it serueth for a countercharm and keepeth away all spells or enchantments. Psychagogus affirmeth, that the flower of this tree will cause water to stand all vpon an yeceal: so that a stasse made thereof, if a man doe sling it at any beast whar soeuer, although it chance to light short for default of strength in his arms who slung it, will notwithstanding crech forward and roll from the place where it fell vpon the earth, and approach neere to the beast afore said, of so admirable a nature is this Holly tree.

The fume or smoke of any Yeugh tree, kill:th mice and rats. Neither hath Nature produced brambles for nothing els but to prick and do hurt, for such is her bounty: that the berries which they beare are mans meat, besides many other medicinale properties: for they haue a desiccative and astringent vertue, and serue as a most appropriate remedy for the gums, the inflamma-

* B. v. thorne.
* Some call it
Cistus thorn.

* Adipatheon
is called Adipatheon.

* Some call it
for the Babes
ry bush.

tion of the Tonills, & the priuy members: the flours also as well as the berries of the brambles, be singular against the Hemorrhoid and the Pester, which are the two wickeddest and most mischievous serpents that be. The wounds inflicted by scorpions, they close & heale vp againe without any danger of franking or apostematation: withall, they haue a property to prouoke vrine, the iuice drawne and pressed out of the tendons or yong sprouts of brambles stamped, and afterwards reduced vnto the consistence of honey by standing in the Sun, is a singular medicine either taken inwardly or applied outwardly, for all the diseases of the mouth and eies; for them that reach vp blood, for the squinancy, the accidents of the matrice and fundament, finally, for the immoderat flux of the belly occasioned by the weaknesse of stomack. As for the fores and infirmities of the mouth, the very leaues alone of the bramble if they be but chewed, are passing good: but if they be reduced into a liniment and so applied, they heale running sores or any scals whatsoeuer in the head: & euen fo being laid alone vpon the left pap, they be wholesome for such as are given to the fainting & trembling of the heart, and subject to fall into cold sweats: likewise being applied accordingly, they ease the pain of the stomack, and such as haue their eies ready to start out of their head: and to help the infirmities of the eares, their iuice is excellent to be dropped into them. The same iuice incorporat with the cerot of roses, healeth the clists and swelling knubs in the fundament: & for the said infirmity, the decoction of yong tendrils in wine, is a present remedy, in case the place be bathed and fomented therein. The same yong springs eaten alone by themselves in a salad, in manner of the tender crops and sprouts of the Colewort, or boiled in some harsh, grosse, and Greene wine, do fasten the teeth which be loose and shake in the head: they stop a lask, and restrain an vnnatural issue or flux of blood, and besides, are good in the bloody flux. Being dried in the shade, and afterwards burnt, their ashes are singular to stay the vula for falling. The leaues also being dried and beaten to powder, are excellent good for the farcines and sores in horses, and such like beasts. As for the blacke berries which these brambles do beare, there is a kind of Diamoron made of them, which is far better for the infirmities of the mouth, and more effectual, than the other of the garden mulberries. The same being so prepared in that stomacal composition aforesaid, or drunk only with Hypocistis and hony, be singular to repress the fury of choler prouoking both waies: they be cordiall likewise, in case of faintings and cold sweats: and lastly, a preseruative against the poison of the venomous spiders. Among those medicines which they call Stypticke or astringent, there is not a better thing than to boile the root of this blackberry bramble in wine to the thirds, and namely to make a collution therewith to wash the cankers or sores breeding in the mouth, or to foment the vlcers growing in the fundament. And verily of such a binding and astringent force is this bramble, that the very spongyous bals that it beareth, will grow to be as hard as stones.

Another kind of briar or bramble there is, ypon which groweth a rose: some call it Cynosbator, others Cynopastosis: it beareth a leafe like to the print or sole of a mans foot. A little bal or pill it breedeth, stirred or bristled much after the manner of the Chestnut, which serueth as a speciall remedy for those that be subiect to the stone. As for Cynorhonos, it is another plant different from this, whereof I will speak in the next book.

CHAP. XIV.

Of * Cynosbator, and the Rastice: of the Rhamnus, and of Lycium and Sarcocolla. Of a certain composition in Physicke called Oporice.

As for the bramble named Chamabatos, it beareth certain black berries like grapes, within the kernell wherof it hath a certain string like a sinew, when vpon it came to be called Newtrospasos it is a different plant from the Caper, which the Physitians haue named also Cynosbator. Now the tender items of the foresaid * Cynosbator or Chamabatos condite in vineger, are good for them to eat who are troubled with the opilation of the spleen, & with ventrosities, for it is a singular remedy for those infirmities. The string or sinew thereof chewed with Mastick of Chios, purgeth the mouth. The wild roses that grow vpon this briar, being incorporated with swines greafe, are excellent for to make the haire grow againe, when it is fluxed by some infirmity. * The berries of these brambles if they be tempered with oilie olue made of green and vnripe olives, colour the haire black. The proper season to gather the floures of these brambles that carry berries like to mulberries, is in harvest time: the white kind of them drunk in wine, is a soveraign remedy for the pleurisie, & the flux of the stomack: the root sodden to the thirds,

stoppeth

A stoppeth a lask, and staieth the flux of blood: likewise a collution made therewith, fastneth loose teeth, if they be washed withall. The same decoction or liquor is good to foment the vlcers of the seat priuy parts. The ashes of the root burnt, keep vp the vula from falling.

The Rastice is called in Latin Rubus Idæus, because it groweth vpon the mountain Ida, and not elsewhere [so plenteously.] Now is this bramble more tender, & lesse in growth: it putteth forth also fewer stalkes vpright, and those more harmlesse and nothing so prickly as the other brambles before named: besides, it louth well to grow vnder the shade of trees. The floures of this bramble reduced into a liniment with hony, restrain the flux of rheumaticke humors into the eies, and keepeth down the spreading of * *S. Ambrosii* fire and giuen in water to drink, it cureth infirmities of the mouth. In all other cases, it hath like operations to the former brambles

B Among the diuers kinds of brambles, is reckoned the Rhamne, which the Greeks call Rhamnos, notwithstanding that it is whiter & more branching than the rest. This Rham beareth many flours, spreading forth his branches armed with prickles not crooked or hooked as the rest, but straight and direct, clad also with larger leaues. A second kind there is of them growing wilde in the woods, blacker than the other, & yet inclining in some sort to a red colour: this carieth as it were certain little coles. Of the root of this Rham boiled in water, is made the medicine that is called Lycium. The seed of this plant draws down the after-birth. The former of these two, (which also is the whiter) hath a vertue more astringent and cooling than the other, & therefore better for impostumations and wounds: howbeit the leaues of both, either green or boiled, are vfed in liniments with oil for the said purpose. But as touching Lycium, the best of all other is (by report) made of a certain Thorne tree or bush, which they call Pyxanthos Chironia, the form wherof I haue described among the Indian trees: & indeed the most excellent Lycium, by many degrees, is that Indian Lycium thought to be. The manner of making this Lycium, is in this wise: they take the branches of this plant, together with the roots which be exceeding bitter, & after they be well punned and stamped, seeth them in water within a brazen pan, for three daies together or therabout: which don, they take forth the wood, & set the liquor ouer the fire againe, where it taketh a second boiling, so long till it be come to the consistence or thickness of hony: howbeit sophisticated it is many times with some bitter iuices, yea and with the lees of oil & beates gall. The very froth & scum, in manner of a story that it casteth vp, some vse to put into colyries & medicines for the eies. The substance of the iuice besides is absterfue, it mundifieth the face, healeth scabs, cureth the exulcerations or frettings in the corners of the eies: it represseth old rheumes & distillations, clenseth eares running with filthy matter, represseth the inflammations of the almonds in the mouth, called Tonillæ, & of the gums; staieth the cough, restraineth the reaching & casting of blood, if it be taken to the quantity of a bean: being spread in manner of a plaster or liniment and so applied, it drieth vp running and watery sores; it healeth the chaps and clists in any part of the body, the vlcers of the secret parts (seruing for generation, any place fretted or galled, new and green vlcers, yea and such as be corrosive and withall growing into putrefaction: it is singular for the callosities, werts, or hard corns, growing in the nostrils, and all impostumations: moreover, women find great help by drinking it in milke, for any violent shift or immoderat flux of their monthly sickness: the best Indian Lycium is known by this,

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E That the masse or lump therof is black without, red within when it is broken, but soon it cometh to a black colour. An astringent medicine this is, and bitter withall, and hath the same effects which the other Lycium is reported to haue, but specially if it be applied to the priue members of generation. As touching Sarcocolla, some be of opinion that it is the gum or liquor issuing from a certain thorny plant or bush, and they hold, that it resembleth the crums of frankincense, called Pollen or Manna Thuris, & in taste seemeth to be sweetish, & yet quick and sharpe withall. This Sarcocoll stamped with wine, and so applied, represseth all fluxes: & in a liniment, good it is for yong infants. This gum also by age and long keeping, waxeth black: but the whiter is the better, & thereby is the goodnesse knowne.

But before I depart from this treatise of Trees, and their medicinable vertues, I must needs say, we be beholden to them yet for one excellent medicine more, which is called Oporice by the Greeks, as one would say, made of froits. This composition is singular for the bloody flux or exulceration of the guts; also for the infirmities of the stomack. The manner of making it, is in this wise: Take y quints, with their kernels, seeds & all, as many pomgranats likewise, let them boile gently ouer a soft fire in one gallon of new white wine, pur thereto the weight or measure or

* the Caper, or Caper briar, or Caper berries.

* Rubus canis.

* O. f. w. how
cont. f. w.
Physitians
down in the
no. f. w. b.
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men. f. w. b.
C. n. f. w. b.
ch. black.
ry. black.

one sextar of Seruises, and as much in quantity of the Sumach which is called Rhys Syriacum, together with halfe an ounce of saffron, seeth all these together to the height or consistence of honey. Thus much concerning the properties of trees seruising in Physicke. It remaineth now to annex herunto a discourse of those plants which the Greek writers (by giuing them names in some analogie respectiue vnto trees) haue left an ambiguity, and made vs doubt of them whether they be trees or herbs.

CHAP. XV.

¶ Of *Chamedrys, i. Germaner: *Chamædaphne, i. Lawrell: *Chamelæa: *Chamaesyce: *Chamaecissos, i. Ale-houee: *Chamaeleuca, i. Fole-foot: *Chamaepeuce: *Chamaecyparissus, i. Lawander-cotton: *Ampelopifos, i. Stachys: Clinopodium, Centunculus, and Clematis Aegyptia, with the medicines that they afford.

Germaner is an herb, called in Greek Chamædrys, and in Latine Triflago: some haue named it Chamædrope, others Teucron: it beareth leaues for bignes resembling mints, in colour like vnto the oke leaues, cut and indented also after the same manner. Of some it is called Serrata; and they affirme that the first pattern of a saw was taken from the leafe of this herb, whereupon it should be so called. The floure beareth much vpon the purple colour: it loneth to grow in stony places, and would be gathered whiles it is full of iuice; and thus gathered in due season, whether it be taken in drink, or taken outwardly in a liniment, most effectually it is against the poison of serpents; likewise it is wholesome for the stomack, good against an inueterate cough; singular to cut, dissolve, and raise the tough fleam flicking in the throat: a special remedy for ruptures, convulsions, and pleurisies: it waite away the ouergrown spleen: it prouokes vrine, and womens flours: in which regard, a bundle or handfull of Germaner boiled in 3 hemines of water, untill a third part be consumed, maketh a foueraigne decoction or drinke for those who are newly fallen into a dropsie. Some there be, who stamp this herb and sprinkle water among, and so reduce it into troches.ouer and besides the vertues before rehearsed, it is good to heale botches newly broken and full of matter; yea old vlcers, though they be filthy and putrified, if it be applied thereto: for the spleen, it is usually taken with vineger: & this iuice doth chaufe and heat those parts which be annointed therewith.

As touching Lawrell, called by the Greeks Chamædaphne, it ariseth vp with one only stem of a cubit high or thereabout: the leaues are but smal, howbeit like to those of the Lawrell: it bringeth forth a reddith seed appearing among the leaues, which being vsed in a liniment fresh and green, casteth the head-ach. The same cooleth all excessive heats; and if it be drunk in wine, appeaseth the wrings and torments of the belly. The iuice thereof taken in drink, drawes downe womens flours, and prouokes vrine: the same applied in wooll to the naturall parts of a woman, causeth her to be soon deliuered when she is in hard trauell of child-birth.

As for *Chamelæa: it hath leaues like vnto those of the oliue: the same be bitter in tast, and in smell odoriferous. This plant groweth in stony grounds, and exceedeth not in height a hand-breadth or span at most; a purgatiue herb it is; for thereof is made an excellent syrrop to euacuate fleame and choler; namely, if there be taken one part of the leaues of this herb, with two parts of wormwood, and so boiled; for certainly this decoction drunk with honey, is singular for to purge the foresaid humors. A cataplasme made with the leaues, cleneth vlcers. It is commonly said, that if this herb be gathered before the sun-rising, and the party to say expressly in the gathering, That it is for the pin and web in the eies; it will dispatch and rid away the laid infirmity, if one do but weare it tied about him. And howe soeuer it be gathered, whether it be with any such circumstance and ceremony, or without, yet is it singular for the haw gnawing in the eies of horses and sheepe.

Chamaesyce beareth leaues resembling those of the Lentil, but they alwaies creep along the ground and rise not vp. This herb groweth in drie and stony grounds: the same boiled in wine and vsed as a liniment vnto the eies, cleareth their sight; for it is singular to dispatch and remove cataracts, suffusions, and cicatrices, growing therein: as also to rid away the misty clouds and films that ouercaeth the sight. Being put vp into the matrice within a linnen cloth in manner of a pessarie, it allaieth the paines thereof. VVarts of all sorts it taketh away, if they be annointed

A nointed therewith. It is a foueraigne remedy also for those who cannot take their wind but sitting vpright.

*Chamaecissos groweth vp spiked with an ear like vnto wheat, and ordinarily putteth forth five branches, and those full of leaues. VVhen it sheweth in the floure, a man would take it to be the *white Violet or Gilloffe. The root is but small. They that are troubled with the Sciaticke, vse to drinke the leau thereof to the weight of three oboli in two cyaths of wine, for seuen daies together; but it is an exceeding bitter potion.

As for Fole-foot, it is called in Greeke Chamæleuca: but we in Latine name it Farranum or Farfugium. It loneth to grow by riuers sides. The leaues fomwhat resemble those of the Poplar, but that they be larger. If the root of Fole-foot be burnt vpon the coles made with Cyprus wood, the smoke or perfume thereof receiued or drunk through a pipe or tunnell into the mouth, is singular for an old cough.

Touching *Chamaepeuce, in lease it is like vnto the Larch-tree: a plant very appropiate to the paine of the back and the loins. The herb Chamæcyparissos, if it be drunk in wine, is singular good against all the venomous stings of serpents and scorpions.

The herb Ampelopifos groweth in vineyards, bearing leaues resembling Porret; but it causeth them to belch foorth that eat thereof. Howbeit, of great power it is against the sting of serpents. It prouoketh vrine & womens monthly terms. And yet whether it be drunke or applied outwardly, it is passing good for them that pisse bloud, & represseth the issue & eruption thereof. Our midwives vse to giue it vnto women newly deliuered and brought to bed: likewise it is found to auile much vnto them that be bitten with mad dogs.

Moreover, the herb called Stachys hath a resemblance also to *Porret, but that the leaues be longer and more in number: it yeeldeth a pleasant smell, and the leaues be of a pale colour, inclining fomwhat to yellow. The nature of this plant is to moue the monthly purgation of women. As for Clinopodium (called otherwise Cleonicion, Zopyron, & Ocymoides) like it is to running wilde Thyme, and full of branches, growing vp a span or handfull high at the least. It groweth in stony places, with a spoky tuft of floures shewing in a round compasse, and for all the world resembleth the feet or pillars that *beare vp a table or bed. This herb taken in drinke is good for convulsions, ruptures, itranguries, and serpents stings. So is the syrrop or juleb that is made thereof, by way of decoction. Thus much of those herbs, which in name carry a shew and resemblance of trees.

It remaineth now to write of some other herbs, which I must needs say are of no great name and reckoning, howbeit such as be indued with wonderfull vertues. As for the famous and notable herbs indeed, I will referue the treatise of them for the books following. And first I meet with that which we in Italy call Centunculus, but the Greeks Clematis, with leaues pointed like the beak of a bird, or resembling the cape of a cloke, growing close to the ground in toiled corn fields. This herb is most effectual and singular about all other, for to stay a laske, if it be drunk in some red or green hard wine. The same beaten into powder, and taken to the weight of one denier Roman, in five cyaths of Oxy mell or hot water, stancheth bleeding: and yet in that sort it is of great effect to fetch away the after-birth of women lately deliuered.

But there be other herbes among the Greeke writers, going vnder the name of Clematis, and namely one, which some call Echites, others Lagines, and there are besides who name it Perty Scammonie, and in very truth, branches it hath a loor long, full of leaues, and not unlike vnto those of Scammonie, but that the leaues be more black or dusky and smaller. This herb is found as well in vineyards as corn lands. People vse to eat this herb with oile and salt, as they do Beets, Coles, and other such pot-herbs; and so eaten, it maketh the body soluble. And yet neuertheless, those who be troubled with the bloody flux, arc wont to take it in some astringing wine with Linseed, and find it to work with good successe. The leaues applied to the eies with parched Barly growth, do restrain the waterish humors which fall thither, so there be a fine linnen cloth wet * between. The same applied in a pulsette to the wens called the kings euil, bring them first to supuration, and afterwards hauing hoggs greafe put thereto, heale them thoroughly. Incorporate with green oile Oliue, they ease the hemorrhoids: and with honey, helpe those that be in a Phthisicke or Consumption. If nouces eat them with their meat, they shall haue good store of milke in their breasts. And if they annoint therewith the heads of their young infants, the haire will come the thicker. A collution made with them and vineger, assuageth the tooth-ach,

* ground-oke,
or pease oke.
* ground-bay,
or pease Law-
rell.
* ground-
oliue, &c.
* ground fig-
tree, &c.
* ground ivy.
* ground Pop-
lar.
* ground-pine,
or Pach tree.
* ground Cy-
pell.
* Porter vine,
or Leek vine.

* otherwife
called, Merg-
ron, Widow-
waile.

* It is not our
ground Lie
or Alchour.
* Vicia sativa.

* Some take it
for Chamæ-
pity.

* * * * *
but it seems
that Pliny
should haue
said ocym-
i. Marjuly, at
Horchound,
out of Distin-
guish hand-
lesse hath ob-
serued.
* Whereupon it
took the name
Clinopodium.

* Supposio:
some make
contrariwise,
Supperpito.

ache, if the mouth be washed therewith. To conclude, it stirreth vp to fleshly lust.

There is besides another kind of Clematis, known by the name of the Egyptian Clematis: howsoever some call it Daphnoeides, others, Polygoneoides. Leaved it is like the Lawrel, saue that the leaues be long and thin. But against all serpents, and especially the Aspidēs, it is a soveraigne counterpoison if it be drunk in vineger. Egypt bringeth forth this herb in great abundance.

CHAP. XVI.

¶ Of Aron, Dracunculus, or Dracontium. Of Aris. Of Millefoile. Of another herbe of that name. Of Pseudobunium. Of Myrrhis and Onobrichis: with their medicinable vertues.

Wake-robin.
Dragon.

There is a great difference betweene * Aron (of which herbe I haue written amongst those with bulbous roots) and * Dracontium: although writers be at some variance about this point, for some haue affirmed that they be both one. Howbeit *Gladius* hath distinguished them, in that the one groweth wild, and the other is planted: and hee pronounceth and calleth Dragon, the sauge Aron: others are of opinion, that there is no other difference between them, but that the onion root is called Aron, and the stem of the same herb Dracontium: whereas indeed there is no likeness at all between the one and the other, if so be that Dracontium of the Greeks be the same that we call Dracunculus in Latine. For Aros hath a black root growing broad, flat, and round, yea, and far greater, in so much as it is a good handfull: but the root of Dracunculus is somewhat red, and the same wyrted and folded round in manner of a Dragon, whereupon it took that name. Nay, the very Greeks themselves haue made an exceeding great difference, between Dragon, and Wake-Robin: for they affirme, That the seed of Dragon is hot and biting, and besides, of such a virulent and stinking smell, that the very sent thereof is enough to driue a woman great with childe to trauell before her time, and to slip an vtremely birth. Contrariwise, they haue wonderfully commended Aron: for first and foremost, they preferre the female of this kind as a principall meat, before the male, which is harder to be chewed, and longer ere it be concocted and digested: moreover, they affirme, That as well the one as the other, doth expectorate the steam gathered in the chest: and whether it be dried and brought into powder and so the drink spiced withall, or otherwise taken in form of a loloche or electuary, it prouoketh both vrine and also womens monthly termes. Drunke with oxymell, it mundifieth and comforteth the stomacke: and Physitians haue giuen it in Ewes milke for the exulceration of the guts: & roasted vnder the embers, they haue prescribed it to be taken with oil for the cough: Some haue foddren it in milke, and giuen the decoction thereof to be drunke in that case. They haue appointed it also to be boiled, and then applied accordingly, to watery cyes for to repress the violence of rheum: likewise, vnto places black and blew with stripes: as also for the inflammation of the amygdals: also, they haue giuen direction to inject the same with oyle by way of clystire, as an excellent remedy for the Hemorrhoids: and to apply it in a liniment with hony, for to take away the pimples and freckles of the skin. *Clephantina* hath giuen it the praise of an excellent antidote or counterpoison: prescribing also the vse thereof for the pleuritic and inflammation of the lungs, in the same manner, as in case of the cough: he appointed likewise to beat the seed into powder, & being mixed either with common oile or oile rosat, to drop it into the eares for to assuage the pain. *Diodes* ordained, to take and temper it with meale, and so to worke it into a paste, & to giue the bread fo made vnto them that cough: to those who be short winded: such also as cannot breath vnlesse they sit vpright: and lastly, to as many as reach vp filthy matter out of their breast. *Diadome* the Physitian made thereof an electuary or loloche with hony, for them to lick who are in a Phthisick, or otherwise diseased in the lights: and hee appointed it to be laid as a pulsette for fractures of bones. There is not a beast or living creature whatsoeuer, but if the shap or naturall parts be annointed therewith, it will fetch away the suitt of their womb. The iuice drawn out of the root, if it be incorporat with Attick hony, fearreth the misty clouds and filmes in the cyes that trouble the sight: the same also cureth the defects and infirmities of the stomack. And a syrup made with the decoction thereof & hony, is good to stint a cough. All vlcers whatsoeuer, be they volues, cancerous sores, or otherwise corrosiue and eating forward illiycia, the very ill-faoured Polype and Noli-me-tangere in the nostrils, the

These descriptions agree: or with our wake Robin & Dragon.

A the iuice of this root doth cure and heale wonderfully. The leaues foddren in wine and oile, are good to be applied vnto any burne or place scalded. Being eaten in a salad with salt and vineger they purge the belly, foddren with hony, and applied as a cataplasme, they are good for dislocations and bones out of ioint. Semblably, the said leaues, whether they be green or dried, are excellent for the gout in any ioint, being laid too with salt. *Hippocrates* deuised a plaster of them and hony together, which was singular for all impostumations whatsoeuer. For to bring downe the desired sicknesse of women, a drams of the root or seeds (it skils not whether) taken in two cyaths of wine, is a sufficient dose. The same potion fetches away the after birth, in case it make no hast to come away after a woman is deliuered of child. And for this purpose *Hippocrates* appointed the very bulbous root of Aron in substance to be applied to the nature of a woman in the like case. It is said, that in time of pestilence it is a singular preseruatiue, if it be eaten with meats. Certes, it is excellent to keep them for being drunke, who haue taken their liquor liberally, or at leastwise to make them sober again. And yet the perfume or smoke thereof, when it burneth, chafereth serpents away, and especially the Aspidēs, or els doth intoxicate their heads, & make them so drunke, that a man shall find them lying benumbed and astonied, as if they were dead. The same serpents moreover will not come neere vnto those that be annointed all ouer with this herb Aros and oile of baies: hereupon it is thought, that it is a good preseruatiue against their stings, if it be drunke in grosslerd wine. They say moreover, that cheefes will keepe passing well, if they be wrapped within the leaues of Aron.

To come now to Dragons, called in Latine Dracunculus, wherof I haue spoken before: the only time to dig it out of the ground, is when barely beyneth to ripen, and within the two first quarters of the Moon, all the while that the doth increase in light. Let one but haue the root of this herb about him in any part of the body (it makes no matter how or where he carry it) he shall be sure that serpents will fle from him. And therefore it is said, that the greater kind of them is singular to be giuen in drink vnto those who are stung already by them, as also that it stoppeth the immoderat course of womens fleurs, in case it touched no yron instrument when it was gathered. The iuice thereof is passing good for pain in the eares.

As for the Dragon which the Greeks name Dracontium, it hath bin shewed & described to me in three forms: the one leaved like vnto the Beers, growing with an vpright main stem with a floure of a purple colour: this Dragon is like vnto Aron. Others brought to me a second kind with a long root (as it were) marked forth and diuided into certaine ioints: it putteth out three small stems and no more: and they declared moreover and gaue direction to seeth the leaues thereof in vineger against the sting of serpents. There was a third sort shewed vnto me, bearing a leafe bigger than that of the Cornell tree, with a root resembling those of the canes or reeds: and (as they auouched) parted into as many ioints and knots just, as it was yeares old, and so many leaues likewise it had, neither more nor lesse. Those that presented it to me, vsed to giue the same in wine or water against serpents.

There is an herb also named Aris, growing in the same Egypt: like vnto Aron above said, saue that it is lesse, hath smaller leaues, and not so big a root, and yet the same is full as great as a good round and large oliue. Of these, there be two kinds: the one which is white, riseth vp with two stalks: the other puts forth but one single stem. Both of them haue vertue to cure running scals and vlcers: to heale burns also and fistulous sores, if a collyrie or tent be made thereof and put into the sore: the leaues boiled in water, and afterwards stamped and incorporate with oile rosat do stay the spreading of corrosiue & eating vlcers. But mark one wonderful property that this plant hath: touch the nature or shap of any female beast therewith, she will neuer linggading vntill she die with one mischiefe or other.

Touching Millefoile or Yarrow, which the Greeks call Myriophyllon, and we in Latine Millefolium: it is an herb growing vp with a tender and feeble stalke, like in some sort vnto Fenell, and charged with many leaues, whereupon it took the name: it groweth in moores and fenie grounds, vsed to very good purpose and with singular successe, in curing of wounds.ouer and besides, it is giuen to drink with vineger for the difficulty of vrine and the stoppage of the bladder, for those that take wind thick and shor, and such as are inwardly bruised by falling headlong from on high: the same is most effectual to take away the tooth ache.

In Tuscan they haue another herb so called, growing in meadowes, which putteth forth on either side of the stalk or stem, a number of pretty leaues as smal in manner as hairs. The same also

is a most excellent wound-hearb. And it is auouched by the people of that country, That if an Ox chance to haue his stringes or sinews cut quite atwioth the plough-share, this hearb will conglutinat and foulder them againe, if it be made into a salve with wines greafe.

Concerning balfard Navev, called in Greeke Pseudo Bunion, it hath the leaves of Navev gentle, and brancheth to the height of a hand-bredth or span. The best of this kind groweth in the lile Candy, where they vse to drinke six or six branches thereof for the wringing tormentes of the belly, for the strangury, the paine of the sides, midriffe, and precordiall parts.

Myrrhis, which some call Smyrrhiza, others Myrrha, is passing like vno Hemlocke, in stalk, leaves, and floure; only it is smaller and slenderer, and hath no ill grace and vnpleasant taste to be eaten with meats. Taken in wine, it hateneth the monthly coule of womens flours if they bee too flow, and helpeth them in labour to speedy deliuerance. It is said moreover, that in time of a plague it is wholsom to drink it for feare of infection. A fupping or broth made of it helpeth those who are in a Phthisicke or consumption. This good property it hath besides, to stir vp a quick appetite to meat. It doth extinguish and kill the venome infected by the fling or prick of the venomous spiders Phalanga. The iuice drawn out of this herb after it hath linc infused or foked three daies together in water, healeth any burne breaking out either in face or head.

Finally, Onobrychis carthiæ leaves resembling Lentils, but that they are somewhat longer: it beareth also a red flower: but reflecth vpon a small and slender root. It groweth about springs and fountains. Being dried and reduced into a floure or powder, it maketh an eath of the strangury, for it be drunk in a cup of white wine well strewed and spiced therewith. It stoppeth a lask. To conclude, the juice thereof caueth them to sweat freely who are annointed all ouer with it.

CHAP. XVII.

¶ The medicinable vertues of Coriacea, Callicia, and Menais, with three and twentie other
herbes, which some hold to be Magicall. Morcorer of Considia, and Aproxits,
besides some other which are revinced and in request againe,
having been long time out of use.

To discharge and acquit my selfe of the promise which I made of strange and wonderful herbs, I cannot chuse but in this place write a litle of those which the Magitians make such reckoning of. For can there be any more admirable than they? And in very truth, *Democritus* and *Pythagoras*, following the tracts of the faid wise men and Magitians, were the first Philosphers, who in this part of the world set those herbs on foot, and brought them into a name.

And to begin with Coriacea and Callicia. *Pythagoras* affirmeth, That these two herbes will cause water to gather it to an yce. I find no mention at all in any other authors, of these herbes, neither doth he report more properties of them.

The same author writes of an herb called Menais, known also by the name of Corinbas, the juice whereof (by his saying) if it be sodden in water, presently curth the sting of serpents, if the place be fomented with the said decoction. He affirmeth moreover, that if the said juice or liquor be poured upon the grasse, whosever fortune to go thereupon, and touch it with the sole of the foot, or otherwise chance to be but dashed or sprinkled therewith, shall die thereupon remedielesse, and no way there is to escape the mischief. A monstrous thing to report, that this juice should be so rank a venom as it is, unlesse it be vsed against a poison.

The felfe fane *Pythagoras* fpeaketh yet of another herb which he calleth Aproxis: the root whereof is of this nature, to catch fire a little off, like for all the world to Naphtha, concerning which, I have written fomewhat already in my difcourfe as touching the wonders of Nature: and he reporteth moreover, That if a man or woman happen to be ficke of any difeafe, at what time as this Aproxis is in the floure, although he or ſhe be thoroughly cured of it, yet ſhall they have a grudging or minding thereof as often as it falleth to floure again yeare by yeare. And of this opinion he is befides, That Frumety come, Hemlock, and Violets, are of the fame nature and property. I am not ignorant, that this booke of his wherein thefe ſtrange reports are recorded, ſome have aſcribed vnto *Cleompus*, a renowned Phyſician: but the current fame or ſpeech holdeth ſtil fo conſtantly, time out of mind, that we muſt needs beleuee *Pythagoras* to be the author of the ſaid booke. True it is indeed, that the name of *Pythagoras* might giue authority and cre-

A dit vnto other mens books attributed to him, if haply any other had laboured and travelled in compiling fow worke, which himselfe judged worthy of such a man as he was but; that *Cleompides* should do yow, who had fet forth other books in his owne name, who would euer beleuee? No man doubteth verily, but that the book intituled * *Chirocinetia*, was of *Demetrius* his making: and yet therein be found more monitrous things by a hundred fold, than those which *Pythagoras* hath deliuered in that worke of his. And to say a truth, letting *Pythagoras* aside, there was not a Philosopher so much added to the schoole and profession of these Magicians, as was *Demetrius*.

In the first place he telleth vs of an herb called Aglaophotis, worthy to be admired & wondered of men by reason of that most beautifull colour which it had : and for that it grew among the quarries of marble in Arabia, confining vpon the coasts of the realme of Persia, therefore it was also named Mamaritis. And he affirmeth, that the Sages or VVise men of Persia called Magi, vsed this herb when they were minded to coniure and raise vp spirits.

ma. In the north-western corner of that country of India inhabited by the Tardiffities, there is another herb named *Ach-menis*, growing without leaf, and in colour resembling Amber; of the root of which herb there be certain Tardifficks made, whereof they cause malefactors and suspected persons to drink (some quantity with wine); the day time, to the end they should confesse the truth: for in the night following they shall be so haunted with spirits and tormented with sundry fancies and horrible visions, that they shall be driven perforce to tell all, and acknowledge the fact for which they are troubled & brought in question. The same writer calleth this plant *Phinophol*, because Mares of all other creatures are most fearful and wary of it.

Furthermore, he reporteth, that so Schogens (from the river Chosais in Persia, there groweth an herb named Theobromon) which for the manifold & sundry colours that it hath, resembleth the painted tail of a Peacock, and it catcheth withall a most sweet and odoriferous sent. This herb (saith he) the Kings of Persia vie in their meats & drinks: and this opinion they haue of it, That it preferreth their bodies from all infirmities and diseases, yea, and keepeth their head so staied and cooled, that they shall neuer be troubled in mind and out of their right wits in such sort, that for the powerfull maiestie of this plant, it is also called Semnon.

D He proceedeth moreover to another, known by the name Adamantis, growing only in Armenia and Cappadocia; which if it be brought neare unto Lions, they will lie all along vpon their backs, and yawne with their mouths as wide as euer they can. The reason of the name is this, because it cannot possibly be beaten into powder.

He goeth on still and beareth vs in hand, that in the realme Ariana, there is found the herbe Ariaris, of the colour of fire. The inhabitants of that country vs to gather it when the Sun is in the signe Leo; and they alirme, that if it do but touch any wood be smeared and rubbed ouer with oile, it will fet the same a burning on a light fire.

What should I write of the plant Theriariaea, which whensoever it begetteth to come vp and rife out of the ground, all the wilde beasts will lie benumbed and (as it were) dead: neither can they be raied or recouered again untill they be sprinkled with the vrine of Hy vna.

E In leafe it reſembleth Lettuce: and being drunk in mead or honied water, there is not ſuch a remedy againe for the dropſie.

ouer and besides, he speaketh of the plant *Ophiura*, found in a country of the same *Aethyopia*, named *Elephantine*: of a leaden hue it is and hideous to see to: whosoever drinke thereof, shall be so frightened with the terrors and menaces of Serpents represented vnder their eyes, that for very feare they shall lay violent hands on themselves: and therefore church robbers are enforced to drinke it. Howbeit, if a man take after it a draught of Date wine, he shall not be troubled with any such fearful visions and illusions.

Moreover, there is found (saith *Democritus*) the herbe *Thalassiegle* about the riuer Indus, and thereupon is knowne by another name *Potamantis*: which if men or women take in drink, transporteth their senses so far out of the way, that they shall imagine they see strange sights.

As for Thencelis, which by his faying groweth vpon mount Libanon in Syria, and vpon Ditea mountain in Candia, also about Babylon and Susis in Persia; if the wife Philosophers (whom they term Magi) drinke of that herb, they shal inconcontinently haue the spirit of prophesie, and foretell things to come.

There

There is besides in the region called Baſtriana & about the riuer Boryſthenes, another strange plant named Gelorophyllis, which (by his report) if one do drink with Myrrh and wine, it will cause many fantastical apparitions: and the party shall thereupon fall into a fit of laughter without ceasing and intermission, and neuer giue ouer, vnlesse it be with a draught of Date wine, wherein were tempered the kernels of Pine nuts together with pepper and honey.

Touching the herb of good fellowship Syſtieteris, found in Perſis, it took that name because it maketh them exceeding merry who are met together at a feaſt. They call the same herb likewise Protomedea, for that it is so highly esteemed among kings and princes. And another name it hath besides, to wit, * Aſagine, because it commeth vp alone & no other herbs neere vnto it: yea, and one more yet, namely, Dionyſiophymas, because wine and it fort so well together, and make as it were a good marriage.

The same Democritus taketh also of Helianthean herb leaved like to the Myrtle, growing in the country Themiscyra, and the mountains of Cilicia, coasting along the sea. And he giues out, that if it be boiled with Lions greafe, and then together with Saffron and Date wine reduced into an ointment, the forſaid Magi and the Persian kings therewith anoint themselves, to seem thereby more pleasant and amiable to the people which is the reason, that the same herb is called Heliocallis.

ouer and besides, he maketh mention of Hermefas (for so he termeth not an herb but a certain composition) singular for the getting of children, which shall proue faire, and of good nature besides. Made it is of Pine nut kernels, stamped and incorporat with bony Myrrh, Saffron, and Date wine, with an addition afterwards of the hearbe Theomprotium and milke: and this confection he prescribeth to be drunk by the man a little before the very act of generation: but by women vpon their conception, yea, and after their deliuey all the while they be noures and giue suck: and in so doing they may be assured, those children of theirs, thus gotten, bred, and reared, shall be passing faire and well fauoured, of an excellent spirit and courage: and in one word, euery way good. Of all these herbes before specified, he setteth down also the very names which the said Magi call them by. Thus much for the Magicke herbes found in Democritus his booke.

Apollodorus, one of his disciples and followers, comes in with his two herbes to the other before named. The one he calleth *Æſchynomæne*, because it draweth in the leaues, if one come neare vnto it with the hand: the other *Croci*, which if the venomous spiders Phalangia do but touch, they will die vpon it.

Crateus writeth of an herb called *Oenotheris*, which being put in wine, if any sauage beaſt be sprinkled therewith, they will become tame, gentle and tractable.

A famous * Grammarian of late daies made mention of another herb *Anacamperos*, of this vertue. That if a man touched a woman therewith, were she departed from him in all the hatred that might be, she should come again and loue him entirely. The same benefit also should the woman find thereby, in winning the loue of a man. This may suffice for the present to haue written of these wonderfull Magicke herbes, considering that I meane to discourse more at large of them and their superstition, in a more convenient place.

CHAP. XVIII.

¶ Of *Eriphia*, *Lanaria*, and *Stratiotes*, with the medicines which they yeeld.

Many writers haue made mention of *Eriphia*. This herb hath within the straw of the stem a certain ſlie like a beetle, running vp and down, and by that meanes making a noise like vnto a yong kid, whereupon it took the forſaid name. There is not a better thing in the world for the voice, than this herb, as folk say.

The herb *Lanaria*, giuen to ewes in a morning when they are fasting, causeth their vdders to ſtrout with milke. *Lactoris* likewise is a common herb and as well known, by reason that it is so full of milke, which causeth vomit, if one taſt thereof neuer so little. Some there be who say, that the herb which they call * *Militaris*, is all one with this *Lactoris*: others would haue it to be very like vnto it, and that it should haue that name, because there is not a wound made with sword or edged weapon, but it healeth it within few daies, in case it be applied thereto with oile.

Sensibly, the Greek writers make great reckoning of their * *Stratiotes*: but this heart groweth

A groweth onely in Egypt, and namely in ſteten grounds where the riuer Nilus hath ouerflowed: and like it is vnto Sengreen or Houſleek, but that it hath bigger leaues. It is exceeding refrigorative, and a great healer of green wounds, being made into a liniment with vineger: moreover it cureth *S. Anthoſis* fire, and all apoſtumes which are broken and run matter: if it be taken in drinke with the male Frankincense, it is wonderfull to see how effectual it is to reſtrefe the flux of blood from the reins.

CHAP. XIX.

¶ Of the herbes that grow vpon the head and chapter of Images and Statues. Of herbes found in rivers. Of the herb called *Lingua*. Of herbes growing through a ſiue, and vpon dung hills. Of *Rhodora* and *Impia*, two herbes. Of *Peſſen Veneris*. Of *Nodia*. Of *Clamers* or *Goſe-graſſe*, called otherwise *Philanthropos*. Of the little Bar named *Canaria*: of *Tordile*. Of the ordinarie *Couch-graſſe*, *Stitchwort*, or *Dent-de-tien*. Of the hearbe *Dactylus*, and *Fenigreeke*: with their medicinal vertues.

It is commonly ſaid, That the herbes or weeds growing vpon the head of any ſtatue or Image, preſently allay the head-ach (if they be gathered in the lapet or any part of ſome garment) ſo as the Patient weare them tied about the necke, by red linnen thread, or inſolded with n ſome red linnen clout. Any herb whatſoeuer gathered out of ſome riuer, creek, brook, or great riuer, before the Sun riſeth, ſo as no man ſee the party during the time of the gathering, provided alwaies that it be tied to the left arm of the ſick Patient, and he or the not know what it is, drives away any tertian ague, if it be true which is commonly ſaid. There is an herbe growing about fountains, called *Lingua*, i. a Tongue: the root thereof being burnt into aſhes, & incorporat with the greafe of a ſwine (out you muſt look, ſay they, that the ſwine be black and baraine) cauſeth haire to come againe, in caſe the place which is bare & bald, be annointed therewith in the ſun. Caſt a ſiue or riddle forth into any beaten path or high way, the graſſe or weeds coming vp vnderneath, and growing through the ſame, if they be gathered and bound about the neck or any other part of women with child, doe haſten their trauell and deliuey. Thoſe herbes which be found growing vpon muckhills, about country farms, are paſſing good and effectual for the ſquinnacy, if they be drunk with water. The graſſe or hearb neere vnto which a dog liſt vp his leg and piſſeth, if it be plucked out of the ground without touching knife or yron inſtrument, cureth any diſlocation or bone out of joint, moſt ſpeedily.

Touching the tree (in manner of an Opie or Poplar) called *Rumbotinus*, I haue deſcribed it in my treatiſe of Hortyards and Tree-plots. Neare to one of theſe (and namely, when there is no vine coupled or married to it) there groweth a certain herb, which in France they call *Rhodora*: it riſeth vp with a ſtem pointed and knotted in manner of a fig tree rod or wand, beareth leaues reſembling nettles, ſo ſo what whitish in the mids, but the ſame in proceſſe of time become red all ouer, and a ſiue of ſiue colour: this herb ſtamped and mixed with old hogs greafe, makes a ſoueraigne liniment for a) ſwellings, inflammations, and impoſtumes gathering to an head; provided alwaies that no edge toole come neare to touch it, and that the party who is dreſſed or annointed therewith turn the head to the right hand, and ſpit thrice vpon the ground on that ſide. And the operation of this medicine will be the more effectual, if three ſundry men of three diuers nations, ſtand on the right hand when they annoint the Patient.

Concerning the herb *Impia*, which is of a hoary colour and white withall, it reſembleth in ſhew the Roſemary, riſing vp with a main ſtem, leaſed and headed in manner of a Cole-ſtocke: from which principall body, there grow forth other ſmall branches, euery one bearing little tufts or heads riſing and mounting about the mother ſtocke (whereupon they called it in Latine *Impia*, for that the children ouer-topped their parents) yet there be others who haue thought it rather ſo called becauſe there is no beaſt wil touch or taſt it. This herb, if it be ground between two ſtones, waxeth as hot as fire, & yeeldeth a iuice which is excellent for the ſquinnacy, if the ſame be tempered with milke and wine. But this is ſtrange that is reported moreover, namely, That whoſoeuer hath once taſted of this hearb, ſhall neuer be troubled with that diſeaſe, and therefore they vſe to giue it in waſh and ſwilt, to ſwine: but look which of them reſuſe to drinke of this medicine, ſhall die of the ſaid ſquinnacy. Some are of opinion, That in birds neſts there is ſome of this hearbe commonly ſet and twiſted among other ſtickes, whereby it commeth to

* Aſone would ſay, wthout ſiue or filter.

* *Apian* called alſo *Pleſion*.

* The ſoulders hearbe.

* All one with *Militaris*.

pasſe that the yong birds neuer be choked, gobbles they their meat as greedily as they will.

As touching the herb called Veneris Peſcen, which took that name of the reſemblance that the long cods thereof haue to combe or rake teeth: the root, if it be ſtamped with mallows, and ſo reduced into a cataplaſme, draweth forth all ſpils, thornes, or whatſoeuer ſticketh within the ſkin. The herb * Exedum, is ſingular to cure the lethargy, and all drowſineſſe.

As for Nodia; it is an herb well knowne in curriers ſhops. They call it alſo Mularis, & other names beſides they haue for it: but tearme it how you will, it healeth corroſiue vlcers: and I find that it is of ſingular operation againſt the poiſon of ſcorpions, if it be drunk in wine or oxycrat, (i.e.) vinegar and water mingled together. There is a certaine rough and prickly herbe, which the Greeks call by a pretty name * Philanthropos, for that it cureth vlcers cloaths as they paſſe by. A chapter or guirland made of this herb, and ſet vpon the head, eaſeth the pain thereof. As for the little Bur called Lappa Canaria, if it be ſtamped with Plantaine and Millefoile, and together with them conſecrated in wine, it healeth all cancerous fores, ſo it be applied vnto the place, and removed once in three daies. The ſame herb digged forth of the ground without any ſpale or yron inſtrument, cureth ſwine, if it be put into the trough where they bee ſerued with graſſe and ſwile, or giuen them in milk and wine. Some adde moreover, that this charm muſt be ſaid in the digging, *Hæc eſt herba Argeomon, quam Minerva reperit ſubtus remedium, qui de illa guſtauerunt*: (i.e.) This is the herb Argeomon, which Minerva inuented as a remedy for diſeaſed ſwine, as many as taſted thereof.

As for Tordile, ſome haue ſaid that it is the ſeed of Sefeli, or Siler of Candy: others take it to be an herb by it ſelfe, which alſo they call Syron: for mine own part, I find by my reading nothing of it, but that it delighteth to grow vpon mountains, and that being burnt, it is good to be drunke for to prouoke womens monethly terms, and to expecorate the ſuperfluous ſcume out of the breſt: for which purpoſes (they ſay) that the root is more effectuall in operation: alſo that the iuice thereof taken in drink to the weight of three oboli, is ſingular for the reins: finally, that the root is one of the ingredients which go to the making of emolliuie plaſters or cataplaſmes.

The Quich-graſſe, otherwiſe named Dent-de-chien, or Dogs-graſſe, is the commonest herbe that groweth: it runneth & creepeth within the earth by many knots or ioints in the root, from which, as alſo from the branches and top-ſprigs trailing about ground, it putteth forth new roots and ſpreadeth into many branches. In all other parts of the world, the leaues of this graſſe grow ſlender and ſharp pointed toward the end: only vpon the mount Pernafius (whereupon it is called Gramen Pernafii) it brancheth thicker than in other places, and reſembleth in ſome fort Iuie, bearing a white ſloure, and the ſame odoriferous. There is not a graſſe in the field whereon horſes take more delight to feed, than this, whether it be Greene as it groweth, or dry and made into hay, eſpecially if it be giuen them ſomewhat ſprinkled with water. Moreover, it is ſaid, that the inhabitants about the ſaide mount Pernafius, do draw a iuice out of this graſſe, in ſtead thereof, they vſe the decoction of the common graſſe, for to conglutinate wounds: [and yet the very herb it ſelfe in ſubſtance will do as much, if it be cut and ſtamped and ſo applied:] and beſides, a good deſenſative it is to keep any place that is cut or hurt, from inflammation. To the ſaid decoction, ſome put wine and hony: others adde a third part in proportion of Frankincenſe, Pepper, and Myrrhe: and then ſet all ouer the fire againe, and boile it a ſecond time in a pan of braſſe: which compoſition they vſe as a medicine for the tooth-ach and watering eyes, occaſioned by the flux of humors thither. The root ſoaken in wine, appeaſeth the wrings & torments of the guts, openeth the conduits of the vrine, and giueth it paſſage; beſides, it healeth the vlcers of the bladder, ſea, it breaketh the ſtone. But the ſeed is more diureticall, and with greater force driueth downe vrine than the root. And yet it ſtoppeth a laſke, and ſlaeth vomit. A peculiar vertue it hath againſt the ſting of dragons or ſerpents. Moreover, ſome there be, who giue direction in the cure of the kings euil, and other flat ſtompes called Pani, to take nine knots or ioints of a root of this graſſe: and if they cannot find one root with ſo many ioints, to take two or three roots, vntill they haue the ſaide number: which done, to enwrap or fold the ſame in vnwaſhed or greaſe wooll which is black [with this charge by the way, that the party who be gathered the ſaid roots be faſting] and then to go vnto the houſe of the patient that is to be cured, waiting a time when hee is from home: and be ready at his returne to receiue him with

A theſe words three times pronounced, *Ieiunus ieiuno medicamentum do*, [i.e.] being yet faſting, giue thee a medicine alſo whiles thou art faſting:] and with that, to bind the foreſaid knots & roots vnto the parts affected, and ſo continue this courſe for three daies together. Furthermore, that kind of graſſe which hath ſeuen ioints in the root, neither more nor leſſe, is ſingular for the head ach, and worketh great effects if the Patient carrieth it tied faſt about him. Some Phyſicians do preſcribe for the intollerable pain of the bladder, to take the decoction of this graſſe boyled in wine vnto the conſumption of one halfe, and giue it to drinke vnto the Patient, preſently vpon the coming out of the baine or hot houſe.

Touching the graſſe, which by reaſon of the pricks that it beares is named Acaleutium, there be three ſorts of it: the firſt is that which ordinarily haue ſuch prickles in the head or top thereof, and thereupon they call it Penta Daſtylon, the five finger graſſe: theſe prickles when they be wound together, they vſe to put vp into the noſtrils, and draw them downe againe, for to make the noſe bleed. The ſecond is like to *Sengreen or Houſleek: ſingular good it is for the whitewits, and excreſcences or riſings vp of the ſkin about the naile roots, if it be incorporated into a liniment with hogs greaſe: and this graſſe they call Daſtylus, becauſe it is a medicine for the fingers. *The third kind named likewiſe Daſtylus but ſmaller than the other groweth vpon old decayed wals or tyle houſes: this is of a cauſtick & burning nature, good to reſſeſſe the cancer in running and corroſiue vlcers. Generally, a chapter made of the herbe Gramen or Dogs-graſſe and worn vpon the head, ſlaneth bleeding at the noſe. The Gramen that groweth along the high waies in the country about Babylon, is ſaid to kill camels that graſe vpon it.

Fenigreeke cometh not behind the other herbes before ſpecified, in credit and account for the vertues which it hath: the Greeks call it Telus and Carphos: ſome name it Buccras and Agoceras, for that the ſeed reſembleth little hornes: we in Latine tearme it Silicia or Siliqua. The manner of ſowing it, I haue declared in due place ſufficiently. The vertues thereof, is to dry, molliſie, and reſolue: the iuice drawne out of it after the decoction, is right ſoueraigne for many infirmities and diſeaſes incident to women, and namely in the naturall parts, whether the matrice haue a ſchirre in it and be hard or ſwolne, or whether the necke thereof be drawne too ſtreight and narrow: for which purpoſes, it is to be vſed by way of fomentation, inſecſion, or bath; alſo by inſuſion or inſecſion with the metrenchlyte. Very proper it is to extenuate the ſcurf or ſcales like dandruffe appearing in the viſage being ſoaken and applied together with ſal-nitre, it helpeth the diſeaſe of the ſpleen. The like effect it hath with vinegar: and being boyled therein, it is good for the liuer: for ſuch women as haue painful trauel in child-birth, & be hardly deliuered. *Dioſcorides* appointed Fenigreeke ſeed to the quantity of one acetabole to be giuen in nine cyaths of wine cuſt for three draughts: with this direction, that the woman firſt ſhould take one third part of this drink, and then go to a hot bath, and whiles ſhe were ſweating therein, to drinke one halfe of that which was left: and preſently after the ſhe is out of the bain, ſup off the reſt. And he ſaith there is not the like medicine to be found in this caſe, when all others will take no effect. The ſloure or meale of Fenigreeke ſeed boyled in mead or honied water, together with barley or Linfeed is ſingular for the paine of the matrice, either applied to the ſhare in manner of a cataplaſme, or put vp into the naturall parts as a peſſary, according as the abouenamed *Dioſcorides* ſaith: who was wont likewiſe to cure the leproy or *S. Magnus* euil, to clenſe & munde the ſkin, of freckles & pimples, with a liniment made with the ſaide ſloure incorporated with the like quantity of brimſtone: with this charge, to prepare the ſkin by rubbing it with ſalnitre, before the ſaid ointment were vſed, and then to annoint it oftentimes in a day. *Theophrastus* vſed to mixe with Fenigreeke a fourth part of the ſeed of garden creſſes wel clenſed, & to temper them in the ſtrongest vinegar that he could come by, which he took to be an excellent medicine for the leproſie. *Damian* ordained to make a drink with halfe an acetabole of Fenigreeke ſeed put into nine cyaths of ſeuil or ſheere water, and ſo to giue it ſo prouoking of womens flours: & no man doubts but the decoction of Fenigreeke is moſt whoſome for the matrice and the exulceration of the guts: like as the ſeed it ſelfe is excellent for the ioints & precordial parts about the heart. But in caſe it be boyled with Mallows, it is good for the matrice & guts, ſo there be put to the ſaid decoction ſome honied wine, & then giuen in drink: for euen the very vapor or ſmell of the ſaid decoction doth much good to thoſe parts. Alſo the decoction of Fenigreeke ſeed reſſeſſeth the ſtinking rank ſmel of the armpits, if the ſkin be waſhed therewith. The ſloure made of Fenigreeke ſeed, incorporated with nitre & wine, quickly clenſeth the head of ſcurf, ſcales, & dandruffe. But

boiled in hydromell (i. honied water) and brought into a liniment with hogs greafe, it cureth the swelling and inflammation of the members serving to generation: likewise it is singular for the broad and flat apoplems called Pains, the swelling kernels and inflammations behinde the ears, the gout as well of the feet as of the hands and other joints; also the putrifaction of the flesh ready to depart from the bone: and being incorporat in vineger, it helpeth dislocations: being boiled in vineger and hony only, it serueth as a good liniment for the spleen: and tempered with wine, it cleneth or mundifieth cancerous sores; but put thereto hony, it healeth them thoroughly in a short time. The said floure of Fenigreeke seed taken in a broth or supping, is an approved remedy for an ulcer within the breast, and any inueterat cough: but it asketh long fetching, euen vntill it haue lost the bitteresse: and afterwards hony is put thereto, and then it is a singular grewell for the infirmities before said. Thus you see what may be said of those hearbes which are in comparison but of a mean account: it remaineth now to discourse of those which are of more account and estimation than the rest.



THE TWENTY FIFTH BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS

SECVNDVS.

CHAP. I.

¶ The nature and properties of Hearbes growing wild and of their owne accord.



When I consider the excellency of such hearbes, whereof now I am to treat, and which the earth seemeth to haue brought forth onely for the vse of Physick, I cannot chuse but grow withall into a wonderfull admiration of the great industry and careful diligence of our Antients before time, who haue made experiments of all things, and left nothing vntried: neither reserued they afterwards this hidden knowledge to themselves, nor concealed ought, but were willing to communicate the same vnto posteritie for their good and benefit: but we contrariwise in these daies, are desirous to keep secret and to suppress the labors of other men, yea and to defraud the world of those commodities which haue been purchased by the sweat of other mens browes: for verily we see, it is an ordinary course, that such as haue attained to some knowledge, enue that little skil vnto their neighbours: and to keepe all forsooth to themselves and teach none their cunning, they thinke the onely way to winne a great name and opinion of some deepe and profound learning. And so far be we off from devising new inuentions, and imparting the same to the generall profit of mankind, that for this long time men of great wit and high conceit haue studied and practised to compass this one point, That the good deeds of their Ancestours might with themselves die and be buried for euer. But certes, wee see and know, that the feuerall inuentions of some one thing or other, haue caused diuers men in old time to be canonized as gods: in such sort, as their memoriall hath bene eternized by the names euen of hearbes which they found out: so thankfull was the age in insuing, as to recognize and acknowledge a benefit from them received, and by this means (in some measure) to make recompence. This care and industrie of theirs, if it had bene employed in Domesticall Plants nere home, which either for pleasure and delight, or else for the Kitchen and Table, are set and sowed, could not haue bene so rare and wonderfull: but they

A they spared not to climbe vp the top of high mountaines, and to rocks vnaccessible; to trauell through blind and vnpeopled deserts, to search euery veine and corner of the earth, & all to find and know the vertues of herbes of what operation the root was, for what diseases the leaues were to be used, yea, and to make wholsome medicines for mans health of those simples, which the verry four-footed beasts of the field neuer fed vpon, nor once touched.

CHAP. II.

¶ The Latine Authors who haue written of herbes and their natures. At what time the knowledge of Simples began to be practised and professed in Rome. The first Greeke writers who treated in this Argument. The inuention of herbes. The ancient Physicke, and the manner of curing diseases as they haue bin. Finally, of the sweet Briar or Eglantine, and the herb Dragons, with the medicinal vertues.

WE Romans haue bin more slack and negligent in this behalfe than was becoming vs, considering how otherwise, there was not a nation in the world more apprehensiu of all vertues and things profitable to this life, than ours. For to say a truth, *M. Cato* (that famous clerke and great professor, so well seen in all good Arts and Sciences) was the first (and for a long time the only author) who wrote of Simples: and howsoever he handled that argument but briefly and summarily, yet he omitted not the leech-craft belonging also to kine and oxen. Long after him, *C. Fulgus* (a noble gentleman of Rome, & a man of approved literature) compiled a treatise of Simples which he left vnperfected, howbeit he dedicated the book to *Augustus Caesar* the Emperour, as may appeare by a preface by him begun, wherein (after a religious and ceremonious manner of supplication) he seemeth to beseech the said prince, That it might please his Majesty especially, to cure all the maladies of mankind. And before his time, the only man among our Latines (as far as euer I could find) who wrote of Simples, was *Pompey the Great*, the valiant or freed man of *Pompey* the Great. And this was the first time that the knowledge of this kind of learning was set on foot and professed at Rome. For *Mithridates* (the most mightie and puissant king in that age, whose fortune notwithstanding was to be vanquished and subdued by *Pompey*) was well knowne vnto the world not only by the fame that went of him, but also by good proofe and euident arguments, to haue bin of all other before his time, a prince most addicted to the publick benefit of all mankind: for the only man he was who deuised to drinke poison euery day (hauing taken his preseruatues before) to the end that by the ordinary vse and continuall custome thereof, it might be familiar vnto his nature, and harmlesse: he first he was also who deuised sundry kinds of antidotes or counterpoisons, whereof one retaineth his name to this day: he it was also and one but he as men thinke, who first mingled in the said antidotes and preseruatues, the blood of Ducks bred in his own realme of Pontus, for that they fed and liued there, of poisons and venenous hearbs. Vnto him, that famous and renowned professor in Physicke *Asclepiades*, dedicated his books now extant: for this Physitian being solicited to repair vnto him from Rome, sent the rules of Physick digested into order, and set downe in writing, instead of comming himselfe. And *Mithridates* it was (as it is for certaine knowne) was alone of all men that euer were, could speake two and twentie languages perfectly; so as for the space of six and fiftie yeares (for so long he reigned) of all those Nations which were vnder his dominion, there neuer came one man to his court, but he communed and parled with him in his own tongue without any truchman or interpreter for the matter. This noble Prince, amongst many other singular gifts that he had, testifying his magnanimitie and incomparable wit) addicted himselfe particularly to the earnest studie of Physicke: and because he would be exquisite and singular therein, he had intelligencers from all parts of his dominions: and I those vnto vpon no small part of the whole world) who vpon their knowledge, exhibited vnto him the particular natures and properties of euery simple by which means, he had a cabinet full of an infinite number of receits and secretes set down together with their operations & effects, which he kept in his said closet, and left behind him with other rich treasure of his. But *Pompey* the Great, hauing vnder his hands the whole spoile of this mighty Prince & meeting in that sacreage with those notes abovesaid, gaue commandement vnto his vassall or enfranchised Grant the sonne named *Lenaxus* (an excellent linguist & most learned grammarian) to translate the same into the

Latine tongue; for which act of *Pompey*, the whole world was no lesse beholden vnto him, than G the common wealth of Rome for the foresaid victorie. Our & besides these, what Greeke authors haue trauelled in Physicke, I haue declared heretofore in conuenient place. And among the rest, *Enax* a King of the Arabians, wrote a booke as touching the vertues and operations of Simples, which he sent vnto the Emperour *Nero*. *Cræneus* likewise, *Dionysius* also, and *Metodorus*, wrote of the same Argument after a most pleasant and plausible manner (I must needs say,) yet fo, as a man could picke nothing almost out of all their writings, but an infinit difficultie of the thing; for they painted every herb in their colors, and vnder their pourtraicts they couched and subscribed their feuerall natures & effects. But what certainty could there be therein: pictures, you know, are deceitfull; also, in representing such a number of colours, and especially expressing the liuely hew of Hearbs according to their nature as they grow, no maruell if they that limned and drew them out, did fail and de, encreat from the first pattern and originall. Besides, they came far short of the mark, setting out hearbs as they did at one only season (to wit, either in th. i. floure, or in feed time) for they change and alter their form and shap euerie quarter of the yeare. Hereof it came, that all the rest labored to describe their forms & colours, by words only. Some without any description at all of their figure or colour, contented themselves (for the most part) with setting downe their bare names, and thought it sufficient to demonstrate and shew their power and vertue afterwards, to whoeuer were desirous to seeke after the same; and verily the knowledge thereof is no hard matter to attain vnto. For mine own part, it hath bin my good hap to see growing in the plant, all these medicinable herbes (excepting very few) b. the meanes of *Antonius Cassor* (a right learned and most renowned Physitian in our daies) who had a pretty garden of his own well stored with simples of sundry sorts, which hee maintained and cherished for his owne pleasure and his friends, who vied to come and see his plot, as indeed it was worthy the sight: this Physitian was then about a hundred yeres old, & in all his life neuer found what sicknesse meant, neither for all this age of his, was his wit decayed, or memory any whit impaired, but continued as fresh still as if he had bin a yong man. But to proceed forward with our discourse: Certes we shall not find a thing againe which our Ancestors so much admired and were more raiused withall, than the knowledge of simples. True it is, I confesse, that the inuention of the Ephemerides (to fore-know thereby not onely the day & night, with the eclipyses of Sun & Moon, but also the very hours) is ancient howbeit, the most part of the common people haue bin and are of this opinion (receiued by tradition) from their forefathers: That all the same is done by enchantments, & that by the means of some sorceries and herbes together, both Sun and Moone may be charmed, and enforced both to lose and recover their light: to doo which feat, women are thought to haue bene wrought by *Medea* queen of Colchis, and other women, and especially by *Circæ* our famous witch here in Italy, who for her singular skill that way, was canonized a goddesse. And from hence it came (I suppose) that *Æschylus* a most ancient Poet, made report of * Italy to be furnished with herbes of mighty operation: and many others haue spoken much of the mountaine *Circios* bearing her name, wherein the said Lady sometime dwelt & kept her residence. And for a notable proof of her singular skill in that kind, the same knowledge in some measure continueth vnto this day in the *Marians* (a nation descended from a son of hers) who are well knowne to haue a naturall power by themselves to tame and conquer all serpents, and not to be subiect to any danger from them. As for *Homer* verily (the father and prince of all learning & learned men, and the best author that we haue of antiquities) howeuer otherwise he was addid to extoll and magnifie dame *Circæ*, yet he attributeth vnto Egypt the glory and name for good herbes; yea though in his time there was not that base Egypt watered as now it is, with Nilus: for afterwards it grew by the mud left there by the inundation of the said riuer. Truly this Poet maketh mention of many singular herbes in Egypt, which the * Kings wife of that country gaue to that lady of his, *Helena*, of whom he writeth so much, and namely, the noble *Nepenthes*, which had this singular vertue and operation, To work obliuion of melancholy & heauinesse, yea and to procure ease, ment and remission of all sorrowes: which, I say, the queene bestowed vpon *Helena* to this end, That she should communicate and impart it to the whole world for to be drunke in those cases abovesaid. But the first man knowne by all records to haue written any thing exactly and curiously of simples, was *Orpheus*. As for *Musæus*, and *Hesiodus* after him, in what admiration they held

A held, and how highly they esteemed the herb *Polion* about the rest, I haue shewed already. Certes, *Orpheus* and *Hesiodus* both haue highly commended vnto vs perfumes and suffumigations. And *Homer* likewise writeth expressly of certain herbes by name, of singular vertue, which I will put downe in their due places. After him came *Pythagoras*, a famous Philosopher, who was the first that composed a booke, and made a treatise purposely of sundry herbes, with their diuers effects; ascribing wholly the inuention and originall of them to the immortall gods, and namely, to *Aspello* and *Æsculapius*. *Democritus* compiled a volume of the same argument. But both hee and *Pythagoras* had trauelled beforeal ouer Persis, Arabia, Ethiopia, and Egypt, and there conferred with the Sages and learned Phylosophers of that country, called Magi. In summe, so far were men in old time raiused with the admiration of herbes and their vertues, that they bashed not to auouch euen incredible things of them. *Xanthus* an ancient Chronicler, writeth in the first booke of his histories, of a Dragon, which finding one of her little serpents killed, raised it to life againe by a certain herbe, which he nameth *Balis*: and with the said herbe, a man also named *Thylas*, whom the Dragon had slaine, was reuiued and restored to health againe. Also King *Tuba* doth report, That there was a man in Arabia, who being once dead, became aliue againe by the vertue of a certain herbe. *Democritus* said, and *Theophrastus* gaue credit to his words, That there is an herbe, with which a kind of soule (whereof I haue made mention before) is able to make the wedge or stoppe to flie out of the hole of her heart, into which the theepheards had drinen it fast, in case she bring the same herbe, and but once touch the foresaid wedge therewith. These be strange reports and incredible, howbeit they draw men into a wonderful opinion of the thing, and fill their heads with a deep conceit, forcing them to confesse, That there is some great matter in herbes, and much true indeed which is reported so wonderfully of them. And from hence it is, that most are of this opinion and hold certainly, That there is nothing impossible, but may be performed by the power of herbes, if a man could reach vnto their vertues: many fewe there be who haue attained to that felicity, and the operation of most simples is vnknewne. In the number of these, *Hierophilus* the renowned Physitian may be reckoned: who was of this mind and gaue it out in his ordinary speech, That some herbes there were, which were effectull and did much good, if a man or woman chanced but to tread vpon them vnder their feet. And verily, this hath bin knowne and found true by experience, that some diseases would be more exasperat and angry, yea, and wounds grow to fretting and inflammation, if folk went but ouer certain herbes in the way as they passed on foot. Low that the Physick in old times was! and how the same lay wholly couched in the Greeke language, and not elswhere to be found. But what might be the reason, that there were no more simples knowne? Surely it proceeds from this, That for the most part they be rusticall peasants, and altogether vnlettered, who haue the experience and triall of herbes, as those who alone liue and conuerse among them where they grow. Another thing there is, Men are careless and negligent, and loue not to take any paines in seeking for them. Again, euery place swarmeth so with Leeches and Physitians, and men are so ready to run vnto them for to recieue some compound medicine at their hands, that little or no regard there is made of herbes and good Simples. Furthermore, many of them which haue bin found out and knowne, haue no name at all: as for example, that herb which I spake of in my Treatise concerning the cure and remedies of come growing vpon the lands: and which we all know, if it be entered or buried in the four corners of the field, will skar away all the foules of the aire, that they shal not settle vpon the come, nor once come into the ground. But the most dishonest and shamefull cause why so few simples in comparison be knowne, is the naughtie nature and pueuich disposition of those persons who will not reach others their skill, as if themselves should lofe forever that which they imparted vnto their neighbor. Our and besides, there is no certain meane or way to direct vs to the inuention and knowledge of hearbes and their vertues: for if we looke vnto these herbes which are found already, we are for some of them beholden to meere chance & fortune: and for others (to say a truth) to the immediat reuelation from God. For prooffe hereof, mark but this one instance which I will relate to you. For many a yeare F vntill now of late daies, the biting of a mad dog was counted incurable: and looke who were so bitten, they fell into a certain * dread & feare of water: neither could they abide to drink, or to heare talk thereof, and then were they thought to be in a desperate case: fortun'd of late, that a fouldier, one of the gard about the * Pretorium was bitten with a mad dog, and his mother saw a vision in her sleep, giuing (as it were) direction vnto her for to send the root vnto her sonne for

* *Tullius* *Terentius*
Terentius

* *Polysdamus*,
Polysdamus
 is the wife of
 King *Terentius*.
Homer O. *Ulysses*.
 O. *Dionysius*.
Calisto *Antiqua*,
 lib. 2.

* *Thyestes*.

* or the prince.

* or Lustitanis.

* Our common
Dragons.

to drink of an Eglantine or wild rose (called Cymorhodon) which the day before she had espied growing in an hortyard, where she took pleasure to behold it. This occurred fel out in * Lactania, the nearest part vnto vs of Spain. Now, as God would, when the fouldier before said vpon his hurt receiued by the dog, was ready to fall into that symptome of Hydrophobic, and began to feare water; there came a letter from his mother, aduerting him to obey the wil of God and to do according to that which was reuealed vnto her by the vision. VVherupon he dranke the root of the said sweet brier or Eglantine, and not only recovered himselfe beyond all mens expectation: but also afterwards as many as in that case took the like receit, found the same remedy. Before this time, the writers in Physick knew of no medicinable vertue in the Eglantine, but only of the sponge or little ball, growing amid the prickly branches thereof, which being burnt and reduced into ashes, and incorporate with honey into a liniment, maketh haire to come againe where it was shed by any infirmity. But seeing I am fallen into the mention of Spain, it cometh to my mind, what I of my selfe knew and saw in the same prouince, within the lands and domaines belonging to an host of mine, namely, a certaine plant or herb there lately found called * Draeculus, which carried a maine foot or stalk an inch or thumb thick, belet with spots of sundry colors, resembling those of vipers and serpents: and I was told, that it was a singular remedy against the sting or biting of any serpents. This Draeculus differeth from another herb of that name, wherof I spake in the book going next before, for this hath a distinct form from that, and besides another strange and wonderful property, namely, to shew two foot or thereabout aboue ground in the Spring time, when serpents first doe cast their sloughes or skins: & the same is no more seen, at the very time that serpents also retire into their holes and take vp their vvinter harbor within the ground. Let this plant be gone once into the earth and hidden, you shal not see a Snake, Adder, or any other serpent stirring abroad. VVherby we may see what a kind and tender mother Nature is vnto vs (if there were nothing els to testifie her loue) in giuing vs warning beforhand of danger: and pointing vnto vs the very time when we are to be afraid and to take heed of serpents.

CHAP. III.

¶ Of a certain venomous found aine in Germany: of the heerb Britannica. What diseases they be that put men to the greatest paine.

SO vnfortunat is our condition, and so much exposed are we to manifold calamities, that the searsh is not pelted with wicked beasts only for to doe vs harme: but also there be otherwhies venomous waters and pestilent traies to work vs more wo and misery. In that voiage or expedition which prince *Cesar Germanicus* made into Germany, after he had passed ouer the riuer Rhene, and had giuen order to aduance forward with his army, he incamped vpon the sea-coasts along Friseland, where there was to be found but one spring of fresh water, and the same so dangerous, that whosoever drunk of that water, within two yeres lost all their teeth, and were besides so feeble and loose iointed in their knees, that vnto they were able to stand. These diseases the Physitians termed * Stomacace and Seelctyrbe: as one would say, the malady of the mouth, and palse of the legs. Yet they found a remedy for these infirmities, and that was a certain herb called * Britannica, which is very medicinable, not only for the accidents of the sinews and mouth, but also for the squinancy and stinging of serpents. It hath leaues growing somewhat long, and those inclining to a brownish or dark greene colour, and the root is blacke; out of which, as also from the leaues, there is a iuice drawne or pressed. The flowers by a peculiar name be called *Vibones*: which being gathered before any thunder be heard, and so eaten, do assure and secure the parties altogether from that infirmity. The Frisians, nere vnto whom we lay incamped, shewed our men this herb. But I muse much and wonder what should be the reason of that name, vnlesse the Frisians bordering vpon the narrow race of the ocean, which lieth only between them & England (called in those daies Britannica) should therupon for the neighborhood & propinquity of that Island, giue it the name Britannica. For certain it is, that it took not that name because there grew such plenty thereof in that country of Eng^{land}, and that it should be transported ouer from thence to our camp; for as yet that Island was not wholly subiect to vs and reduced vnder the Roman seignorie. For an ordinary thing it was in old time practised by those that found out any herbes, to affect the adoption (as it were) of the same, & to call them

* Some thinke this disease to be the Schobuck or Scobut, which rising early at this day, is taken to be our Coelicania, & is so commonly called Scobut-graue or Scobut-graue.

A by their own names, wherein verily men took no small contentment: according as I purpose to shew by the example of certain kings and princes, whose names liue and continue yet in their herbes: so honorable a thing it was thought in those daies to find and it were but an hearme that might do good vnto man. VVheras in this age wherein we now liue, I doubt not but there be some who will mock vs for the pains taken in that behalf, and thinke vs very simple for writing thus as we do of Simples; so base and contemptible in the eyes of our fine fooles and delicate persons, are euen the best things that serue for the benefit & common vility of mankind: howbeit, for all that, good reason it is and meet that the authors and inuentors of them, as many as can be found, should be named and praised with the best yea, and that the operations & effects of such herbes should be digested and reduced into some method, according as they be appropriate to euery kind of disease. In the meditation whereof, I cannot chuse nor contain my selfe, but deplore and pity the poore estate and miserable case of man: who ouer and besides the manifold accidents and casualties which may befall vnto him, is otherwise subiect to many thousands of maladies, which we haue much ado to deuise names for, euery houre of the day happening as they do, and whereof no man can account himselfe free, but euery one is for his part to feare them. Of these diseases so infinit as they be in number, to determine precisely and distinctly which be most grievous, might seem more folly, considering that euery one who is sicke for the present, imagineth his owne sickness to be worst & fullest of anguish. And yet our forefathers haue giuen their judgement in this case, and by experience haue found, That the most extreme pain & torment that a man can indure by any disease, is the Strangury or pissing trouble, occasioned by the Stone or grauell in the bladder. The next is the griefe and anguish of the stomack and the third, Head-ach: for setting these three maladies aside, lightly there are no pains that can kill a man or woman so soon. And here by the way, I cannot for mine owne part but maruell much at the Greeks, who haue published in their writings venomous and pestilent herbes, as well as those that be good and wholesome. And yet there is an appearance and shew of reason, why some poisons should be knowne: for otherwhiles it falleth out that men liue in such extremity as better it were to die, than so to lie in anguish and torment; in somuch, as death is the best port and harbor of refuge that they haue. Certes, *Marcus Varro* reporteth of one *Servius Glodius* a gentleman or knight of Rome who for the extreme pain of the gout, was forced to annoint his legs and feet all ouer with a narcotick or cold poison, whereby hee so mortified the spirits of the muskles and sinews, that he became paralyticke in that part: and euer after vnto his dying day, was rid as well of all sense, as of the paine of the gout. But say, that in these cases it might be tolerable to set down in their books some poisons: what reason, nay what leaue had those Greeks to shew the means how the brains and vnderstanding of men should be intoxicated and troubled: what colour and pretence had they to set downe medicines and receits to cause women to slip the vtinely fruit of their womb, and a thousand such like casts & deuises that may be practised by herbes of their penning? for mine owne part, I am not for them that would send the conception out of the body vnaturally before the due time: they shall learne no such receits of me, neither will I teach any how to temper & spice an amorous cup, to draw either man or woman into loue, it is no part of my profession. For well I remember, that *Lucullus* a most braue General, and a captain of great execution, lost his life by such a loue potion. Much lesse then shall ye haue me to write of Magick, witchcraft, charms, enchantments and forceries, vnlesse it be to giue warning that folk should not meddle with them, or to disprove those courtes for their vanities, and principally to giue an Item, how little trust and assurance there is to be had in such trumpery. It sufficeth me and contenteth my mind, yea and I thinke that I haue done well for mankind, in recording those herbes which be good and wholesome, found out by men of wit and learning for the benefit of posterity.

CHAP. IIII.

¶ Of Moly, and Dodecatheos: of Parony, and herbe called Ventoralis or Glycyde. Of P. naces, Asclepium, Heraclium, and Chironium. Of P. naces Centaurium or Pharmicum. Of Heraclium, Siderium. Of Henbane called Hyoscyamus, Apollinaris, or Altercangenus.

Homer is of opinion, That the principall and soveraigne heerb of all others, is Moly; so called (as he thinketh) by the gods themselves. The inuention or finding of this heerb be

* ascri-

* ascribeth vnto *Mercury*: and sheweth that it is singular against the mightiest witchcraft & incantments that be. Some say, that this herb *Moly*, euen according to *Homers* description, with a round and black bulbous root to the bignesse of an onion, and with a leafe or blade like that of *Squilla*, groweth at this day about the river or lake *Peneus* and vpon the mountain *Cylleum* in *Arcadia*: also that it is hard to be digged out of the ground. The *Grecian* Simplicits describe this *Moly* with a yellow floure, whereas *Homer* hath written, that it is white. I met with one physician, a skilfull Herbarist, who affirmed vnto me, That this *Moly* grew in *Italy* also: and in verie truth he brought and shewed me a plant which came out of *Campaine*, about the digging vp whereof among hard and stony rocks, he had bin certain daies: but get he could not the entire root whole and found, but was forced to break it off, and yet the root which he shewed mee was thirte foot long.

Next vnto *Moly* in account and reputation, is that plant which they call *Dodecateos*, for that it doth represent & comprehend the maicety of all the chiefe gods. They say if it be drunk in water it is a foueraign medicine for al maladies. Seven leaues it hath, resembling very much those of *Lectuce*, and the same spring from a yellow root.

As touching *Pæony*, it is one of the first herbs that were euer known and brought to light, as may appeare by the author or inuentor thereof, whose name it beareth still. Some call it *Pentorobos*: others *Glycyfide*. [where by the way I am to aduertise the Reader, of the difficulty in the knowledge of herbs by their names, considering that the same herbe hath in sundry places diuers appellations.] But to proceed forward with our *Pæony*: it groweth among, bleake and shady mountains, rising vp with a stem between the leaues, * a fingers breadth, and bearing in the top 4 or 5 heads, fashioned somewhat like to *Filberds*, within which there is plenty of seed both red and black. This herb is good against the fantasticall illusions of the * *Fauni* which appeare in sleep. It is said, that this herb must be gathered in the night season: for if the *Rainbird*, woodpeck or *Hickway*, called *Picus Martius*, should chance to spie it gathered, he would flie in the face, and be ready to peck out the eies of him or her that had it.

The herb * *Panace*, promisseth by the very name a remedy of all diseases. A number there be of herbs so called: and all ascribed to some god or other for the inuention of them: for one of them hath the addition of *Asclepius*, for that *Asclepius* had a daughter named also *Panacea*. As touching the coneret iuice named *Opopanax*, it is drawn from the root of this plant (beeing of the *Ferula* or *Fennell* kind, such as I haue heretofore shewed) by way of incision, the which root hath a thick rind, and of a saltish sauer. When the root is pulled out of the ground, there is a religious ceremony obserued to fill vp the hole again with all sorts of corn, as it were in satisfaction to the earth for the violence offered in tearing it vp. As for the said iuice *Opopanax*, where and how it should be made, and which is the best kind thereof and not sophisticat, I haue declared already in my Treatise of forrain and strange plants. That which is brought out of *Macedony*, they call *Bucolicum*, because the Neat-herds of the country mark when the liquor breakes forth and runneth out of it selfe, and so receiue and gather it from the plant: this wil not last, but of all the rest soonest loseth the force. Moreover, all sorts of it, that is rejected principally, which is black and soft; for these be markes to know that it is corrupted; and sophisticat with wax. A second kind there is of *Panaces*, which they call *Heraclium*: the inuention of the vertues and properties whereof is attributed vnto *Hercules*. Some there be who call it *Origanum* *Heraclæticum* the wild, because it is like to *Origan*, whereof I haue heretofore written: but the root of this *Panaces* is good for nothing. A third kind of *Panaces* took the name of *Chiron* the Centaur, who was the first that gaue intelligence of the herbe and the vertues thereof. The leafe is like vnto the *Dock*, but that it is bigger and more hairy: the floure is of a golden yellow color: the root but small: it louth to grow in rich, fat, and barle grounds. The floure of this *Panaces* is most effectual in Physick: in which regard there is more vse and profit thereof than of all the former kindes. A fourth *Panaces* there is besides, found out also by the same *Chiron*, whereupon it hath the denomination of *Centaurium*: called also it is *Pharmaceum*: the occasion of this two-fold name is this: because there is some controuersie in the first inuention thereof; whilst some attribute to it the Centaur *Chiron*, others to *K. Pharnaces*. This *Panaces* is usually fer and planted, bearing leaues indented in the edges like a saw, and those longer than any of the rest. The root is odoriferous, which they vse to drie in the shadow, and therewith to aromatize their wine, for a pleasant and delectable taste it giueth vnto it. Hereof they haue made two speciall kinds:

A kinds: the one with a * thicker leafe: the other with a thinner and smaller.

As for *Heraclæon* *Siderion*, a plant it is also fathered vpon *Hercules*. It riseth vp with a slender stalk to the height of foure fingers, bearing aed floure, and leaues in manner of the *Coriander*. Found it is growing neare to pooles and riuers: and for a wound herb there is not the like, especially if the body be hurt by sword, or any edged weapon made of yron and steele.

There is a wild Vine, named *Ampelos* *Chironia*, for that *Chiron* was the first author thereof. Of this plant I haue written in my discourse of Vines [vnder the name of *Vitis Nigra*] like as also of another * herb, which hath the goddesse *Mineria* for the inuentress.

Moreover, vnto *Hercules* is ascribed *Henbane*, which the Latines call *Apollinaris*; the Arabians, *Altercum* or *Altercanganon*; but the Greeks, *Hyocyamus*. Many kinds there be of it: the one beareth black seed, floures standing much vpon purple, and this herb is full of prickles. And in very truth, such is the *Henbane* that groweth in *Galacia*. The common *Henbane* is whiter, and brancheth more than the other: taller also than the *Poppy*. The third kinde bringeth forth seed like vnto the graine of *Trio*. All the sort of these already named, trouble the brain, and put men besides their right wits: besides that, they breed dizziness of the head. As touching the fourth, it carieth leaues soft, full of down, fuller and fatter than the rest: the seed also is white: & it groweth by the sea-side: Physicians are not afraid to vse this in their compositions, no more than that which hath red feed. Howbeit, otherwiles this white kinde especially, if it be not thoroughly ripe, proueth to be reddish, and then it is reiectd by the Physicians. For otherwise none of them all would be gathered, but when they be fully drie. *Henbane* is of the nature of

C * wine, and therefore offensive to the vnderstanding, and troubleth the head: howbeit, good vse there is both of the seed it selfe as it is in substance, and also of the oile or iuice drawn out of it apart. And yet the stalks, leaues, and roots, are imployed in some purposes. For mine owne part, I hold it to be a dangerous medicine, and not to be vsed but with great heed and discretion. For this is certainly knowne, That if one take in drink more than foure leaues thereof, it will put him beside himself. Notwithstanding the Physicians in old time were of opinion, that if it were drunk in wine, it would driue away an ague. An oile (I say) is made of the seed thereof, which if it be but dropped into the eares, is enough to trouble the brain. But strange it is of this oile, That if it be taken in drink, it serues for a counterpoison. See how industrious men haue bin to proue experiments, and made no end of trying all things, inso much as they haue found means and forced very poisons to be remedies.

CHAP. V.

¶ Of *Mercury*, called *Linozotis*, *Parthenium*, *Hermupoa*, or rather, *Mercurialis*: of *Achilleum*, *Panaces*, *Heraclæum*, *Sideritis* and *Millefolie*: of *Scupa regia*, *Hemionium*, *Tecurium*, and *Splenium*: of *Melampodium* or *Elleboro*, and how many kinds there be of it: of the black or white *Elleboro*, & their medicinable vertues: how *Elleboro* is to be giuen, how to be taken, to whom, and when it is not to be giuen: and how it killeth Mice and Rats.

E The herb *Mercury*, called by the Greeks *Linozotis* and *Parthenium*, was thought to be first found out by *Mercury*: whereupon many of the Greeks call it *Hermu-poa*: and wee all in Latine name it *Mercurialis*. Of it be two kinds, the male and the female: howbeit, the female *Mercury* is of better operation than the other. It riseth vp with a stem a cubit high, which otherwile brancheth in the top: the leaues be like vnto *Basil*, but that they are narrower: full of knots or joints the stalk is, and those haue many hollow concavities like arme-pits. The feed hangeth down from those ioints. In the female the same is white, loose, & in great plenty in the male it standeth close vnto those joints, but thinner: and the same is firer: and as it were wreathed. The leaues of the male *Mercury* be of a dark and blacker greene: whereas in the female they be more white. The root is altogether superfluous, and very little. Both the one and the other delight to grow in plains and champion fields well ordered and husbanded. It is wonderful if it be true, that is reported of both these kinds, namely, That the male *Mercury*, caught women to beare boies: and the female, girls. For which purpose the woman must presently after that shee is conceived, drink the iuice of which *Mercury* the will, in sweet wine cut, and eat the leaues either sodden with oile & salt, or els greene & raw in a salad with vinegar. Some there be who

boyle

* *Mercurialis*
= *Asclepius*
= *Thymus*

* *Mercurialis* or
Parthenium,
= *Asclepius*,
= *Thymus*

* *Mercurialis*
= *Asclepius*,
= *Thymus*

* *Mercurialis*
= *Asclepius*,
= *Thymus*

* *Mercurialis*
= *Asclepius*,
= *Thymus*

* *Mercurialis*
= *Asclepius*,
= *Thymus*

* *Mercurialis*
= *Asclepius*,
= *Thymus*

* *Mercurialis*
= *Asclepius*,
= *Thymus*

boile it in a new earthen vessell neuer vsed before, together with the hearbe Heliotropium or Turnsol, and 2 or 3 cloues of Garlick, vntill it be thoroughly sodden. VVhich decoction they prescribe to be giuen to women, as also the herb it self to be eaten the second day of their monthly sickness, and so to continue for 3 daies together: & then vpon the fourth day, after they haue bathed, to company with their husbands. *Hippocrates* giueth wonderfull praise vnto Mercury, as wel the male as the female, for all those accidents which follow women: but the manner of vniing it, which he prescribed, there is no Physitian hath skill of. He appointed to make pessaries thereof with hony, oile of Koses, oile of Ireos or Lillies, and so to put them vp into the secret parts: and in this manner he saith that the herb is excellent good for to prouoke the monthly termes of women, and to scetch away the after-birth. He affirmeth also, that a potion or fomentation therewith wil do as much. Moreover, by his saying, the iuice of Mercury infused into the ears, or applied by way of liniment with old wine, is singular for them when they runne with stinking matter: he ordaineth likewise a cataplasme of Mercury to be laid to the belly, for to stay the violent flux of humors thither: for the strangury also and infirmities of the bladder. In which cases he gaue the decoction thereof with Myrrhe and Frankincense. And verily for to loosen the belly, although the Patient were in a feuer, there is a potion of Mercury singular good, made in this wise: Take a good handfull of Mercury, seeth the same in two sextars of water, vntill one halfe be consumed, let the party drink the same with salt and hony mixed therewith: but the said decoction if it be made with an hoggs foot, with a hen, capon, or cock boiled withal, is the wholesome. Some Physitians were of opinion, That for to purge the body, both Mercuries, as wel the male as the female are to be giuen, either boiled alone by themselves or els with Mallows: they cleanse the breest parts, and euacuate choler, but they hurt the stomacke. Touching all the other properties of Mercury, I will write in place conuenient.

As *Chiron* the Centaure found out the medicinale vertues of certaine herbes, so we are beholden to his scholler *Achilles* for one, which is singular to heale wounds, and of his name is called Achilleos. This is that wound-herb, wherewith (by report) he cured prince *Telexphus*. Some haue thought that hee deuised first the rust of brass or verdegreece, which is so excellent for salues and plasters: & therefore you shall see *Achilles* commonly painted scraping off the rust of his speare head with his sword into the wound of the said *Telexphus*. Others say, that he took both the said rust or verdegreece, and also the herb *Achilleos* to worke his cure. Some would haue this *Achillea* to be *Panaces* *Heraclaeon*, and others *Sideritis*: we in Latine call it *Millefolia*. An herb it is growing with a stalk or stem to the height of a cubit, spreading into many branches, clad from the very root vp to the top, with leaues smaller than those of Fenell. Others confesse indeed that this herb is singular good for wounds: but the true *Achilleos* (say they) hath a blewish stalk a foot high & no more, bare and naked without any branches at all, howbeit finely deckt and garnished on euery side with round leaues, standing one by one in excellent order, and making a faire sight. There be again who describe it with a four-square stem, bearing heads in the top in manner of Horehound, and leaues like vnto an Oke. And this they say is of that efficacy, that it wil conglutinate & vnite snaws again, if they were cut quite asunder. Moreover, you shall haue some who take it for *Achillea* that kinde of *Sideritis* growing vpon mud walls, which if it be bruised or stamped, yeldeth a stinking sent. Moreover, there is another going vnder the name *Achilleos*, like to this last described, but that the leaues be whiter and fatter, the little stalks or sprigs more tender, & it groweth in vineyards. Last of al, there is one more called *Achilleos*, which riseth vp to the height of 2 cubits, bearing pretty fine & slender branches, and those three square, leaues resembling Fearn hanging by a long stele, & the seed is much like to that of the Beet. In one word, they be al of them most excellent for healing wounds. And as for that especially, which hath the largest leaues, our countrymen in Latine haue called it *Scopa Regia*. And the same is holden to be good for to heale the Squinancy or Gargle in swine.

In the same age wherein *Achilles* liued, prince *Tener* also gaue the first name and credit to one speciall herb, called after him *Teucrion*, which some nominat *Hemionum*: this plant putteth forth little stalks in manner of rushes or bents, and spreadeth low: the leaues be small: it loveth to grow in rough and vntoiled places: a hard and vncleasant fauor it hath in tast: it neuer flourisheth, and feed it hath none. Soueraigne it is for the swolne and hard spleene: the knowledge of which property came by this occasion, as it is credibly and constantly reported. It fortuned on a time when the inwards of a beaſt killed for sacrifice, were cast vpon the ground where this herb

grew,

A grew, it took hold of the spleen or milt, and claued fast vnto it, so as in the end it was seen to haue consumed and wasted it clean: hereupon some there be that call it *Splenion*, or *Splenwort*: and there goeth a common speech of it, That if swine doe eat the root of this herbe, they shall be found without a milt when they are opened. Some there be, who take for *Teucrium* and by that name do call, another herb full of branches in manner of hyssop, leaues like vnto beanes, and they giue order, that it should be gathered whiles it is in floure, as if they made no doubt but that it would floure. The best kind of this herb they hold to be that which cometh from the mountains of Cilicia and Pisidia.

Who hath not heard of *Melampus* that famous diuiner and prophet? he it was of whom one of the Ellebores took the name, and was called *Melampodium*: and yet some there be who attribute the finding of that herb vnto a shepheard or herdman of that name, who observing wel that his he goats feeding therupon, fell a scouring, gaue their milk vnto the daughters of a king *Præus*, whereby they were cured of their furious melancholy, and brought again to their right wits. This herb then being of so excellent operation, it shall not be amisse to discourse at once of all the kinds of Ellebore, whereof this maketh one. And to begin withal, two principal sorts there be of it, namely, the white and the black: which distinction of colour, most writers would haue to be meant and understood of the roots only, and no part else: others there be who would haue the root of the blacke Ellebore to be fashioned like vnto those of the Plane-tree, but that they be smaller and of a more darke & dusky green, diuided also into more jaggs and cuts, but those of the white Ellebore, to resemble the yong Beet new appearing about the ground, save only that they be of a more blackish colour, and along the back part of their concavities inclining to red. Both the one and the other bringeth forth a stalke in fashion like the *Pennis* or *Fennel*-geant, a span or good hand-breadth high, and the same consisteth of certain tunics or skins folded one within another in manner of bulbous plants, rising from the like root; and the said root is full of strings or fringes, as is the head of an onion. The blacke Ellebore is a very poison to horses, kine, oxen, and swine, for it killeth them; and therefore naturally these beaſts beware how they eat of it, whereas confidently they feed vpon the white. The right season of gathering the Ellebores, is in harvest time: Great store thereof groweth vpon the hill *Oeta*, but the best is that which is found in one only place thereof neere about * *Pyra*. The black Ellebore cometh

vp euery where; but the best is in *Helicon*, a mountaine much renowned and praised for other herbs beside it, wherewith it is well furnished. As touching the white, that of the mount *Oeta* is counted the principall: in a second degree, is the white Ellebore of *Pontus*: in the third place is to be ranged, that which cometh from *Elaea*, which (they say) groweth among vines: in the fourth and last place, for good use, is that of the mount *Parnassus*, which is sophisticated with the Ellebore of *Aetolia* neare by. The blacke Ellebore is called *Melampodium*, wherewith folk vse to hallow their houses for to driue away ill spirits, by brewing or perfuming the same, and using a solemne prayer withall: it serueth also to blesse their cattell after the same order. But for these purposes they gather it very deuoutly and with certain ceremonies: for first and foremost, they make a round circle about it with a sword or knife, before they go in hand to take it: and of the ground: then the party who is to cut or dig it vp, turneth his face into the East, with an humble prayer vnto the gods, That they would vouchsafe to giue him leaue with their fauor to do the deed; & with that he makes and obserueth the sight of the Egles; for lightly while they be cutting vp of this root, ye shall see an Egles foring aloft in the aire: now in case the said Egles flie neere vnto him or her that is cutting vp Ellebore, it is a certaine preface and foretoken, that he or she shall surely die before that yeare go about. Much ado also there is about the gathering of the white Ellebore, for vnlesse the party do eat some garlick before, and effumes in the gathering sup off some wine, and will make haste to dig it vp quickly, it will stiffe and offend the head. The blacke Ellebore some call *Eutomon*, others *Polyrrhizon*; it purgeth downward; the white, by vomit, upward, and doth euacuate the offensive humors which cause diseases.

In times past it was thought to be a dangerous purgative, and men were afraid to vse it: but as it forwards it became familiar and common, in so much as many students tooke it ordinarily for to cleanse the eies of those fumes which troubled their thought, to the end that whiles they read or wrote, they might see the better or more clearly. It is wel known, that *Cornelius* the Philosopher purposing to answer the bookes of *Zeno*, prepared his wits and quickened his spirits, by purging his head with this Ellebore. And *Drusus* our Country-man, one of the most famous and renowned

v

renowned

fores remaining after imposthumes suppurate and broken: mixed with parched or fried braley-groats, it is a very rats-bane, & killeth both them & mice. The Gauls or Frenchmen when they ride a hunting into the chafe, vse to dip their arrow heads in the juice of Ellebore, & they have this opinion, that the venison which they take will eat the tenderer; but then they cut away the flesh round about the wound made by the forsaide arrows. Furthermore it is said, That if white Ellebore be beaten to powder and strewed upon milk, all the flies that tast thereof will die. To conclude, the said milke is good to rid away lice, nits, and such like vermin out of the head and other parts of the body.

CHAP. VI.

¶ Of the herbe Mithridation. Of Scordatus or Scordium. Of Polemonia, and Philataria, otherwise called Chiliodynama. Of Eupatorie or Agrimony. Of great Centaury, otherwise named Chironia. Of the little Centaury, named also Libadion and Fel terre. Of Trioches: and the medicinable vertues upon these Simples depending.

C RATERUS hath ascribed the inuention of one herb to K. Mithridates himselfe, called after his name Mithridation: this plant putteth forth no more than two leaues, and those directly and immediately from the root, resembling the leaues of Branc vsmthere riseth vp a stem between them both in the mids, carrying an incarnat floure in the head like a roie.

Pompeius Lenaxus (who by the commandement of Pompey the Great translated into Latine the Phisick notes and receipts of K. Mithridates) saith moreover, that the said prince found out another herb named Scordotis or Scordium; and that among other his writings hee met with the description of the said herb, set down vnder the kings own hand in this manner, namely, That it grew a cubit high, with a main stem four square, and the same full of branches garnished with downy or furred leaues, indented and cut like to those of the oke. This herb is found ordinarily growing within the region of Pontus, in battle and moist champion grounds, and in taste is very bitter. There is another kind of Scordium, with larger and broader leaues, and like it is vnto wild Minth or Calamint; both the one & the other be of great vse in Phisicke, either by themselves alone, or els put into opiats and antidots among other ingredients.

Touching * Polemonia, which others call Philataria, it tooke the name vpon occasion of the strife and controuersie betwene certaine princes which debated about the first inuention thereof. The Cappadocians know it by the name Chiliodynama, & as one would say, ended with a thousand vertues. This plant hath a thicke and grosse root, but smal & slender branches, from the tops whereof there hang down certaine berries in tufts and clusters, inclosing within them black seed in all other respects it resembles rue, & groweth commonly vpon mountains. As for Agrimony, called otherwise Eupatoria, it hath gotten credit & reputation by a * King, as it may appeare by the name. The stalk or stem of this herb is of a woody substance, blackish in colour, hairy, and of a cubit in height, or rather more. The leaues grow disposed and distant by certaine spaces asunder, much like vnto those of cinquefoile or hempe, snipped & cut about the edges ordinarily in five parts, the same are of a blackish or dark green, and full of a kinde of plume or downe. The root is superfluous for any operation that it hath in Phisick: the seed of this herb drunk in wine, is a singular remedy for the dysentery or bloody flux.

The greater * Centaury is that famous herbe wherewith Chiron the Centaure (as the report goeth) was cured, at what time as hauing entertained Hercules in his cabin, hee would needs be handling & tempering with the weapons of his said guest, so long vntill one of his arrows light vpon his foot and wounded him dangerously: wherupon some there be who name it Chironion. The leaues grow large, broad, and long, indented or cut rather, like a saw round about the edges: neare vnto the root they come vperly thick: the stems run vp three cubits high, full of knots and joints all the way: knobbed in the top like vnto Poppie heads: the root is of a mighty bignesse, inclining to a red colour, howbeit tender and easie to break or knap in sunder: two cubits M it beareth in length, full of a liquid juice: bitter in taste, and yet sweet withal: it longeth to grow vpon banks and prety hills, where the ground is fat and battle. The best Centaury of this greater kinde, cometh out of Arcadie, Elis, Messenia, Phloe, and mount Lycæus: and yet there is good found vpon the Alpes, and in many other places. Some there be, who out of this plant

A draw a juice in manner of Lycium. Of such efficacy it is to incarnat wounds, that (by report) if it be put into the pot to seeth among many gobbets or pieces of flesh, it will cause them to grow together and vnite. The root only is to be giuen inwardly, and namely in drinke, to the weight of two drams, in such cases as I will shew hereafter with this charge. That if the Patient haue an ague hanging vpon him, it be stamped and taken in water: others may drinke it well enough in wine. Also the juice drawn forth of it when it is boiled, is good for the diseases or root of theep.

Another Centaury there is, fymnamed also in Greeke Lepton (i. Small) for that it hath little leaues in comparison of the other: some name it Libadion, for that it longeth to grow neere to springs or fountains: it is somewhat like to Origan, save that the leaues be narrower and longer: the stalk is cornered, rising vp to a smal height, to wit, a hand-breadth or a span at most: the same also putteth forth little branches: the floure hath some resemblance of the * red Rose campion: the root is small, & needlesse for any Phisicke vse: but the juice of the herb it selfe, is of singular operation. This herb would be gathered in Autumne, when it is fresh, full of leaues, and floures, for then it yeeldeth best juice. Some take the stalks and branches, shred them final, let them lie infused in water 18 daies, and then presse forth the juice. This is that * Centaury, which we here in Italy call Fel Terre, i. the Gal of the earth, by reason of the exceeding bitterness which it hath: the Gauls terme it Exacos, because if it be drunk it sendeth downward by seage out of the body, any hurtfull poison whatsoever.

There is a third Centaury named Centauris, knowne by the addition Trioches: who soeuer cometh to cut this herb, he quits himselfe well and escapeth faire, if he wound not himselfe. C This plant yeeldeth forth a certaine selfe like vnto bloud. Theophrastus hath deliuered in his history of Plants, that the hawkes * Triorchides prote & defend this herbe, & are ready to encounter and fight with them that come to gather it: wherupon it took the forsaide name Triorchis. But many ignorant and vnskillfull persons there be, who write confusedly of all these Centauries, and attribute this last property and name, to the first Centaury the great.

CHAP. VII.

¶ Of Clymenos, Gentian, Lyfimachia, Parthenis or Artemisia, Ambrosia, Nymphaea, Helictum, and Euphorbium, with their operations in Phisicke.

D HE herb Clymenos beareth the name of K. Clymenus, the first inuenter and finder out thereof: Leased it is like vnto Ivie, full of branches: the stalks or stems be hollow and empty within, diuided by joints and partitions: of a strong and vnpleasant smell: the seed resembleth the grains or berries of Ivie; and it taketh pleasure to grow in wilde woods and among mountains. As touching the operations which it hath, & namely what diseases it cureth being taken in drinke, I will shew hereafter: mean while, I will not put off any longer, but aduertise the Reader, euen in this place, That this herb as it doth good one way, so it hurth another; for if it killeth their naturall seed, it wel may it cure them of the maladies for which it is giuen, but surely E Grecian writers described it to be like in leaue vnto Planrain: in stem four square, bringeth forth certain little eods full of seed, infolded and interlaced one within another after the manner of the tufted and curled haire about the Pourcuttle fishes called Polyp. But be it what it will, the juice of the herb is refrigeratiue, and of great vse in Phisicke.

As for the herb Gentian, we must acknowledge Gentius king of the Illyrians for the Authour and patron thereof, for he brought it first into name & credit: and howsoeuer it grow in all places, yet the best is that which is found in Illyricum or Sclauonia. The leaues come neare in fashion and forme to those of the Ash tree, but that they be small in manner of Lettuce: the stem is tender, of a thumb thickenesse, hollow as a kee and void within: in leaues here and there with certain spaces betwene, growing vpon other while 3 cubits high. The herb is pliable and will winde euery way, somewhat blacke or dusky, without any smell at all: it groweth in great plenty vpon waterish hillslocks that lie at the foot of great mountains, such as the Alpes be. The juice of the herb is medicinable, like as the root it selfe also, which is very hot of nature and not to be giuen in drinke to women withchilde.

Lyfimachia, the herbe so much commended by Erasistratus, beareth the name of king Lyfimachus,

machus, who first gaue light of the vertues that it hath: greene leaves it beareth like vnto those of the willow: the floures be purple: giuen much it is to branch from the root, and those stalkes grow vpright: a * sharp smell it carrieth with it, and delighteth to liue in watery places. Offo effectuall vertue it is, that if it be laid vpon the yoke of two beaſts which will not draw gently together, it staith their strife and maketh them agree well enough.

Not men only and great kings, but women also and queens have affected this kind of glory, To giue names vnto herbes. Thus queen *Artemisia* wife to *Maſſolus* king of Caria, eternized her own name by adopting (as it were) the herb *Mugwort* to her selfe, calling it *Artemisia*, where-as before, it was named *Parthenis*. Some there be who attribute this denomination vnto *Diana* (called in Greek *Artemis* *Ilithya*) because it is of speciall operation to cure the maladies incident to women. It brancheth and buſheth thick much like to wormwood, but that the leaves be bigger, fat and well liking withal. Of this *Mugwort* there be two kinds: the one carrieth broad leaves, the other is tender and the leaves smaller: this grows no where but along the sea coasts. There be writers who call by this name *Artemisia*, another herb growing in the midland parts of the main and far from the sea, with one simple ſtem, bearing very small leaves and plentie of floures, which commonly break forth and blow when grapes begin to ripen, and those cast no vnpleasant ſmell, which herb some thereupon name * *Botrys*, others *Ambrosia*: and of this kind there is great store in *Cappadocia*.

* *Nemphar* is called in Greeke *Nymphæa*, the original of which herb and name also, arose by occasion of a certain maiden *Nymph* or young lady, who did for jealousy that she had conceived of prince *Hercules* whom she loved: and therefore by some it is named also *Heraclion*, of others *Rhopalos*, for the resemblance that the root hath to a club or mace. But to come againe to our first name *Nymphæa*: this quality it hath alluding and respecting the flesh, no disposition (I say) to the act of venery or company of women, as being deprived for that time of all natural feed. The best *Nemphar* or *Nymphæa*, is found in the lake *Orchomenus*, and about the plain of *Marathon*. The people of *Bœotia*, who also vse to eat the feed thereof, commonly call it *Madon*. It taketh great contentment to grow in waters: the leaves floating vpon the face of the water, be broad and large, whiles others put forth from the root. The floure resembleth the *Lillie*, which when it is once shed, there be certain knobs remaining like vnto the bolls or heads of *Poppie*. The proper season to cut the ſtems and heads of this plant, is in Autumne. The root is blacke, which being gathered and dried in the Sunne, is counted a soveraigne remedy for those that be vexed with the flux or fretting of the belly. A second * *Nemphar* or *Nymphæa* there is, growing in *Thessaly*, within the river *Peneus*, with a white root, but a yellow floure in the head about the bignesse of a roſe.

No longer ago than in our forefathers daies, *Juba* king of *Mauritania*, found out the herb *Euphorbia*, which he so called after the name of his own Physitian *Euphorbus*, brother to that learned *Musa* Physitian to *Augustus Cæſar*, who saved the life of the said Emperor, as heretofore I have declared. These two brethren Physitians, joined together in counsell, and gaue direction to wash the body all over in much cold water, after the hot baine or floure, thereby to knit and bind the pores of the skin: for before their time, the manner was to bathe in hot water only, and bind the pores of the skin: But now to return vnto our herb *Euphorbia*, the foresaid *K. Juba* wrote one entire booke (at this day extant) wherein he doth nothing els but expressely set forth the commendable vertues and properties of this one herb. He found the same first vpon the mountain *Atlas*, where it was to be seen (saith he) bearing leaves resembling *Branc-vrins*: so strong and forcible it is, that those who receive the juice or liquor issuing from it, must stand a good way off; for the manner is to lance or wound it first, and then presently to retire backe, and so at the end of a long pole to put vnder it a pail or trey made of kids or goats leather for a receptory, into which there runneth forth out of the plant, a white liquor like vnto milke: which when it is dried and growne together, resembleth in ſhew a lump or masse of *Frankincense*. They that have the gathering of this juice called *Euphorbium*, find this benefit thereby, M That they fee more clearly than they did before: an excellent remedy this is against the venom of serpents, for what part soever is stung or wounded by them, make a light incision vpon the * crown of the head and apply thereto this medicinable liquor, it will surely cure it. But in that country, the *Getulians* (who commonly do gather *Euphorbium*, for that they L order vpon the

* Or the upper part of the butt place.

A mount *Atlas* sophisticate it with goats milke. Howbeit, fire will soon deteſt this impoſture of theirs, for that which is not right but corrupt, when it burneth, doth yeeld a lothſome ſume and ſtinking ſent. The juice or liquor which in France is drawn out the herb *Chamælea* (the same that beareth the red grain, named by the Latines *Coccum*) commeth far short of this *Euphorbium*. The same being grown thick and hard, if a man break it, resembleth gum *Ammoniacke*. Taſt it neuer ſo little at the tongues end, it ſetteth all the mouth on a fire, and ſo continueth it a long time hot, but more by fits, vntill in the end it parcheth and drieth the chaws and throat all ſo far within.

CHAP. VIII.

B ¶ Of *Plantain*, *Bugloſſe*, and *Borrage*. Of *Cynogloſſa* or *Hounds tongue*. Of *Euphthalmus*, *Oxe eye*, or *Many-weed*. Of *Scythica*, *Hippice*, and *Iſchæmon*. Of *Petronica* and *Cantabrica*. Of * *Conſiglio* and *Scotterwoort*, *Hibris*. Of *Celandine* the great. *Canaria* and *Elaphoboccos*. Of *Diſtammus*, *Ariſtolochie* or *Hern-wort*: That ſhew are delighted ſo much therewith, that they will make haſt vnto it, and be ſoon taken. Also the medicinable vertues of theſe herbes above named.

T *Hemiſon*, a famous Physitian, ſet forth a whole booke of the herbe *Way-bred* or *Plantaine*, wherein he highly praiſeth it: and challengeth to himſelfe the honor of firſt finding it out, notwithstanding it be a triuiall and common herb, trodden vnder euery mans foot. Two kinds of it be found: the one which is the leſſer, hath alſo narrower leaves, and inclining more to a blackiſh green, reſembling for all the world ſheepe * or lambs tongues, the ſtalke is cornered bending downward to the ground, & it grows ordinarily in meadows. The other is greater, with leaves enſloſed (as it were) within certain ribs reſembling the ſides of our body, which being in number ſeven, gaue occaſion to some herbariſts for to call it *Heptapleuron*, as a man would ſay, the ſeven ribbed herb. The ſtem of this *Plantain* riſeth to a cubit in height, much like to that of the *Napheew*. That which groweth in moit and watric places, is of greater vertue than the other. Of wonderfull power and efficacy it is by the attinent quality that it hath, for to dry and condenſe any part of the body, and ſerueſh many times in ſtead of a cautery or ſearing yron. And there is nothing in the world comparable vnto it, in ſtaying of fluxes and deſtillations, which the Greeks call *Rheumatifmes*.

To *Plantain* may be ioined the herb * *Bugloſſos*, ſo called, for that the leaſe is like an *Oxe* Our *Borrage*. tongue. This herb hath one ſpeciall property about the reſt, that if it be put into a cup of wine it cheareth the heart, and maketh them that drink it, pleaſant and merry; whereupon it is called *Euphroſynon*.

Vnto this affinity of name, it were good to annex *Cynogloſſos*, *i. Hounds tongue*, for the reſemblance that the leaves haue to a dogs tongue: a proper herb for vinct-works and knots in gardens. It is commonly ſaid, That the root of that *Cynogloſſos* which putteth forth 3 ſtems or ſtalke, and thoſe bearing feed, if it be giuen to drink, cureth tertian agues: but the root of that which hath foure, is as good for the *Q. uartains*. Another * *Cynogloſſos* there is like to it, which carrieth ſmall burſ: the root whereof being drunke in water, is a ſingular counterpoiſon againſt the venom of toads and ſerpents.

E An herb there is with flours like vnto *oxe eyes*, wherupon it took the name in Greek * *Euphthalmos*: the leaves reſemble *Fennel*: & it groweth about town ſides: it ſhutteth forth ſtalke from the root plentifully, which being boiled, are good to be eaten. Some there be who call it *Cachia*. This herb made into a ſalue with wax, reſolueth all * ſchirrous and hard ſwellings.

Other plants there be, which beare the names not of men but of whole nations, which firſt found them and their vertues out. And to begin withal, beholden we are to *Scythia* for that which is called *Scythica*. It groweth notwithstanding in *Bœotia*, and is exceeding ſweet in taſt. Also there is another of that name, ſingular good for the cramps, called by the Greeks *Spasmata*. An excellent property it hath beſides, for that whoſoever holds it in their mouth, ſhall for the time be neither hungry nor thirſty. Of the ſame operation there is another herb among the *Scythians* or *Tartars*, called * *Hippice*, becauſe it workes the like effect in horſes, keeping them from hunger and thirſt. And if it be true that is reported, the *Scythians* with theſe herbs will endure without meat or drink for twelue daies together.

Touching the herbe *Iſchæmon*, the *Thracians* firſt found out the rare vertue that it hath in ſtanching but not of any herb *Hippice*.

This is our common Hound-tongue with little burſ.

Some call them Moons, *Schirromata*, or ſchirrous Swellings, which be ſwellings in the ſtiff full of a graſſie matter.

* *Euphthalmos* witheth the like of the ſweet root or *Liquorice* and *Hippice*, that is cheſt made of marſ milke, but not of any herb *Hippice*.

stanching blood, according as the very name implies. For (say they) it will stop the flux of blood running and gushing out of a vein not only opened, but also if it were cut through. It coucheth and creepeth low by the ground, and is like vnto Millet, but that the leaues be rough and hairy. The manner is to stanch the nothills therewith for to stay the bleeding at noife. And that which growth in Italy stancheth blood, if it be but hanged about the neck, or tied to any part of the body.

The people in Spain named Vetronee, were the first authors of that herb, which is called in France *Vetrenica, in Italy Scerratala, and by the Greeks Ceftron or Plyphotrophon: Surely an excellent herb this is, and aboue all other simples most worthy of praise. It cometh forth of the ground, and riseth vp with a cornered stalk, to the heigh of two cubits, spreading from the very leaues of the biggesse of Sorrell, cut in the edges, or toothed in manner of a saw, with floures of a purple color growing in a spike, & seed correspondent thereto. The leaues dried and brought into powder, be good for very many vses. There is a wine and vineger made or condite rather with Betony, soueraign for to strengthen the stomack, and clarifie the sight. This glorious prerogative hath Betony, that look about what house fouer it is let or sowed, the same is thought to be in the protection of the gods, and safe enough for committing any offence, which may deferre their vengeance and need any expiation or propitiatory sacrifice.

In the fame Spain groweth * Cantabrica, lately found by the people Cantabri, and no longer since than in the daies of *Augustus Caesar*. This herb is to be seen every where, rising vp with a bent or rusty stalk a foot high, vpon which you may behold small low flowers, like to cups or beakers, wherein lie enclosed very small seeds. Certes, to speak the truth of Spain, it hath bin alwaies a nation curious in seeking after simples. And euen at this day in their great feasts where they meet to make merry Sans-nombre, they haue a certain waffell or Bragar, which goeth round about the table, made of honied wine or sweet mead, with a hundred distinct herbs in it; and they are perfumed that it is the most pleafant and wholesomest drinke that can be deuised: yet there is not one amongst them all who knoweth precisely what speciall herbs there be in all that number, in this only they are all perfect, that there goe a hundred severall kinds thereof, according as the name doth import.

In our age we remember well, that there was an herb discovered in the Marfians country: and yet it groweth also amongst the people named *Aequicolæ*, neare vnto the borough *Neruesia*, and they call it * *Confilgio*: this is a soveraigne plant, as we shall shew hereafter in place convenient, for those that be so farr gone in a Phthisicke or consumption, as no man would hope for their life and recovery.

of late daies *Seruilinus D'annocrates*, a famous practitioner in Physick, brought to light an herb
 which he termed *Hiberis*, a deuised and fained name for his own pleasure, and nothing signifi-
 cant, as may appeare by a certain^e Poem that he made as touching the discouery of that herbe.
 It cometh vp most willingly about old tombes and sepulchres, decayed wails, and ruinaul build-
 ings, in vntoiled and neglected places, and namely, common high waies. It beareth floures at
 all times, and is leaued like to *Cresses*: the maine stalk is a cuert hie; but the feed so fine and
 small, that hardly they can discern it. The root also hath the very fine of *Cresses*; it serueth to
 many good purposes, but with most successe in Summer time, & neuer but when it is green and
 fresh gathered. Much ado and trouble there is about the punning and stamping of it. Being tem-
 pered and incorporate with a little hogs greafe, it is singular to be applied to the paine of the
 hucklebone called *Sciatica*, as also to the gout of any ioints whatsoever. If the patient be a man
 it must lie bound fast vnto the place four houres at the most: but women may abide it but halfe
 so long, prouided alwaies, that presently vpon this medicine they go down into an hot bain, and
 after they haue bathed, annoynt their bodies all ouer with wine and oile. Thus must the patient
 doe once euery 2 daies, so long as there remaineth any grudging or minding of the forefaid
 pain. And surely in this sort it drieth vp and cureth all inward and fceret rheums running neare
 vnto the bones. Howbeit, this caueat would be giuen, not to lay this plaister too in the very heat
 and fure of the pain or disease, but the time must be waited when the extremity is somewhat fla-
 ked and ouer past.

Moreover other living creatures also there be besides men, to which we are to attribute the invention of herbs: as first and principally, the great * Celendine, called in Greek Chelidonia, for that the old Swallows with the helpe of this herb helpe their young ones to see again, yet though

A though their eies were plucked out of their head, as some are of opinion. Of this herb there be two kinds: the greater, which putteth forth many flemes, & those full of branches, beareth leaues like vnto the wild * Parieple, but that they be larger. The herb it self groweth vpon to the height of two cubits. The leaues be whitish or hoary, like as the whole plant is feligall, haue the floure, which is yellow. The whole herb yeeldeth a biting and fretting iuice, of the colour of Saffron: and it bringeth forth feed resembling that of Poppy. The lesse * Celendine is seen with leaues fashioned much after the Ivy, but that they be rounder. Both Celendines do floure in the spring about the time that the swallows come abroad and shew themselves vnto vs, and those floures begin to fade again vpon the departure of that bird from vs. The onely time to draw or presse their iuice from them, is whiles they be in the floure: which if it be put into a brazen pan, and seeth gently vpon hot embers or ashes only, together with the best Atticke honey, is a singular medicine to disscusse and scatter the cloudy films that dim the eie-sight. The said iuice alone without any other preparations, goeth to the making of many collyries or eyefalues, which be called Chelidonia, by reason of that ingredient.

Touching the Dogs grail Canaria, it took that name in Latin, because dogs use therewith to discharge their gorge & what their stomacks when their appetite to meat is gone. A strange thing of these dogs wee see them chew this herb in our fight ordinarily every day, yet fo, as we neuer can tel which * herb it is that they haue bitten-for we may perceiue it only when it is eaten down. But no maruel if this creature be so faithful as to coneeale from vs a purgative herb, considering a greater malice that he sheweth in another-for it is said, that if a dog be bitten by a serpent, he hath recourse by and by to a certaine herb that cureth him presently; but he will be sure that no man shall fee him when he creepeth that herb.

Yet the poore hinds (simple and harmlesse creatures they) are not so coy and dainty of their knowledge, for they have shewed vs the plant * Elaphoscolon, whereof I have already written: like as the herb* Sefelallo, which presently after they have calued, they feed vpon in our fight, & make it not frange. Nay, they haue not thought much to impart to vs the vertue of the herb Dictamnus (as I haue partly declared heretofore) for we may euidently see them after they bee shot or wounded, to go forthwith vnto this herb, and no sooner haue they eat of it, but immediately the arrows or darts wherewith they were hurt and sticking in them, fall out of their bodies. This plant is found growing no where but in the Island of Candia.

* *Puffin-berry*—
rain-dance
read *Coranthe*
Cassiopeia,
one of *Dofor*.
* *Scrophularia*,
i. *Pilewort* or
Figwort. This
floureth too-
ner, to wit, in
February.

*With vs they
doe'nt the
common
Quack gaffe.

* *Gretia Dei.*
* Which the
old Romanes
called *Siluri*,
wh. *Siluri* *Dei*
thinketh that
Siluri is a
break fast, for
the name: be-
cause they vs
before dinner
or nooner: te-
tion, to drinke
a draught of
wine: a o nati-
zed with this
a ripe.

In Discreet,
whom Play
beneath here
to translate, it
should be read
as, *Discreet*,
from, *dis*,
that, *cre*,
in a good seed
of discretion:—
so that I shall
ours, appear
by *Discreet*,
to be *Discreet*,
effect:—
will, *Discreet*,
atrix *Discreet*,
opit ab Ida,
obtrusum
infolys. &
re content: m.
ature, &c.
Discreet,
th the int
p women
to edy
lib: th

for that those kind of cattell, feed indifferently in manner of all kind of herbs. Certes, of what G power and efficacy herbs are, and namely, what effects they may work euen by the milk of four-footed beasts grazing and paituring thereupon, appeareth manifestly by two notable examples which I will report vnto you. About Adchera, and along the street or highway called *Diomedes* cauley, there lie certain pastures, wherein all the horses that feed, become enraged, & stark wood thereby. Semblably, the herbage belonging to Potnia, a towne in Magnesia, driueth Asies to a kind of madnesse.

Leauing now those herbsts which took their appellations of beasts, let vs proceed to others. Among which, *Aristolochia* descendeth to be ranged with the best and principall herb which seemeth to haue had that name giuen it by great belied women, for that it is * *aperta lingua*. Our Countreyment of Italy call this herbe in Latine *Malum terra*, which is as much to say, as the * *Apple of the earth*: and they do make foure kinde thereof. The first hath a round root swelling and bunching out: leaues resembling the Mallow, and partly those of luy, but that they be of a more browne and duskyish colour, and withall, softer in the hand. The second *Aristolochia* or Birthwort is taken to be the male, and hath a root as thick as a good Baston or staffe, growing longwile to the length of foure fingers. The third, which by some is called *Clematis*, by others, *Aristolochis* of Candy, hath a root exceeding long and slender, like to that of a young Vine: and this is reputed of all others for the best and most effectuall. The roots of them all be of a Box colour, the stalks small, and the floures purple. They beare little pretty berries, much like to capers. But it is the root alone which is medicinable. A fourth kinde there is also, which they call *Pistolochia*, smaller and slenderer than the last before, named *Clematis*. A root it hath diuidd into many fibers or strings, growing thick one by another, to the thickness of big and well growne riles: whereupon some haue giuen it the name of *Polyrhizon*. All the sort of these *Aristolochies* yeld an aromaticall odour: but the long and smaller root is that which is most pleasant to smell vnto: for it hath a fleshy rind, and is one of the principall ingredients which enter into those odoriferous perfumes and ointments which stand most vpon Nard: these Birth-worts delight all of them to grow vpon plaines and battell grounds. The right season to digge or draw them out of the earth, as in harvest time: and then after they be rid and scaled as it were, from the earth or mould sticking vnto them, they vse to lay them vp safe. Howbeit the best simply are those which come out of Pontus. And take this for a generall rule, That in euery kind, the weightiest is alwaies most medicinable. The round rooted *Aristolochie* hath a speciall property against the poison of serpents. Yet there goeth the greatest name of the long, for this excellent qualitie, if it be true, that is reported thereof: namely, that if a woman newly conceiued with childe, apply the root thereof to her naturall parts within a morcell of raw boeue, it will cause her to breed and forme in her wombe a man childe. Our Fishers here by in Campanie, doe tearme the round root. The poison of the earth. In very truth I haue seene them with mine owne eyes to stampe the said root, and incorporate it with lime into a pisse, and so cast it into the sea in small pellets or gobbets, for to catch fishes: and I assure you they will skuld amaine, and make haste to this bait, and be very eager of bit: but no sooner haue they tasted thereof, but they will turne vp their bellies, and lie floating aloft vpon the water starke dead. As for that *Aristolochie*, which for the manifold routes that it hath is called *Polyrhizon*, it is thought to be soveraigne for conuulsions or crampes, contusions, or bruises: for such also as haue fallen from some steepe and high place, if the root be drunke in wine. Likewise, the seed of this kinde, is supposed singular good for the pleurisie: and to corroborate, strengthen and heat weak and distempered sinewes. The same likewise may be reckoned for a * *Satyriion*.

It remaineth now to knit vp this discourse with a rehearfall of all the operations and effects of the plants before named. To begin then with the most dangerous accident of al other; to wit the sting of serpents, these herbes following are very medicinable and effectuall in that case: namely, *Britannica*, and the roots of all the kinds of *Panaces* taken in wine. The floure & seed besides (of *Chironium* especially) if it be drunke, or otherwise applied as a liniment with wine and oile. Also the wild *Origan* or *Marjoram* called *Camula Bubula*, hath a singular property by it self that way: like as *Polomonia*, otherwise called *Philoteria*, if one take 4 drams weight of the root in wine. Semblably, *Tueurion*, *Sideritis*, & *Scordotis* giuen in wine. But more particularly against snakes, aders, & the like, the said herbes be right soveraigne, either inwardly taken or

A outwardly applied vpon the wound, be it in juice, substance of leafe, or decoction, it skilleth not whether: for which purpose a dram weight of the root of great *Centaure* drunke in three cyaths of white wine is excellent: as for *Gentian*, it serueth properly against snakes, if it be taken to the poise of two drams with Pepper and Rue, in 6 cyaths of wine, green or dry, it makes no matter. Touch herbe *VWillow* or *Lythmachia*, serpents cannot abide the very smell thereof, but flee from it. If any body chance to be stung already by them, there is not a better medicine than to giue *Celandine* in drinke. But of *Betonie* above all the rest there is made a most soveraigne salve to be laied vnto the place that is stung. And such a contrarieite in nature or Antipathie there is by folks report between them and this herb, that if the leaues thereof be strewed in a circle round about them, the serpents within will neuer giue ouer flapping with their tails, and bearing their own sides, until they haue killed themselves. Now for their sting, it is an vsuall practise to giue inwardly one dram weight of the seed of *Betonie* in three cyaths of wine, or els to incorporate 3 drams of the powder in one sextar of water, and lay it as a cataplasme to the sore. *Cantabrica*, *Disammum*, and *Aristolochia*, serue likewise for good counterpoisons, in case a dram weight of their root be giuen in one hemine of wine. But then the Patient must vse to drinke it often. And verily *Aristolochia* worketh the same effect, if it be reduced into a liniment and so applied: so doth *Pistolochia*, which herb is so aduersarie vnto serpents, that if you doe but hang it vp in the chimney ouer the hearth, it will chase away all kind of serpents out of the house.

CHAP. IX.

¶ Of *Argemonie*, *Agarick*, and *Echium*. Of *Henbane* and *Vernaine*. Of *Blatary* and *Lemoria*. Of *Cinquefoile*, *Carot*, and the *Clot* or great *Bur*. Of *Cyclaminus* or *Sow-bread*, and *Hurstrang*: herbs all singular against the sting of Serpents.

The root of *Argemonia* taken to the weight of one Roman denier in 3 cyaths of wine, is singular against the sting of serpents. And since I am come to mention this herbe, I thinke it convenient to discourse farther thereof: like as of other simples also, which I meane to name first, before that I treat of their vertues and effects. And in this course of setting downe medicines, euer as I meet with any herb of any singularitie, I will range it there whereas I know it to be most soveraigne and effectuall. Wel, this * *Argemonia* aforesaid hath leaues like to *A-nemomy*. Rose Persly or *VVindfoure* jagged they be in manner of garden Parsly. Heads it beareth in the top of euery stalk or branch, resembling those of wild Poppy or *Corne-rose*: and a root also not unlike to that of the said herb. A juice it yeeldeth yellow as *Safron*, hot, sharp, and biting in tast. *VVith* vs here in Italy it groweth vpon corn lands. Our countrey men haue described three kinds thereof, but they allow and commend that only, which hath a root sending much of *Frankincense*.

Touching *Agarick*, it is a fungous excrecence growing out of certain trees neare vnto the straits of *Bosphorus*, much like vnto a white Mushrum. The ordinary dose or receipt thereof, to be giuen, bruised, and beaten small into powder, is to the weight of two drams in two cyaths of Oxymel or honied vinegar. That which is found in *Gaule* or *France*, is thought to be weaker in operation. Moreover, that *Agarick* is counted the male which is more massiue or compact, and bitterer withall: but one ill quality it hath, namely, to make the head to ache. The female is of a more loofe and softer substance, which at the first when you tast it seemeth sweet, but within a while it turneth to be bitter.

Echium is of two kinds. One of them is like to *Penirovall*, garnished & crowned (as it were) with tufts of leaues in the head: which being giuen to the weight of two drams in 4 cyaths of wine, is singular good for the venome of serpents, inflicted by their sting. The like effect hath the other also, which is distinctly knowne from the other by the rough and prickie downe that the leaues do beare, and it carrieth in the top little knobs resembling vipers heads: and this may be taken either in wine or in vinegar, chuse you whether.

The great *Clot-bur*, called in Greek *Arction*, some haue named in Latine *Personata*. There is not a plant in the field that carrieth a broader leafe, and besides, furnished it is with as big Burs. The root of this herbe boiled, the Physicians prescribe to be giuen in vinegar to drinke against the sting of serpents.

Henbane, stamped leaues and all, is singular to be taken in wine, especially against the sting G
of the Aspidēs.

But of all other herbs, there is none more honored among the Romans than * Hierobotane,
called also otherwise in Greek Peritiron: which we in Latine name Verbenaca. This is that
herb, which (as I haue declared heretofore) our Embassadors vse to carry with them when they
go to denounce war, and to giue defiance vnto our enemies. VVith this herbe the feastuall ta-
ble of * Iupiter is wont to be welpt and clesned with great solemnitie; our houses also be rubbed
and hallowed, for to driue away ill spirits. And herofe be two kinds. That which they take to be
the female, is stored well with leaues; the male hath them growing but thin: yet both of them
put forth many small and slender branches, commonly a cubit long, and cornered. The leaues
be lesser and narrower than those of the Oke, but deeper they be indented, and the partition vi-
der: the floures be of a * gray colour, the root long and small. It groweth euery where vpon
plains subiect vnto waters. Some writers make no distinction at all of male & female, but hold
them all to be of one and the same kind, because they work the same effects. In France the Drui-
dē vse them both indifferently, in calling lots, telling fortunes, & foreshewing future events
by way of prophesie. But the wise men or sages called Magi, ouerpasse themselves mightily in
this herb, and shew their foolery and vanity without all fence and reason: They would beare vs
in hand forsooth, that whofoeuer be rubbed all ouer the body therewith, shall obtaine whatsoe-
uer their heart desireth, be able to cure and driue away all manner of agues, reconcile them that
be fallen out, make friendship between whom they list, and in one word, giue remedy to any di-
sease whatsoeuer: they giue moreover expresse order, that it be gathered about the rising of the
great doge star, but so, as neither Sun nor Moon be at that time about the earth to see it; with
this especial charge besides, that before they take vp the herbe, they bestow vpon the ground
where it groweth, honey with the combs, in token of satisfaction and amends for the wrong
and violence done in depriving her of so worthe an hearbe. They rest not so, but when these
ceremonious circumstances be performed, they inioine them also who are to dig it vp, for to
make a circle round about the place with some instrument of yron and then to draw and pluck
it vp with the left hand in any wise & so to fling it aloft ouer their heads vnto the aire which
done, they appoint precisely that it be dried in the shade, leaues, stalkes, and roots, euery one a-
part by themselves. To conclude, they adde moreover and say, that if the ball or dining cham-
ber be sprinkled with the water wherein Veruaine lay steeped, all that sit at the table shall be very
pleasant, and make merrie more iocundly. VVell, to leaue these roies and fooleries, the truth is
this, stamp and beat it, giue the iuice or pouder therof in wine, it is a good defensatiue against
the poison of serpents.

An herb there is much resembling Mullen or Langwort, and indeed so like as oftentimes
one is taken for the other, howbeit, the leaues be not altogether so white, and more little
branches it putteth forth, bearing likewise a pale yellow floure: cast this herb or strew it in any
place all the moths thereabout will gather to it, whereupon at Rome they call it Blattaria.

The herbe Lemonium yeeldeth a white iuice, much like vnto milke, which will harden and
grow together in manner of a gum: and it groweth in moist places. The weight of one denari-
us giuen in wine, is a singular preseruation against the dangerous sting of serpents.

As for Cinque foile or five leaved grass, there is not one but knoweth it: so common it is,
and commendable besides for the * strawberries which it beareth. The Greeks call it Pentape-
tes, Chamaelon, or Pentaphyllon: the Latines Quinquifolium. The root when it is new dig-
ged, looketh red: but as it beginneth to drie about ground, so it waxeth black, and becometh
also cornered. It tooketh the common name both in Greeke and Latine, of the number of leaues
which it beareth. This herb herein is of great affinity with the vine, that they both bud, spring
leafe, and shed the same together. It is vied also about purging & blessing of the house against
naughtie spirits or enchantments.

As for Sparganium an herb so called by the Greeks, the root thereof is good to be giuen in
white wine against venomous serpents.

Of Carrots, *Petrusius Diadotus* hath set downe 4 several kinds. But what need I to go through
them all foure, seeing they may be reduced well enough into * twaine, and doe require no o-
ther distinctions. The best and most approued Carrots be those of Candy: the next to which
in goodnesse come out of Achaia. But generally in what country soeuer they grow, the better
be

A be such as come vp in the fonder and drier grounds. As touching the Candy Carot, it resem-
bleth fennel, but that the leaues stand more vpon the white, they be smaller also and hairy with-
all. The stem groweth vpright a foot high, and hath a root odoriferous to smell vnto, and of a
most pleasant tast: this ioieth in stony places exposed to the South quarter of the world. As for
the other Carots of a wild nature, in what countrey grow they not? you shall finde them vpon
earthy banks and hills, you shall haue them about high waies, but neuer shall a man meet with
them in a leane and hungry ground; they loue a battle and far soile: their leaues come neare to
the Coriander: their stem ariseth to a cubit height, bearing round heads, three ordinarily, and
otherwhiles more: the root is of a woody substance, and being once dried, it serueth to no pur-
pose. The seed of this kind is like vnto Cumin, but of the former, to Millet grain, white, quick,
and sharp, and they be all odoriferous and hot in the mouth. The seed of the second is more a-
gre and biting than the former, and therefore ought to be taken in lesse quantitie. As for the
third kind (if we list to make so many) it is much like to the wild Parsnep, called in Greek Sta-
phylinos, and in Latine Pastinaca Erratica: the same beareth a seed somewhat long in form, and
a sweet root. All the sort of these Dauci or Carots, are safe enough from the bit of four-footed
beasts both winter & summer, vnlesse it be after they haue cast their abortiue fruit before-time
[for then they seek thereto to be clesned of their gleane.] Of all Carots, the seeds be vied only:
but that of Candy affordeth the root also, which is sweet: but both the seed of the one sort and
the root of the other, be most approprie remedies against serpents: a dram weight in wine is a
sufficient dose at a time: which also may be giuen in a drench to foure-footed beasts that be
stung by them.

C Touching the herb Therionarca (I mean not that which the Magicians vse) it groweth also
in this part of the world here with vs in Italy: many branches it putteth forth, and springs thick
with diuers shoots from the root: the leaues be of a light green, and the floure of a red rose
colour: it killeth serpents outright, besides, it hath this property, That if it be brought neere vnto
any wild beast, whatsoeuer it be, nameth their fences [whereupon it took that name.]

Perfolata, which the Greeks writers call * Arcion, there is not one but knoweth: large leaues
it hath, and bigger than the very Gourds, more hairy, blacker also and thicker, a white root and
a greath: this root taken in wine to the weight of two deniers Roman, is good likewise against the
venom of serpents. In like manner, the root of Cyclaminus or Sow-bread is as effectuall against
them all: leaues it hath somewhat resembling those of Ivy, but that they be of a more dusky
and sad greene, smaller also and without corners, wherein a man may perceiue certaine whitish
specks. The stem is little, and hollow within: the flours of a purple colour; the root broad (so as
a man would take it to be a Turnep) and couered ouer with a black rind: it groweth in shadowy
places. Our countrymen here in Italy call it in Latine Tuber terra, that is to say, The knor or
bunch of the ground. Sowne and planted it would be in euery garden about an house, if to be it
be true that is reported of it; namely, that wherefoeuer it groweth, it is as good as a counter-
charm against all witchcraft and forceries, which kind of defensatiue is called properly A-mu-
lum. Moreover, this root (they say) if it be put into a cup of wine, turneth the brain presently,
and maketh as many drunk as drink therof. For the better keeping and preserving of this root,
it must be ordered after the manner of Squilla or Sea-onion roots, (i. e.) cut into thinn slices or
roundles, then dried, and so laid vp: the same also is usually sodden to the consistence or thicke-
nesse of hony. As good as this root is in those former respects, yet it is not without some veno-
mous quality, for it is commonly said, That if a woman with child chance to depoure it, shee
will fall presently to labour before her time, and lose the fruit of her wombe. A second kind of
Cyclaminus or Swine-head I finde, surnamed by the Greekes * Cissanthemos, growing with
stem full of knots or joints, hollow within and good for nothing, far different from the former,
winding and clasping about trees; bearing berries much like to those of Ivy, but they are soft &
white floure faire and louely to see too, but a needlesse root for any goodnesse in it: the berries
that it beareth be only in vse, and those are of a sharp and biting tast, & yet they be viscous and
clammy to the tongue: these being dried in the shadow and stamped, are afterwards reduced in-
to certain bals or troches. My self haue seen a third kind also of Cyclaminus, carrying the name
besides of Chamæcissos, which brought forth but one only leafe: the root was much forked &
diuided into branches, wherwith folk vied to kill fishes. But among all other herbs of name, Pen-
cedanum is much talked of and commended: principally, that which groweth in Arcadia: next
to

* Some take it
to be the Cloe
but, or Black-
bar.

* Arcanthos,
Dioscor. id est,
i. caudicifero
Iris.

* Pliny here in-
err sig. offely.
Indic the
leaves of
Cinque foile
are much like
to the Stra-
berries: al-
though the one
hath no root
or by an all,
so the other
with the straw-
berry wick
puts forth but
three leaues.
* The name
and the wilde

to it, most account is made of that in Samothrace: a slender stalk it carrieth and a long, resembling the stem of Fennell: neere vnto the ground it is replenished well with leaves: the root is black, thick, full of sap, and of a strong and vnpleasant smell: it delighteth to come vp and grow among shady mountains. The proper time to dig it out of the ground, is in the later end of Autumne: the tenderest roots and those that run deepest downe into the earth, are most commendable. The manner is to cut these roots ouerthwart into certaine cantels or pieces of foure fingers in length, with knives made of bone, whereout there issueth a iuice which ought to be dried & kept in the shade: but the party who hath the cutting of them, had need first to annoint his head all ouer and his nostrils with oile of rose, for feare of the gidd; and leafe he should fall into a dizziness or swimming of the braine. There is another iuice or liquor found in this plant lying flat within the stems thereof, which they yeeld forth after incision made in them. The best iuice is knowne by these marks; It carrieth the consistence of honey, the colour is red, the smell strong, and yet pleasant, and in the mouth it is very hot and stinging. Much vfe there is of it in many medicines, as also of the root and decoction thereof: but the iuice is of most operation; which being dissolved with bitter almonds or rue, people vse to drinke against the poison of serpents; & in case the body be annointed all ouer with oile, it preferueth them safe against their stings.

CHAP. X.

¶ Of ground Eld: or Wallwort. Of Mullen or Taper wort. Of the Aconit called Thelyphonus. Of remedies against the pricks of Scorpions, the venom of Hedge-toads, the biting of mad Dogs: and generally against all poisons.

The smoke or perfume also of VValwort (a common herb and knowne to euery man) chafereth and putteth to flight any serpents. The iuice of * Polemonia, is a proper defensative especially against scorpions, if one haue it tied about him or hanging at his neck: likewise it resisteth the prick of the spiders Phalangia, and any other of these venomous vermines of the smaller sort. Aristolochia hath a singular vertue contrary vnto serpents: so hath Agaricke, if foure oboli thereof be drunke in as many cyaths of some artificiall or compound aromatized wine, Vervaine is a soueraigne herb also against the venomous spider Phalangium, being taken in wine or oxycrat, i. vinegar and waterso is Cinquefoile, and the yellow Carrot.

That herb which the Latines call Verbascum, i. Lungwort or Hightaper, is named in Greek Phlomos. Two special kinds there be of it: the one is whiter, which you must take for the male; the other black, & that may go for the female. There is a third sort also, but it is found nowhere but in the wild woods. The leaves of all the former, be broader than those of the Colewort, and hairy withal: they beare a mainvpright stem, a cubit in height with the vantage: the seed is black and of no vse in Physicke: a single root they haue, of a finger thickness. These grow also vpon plains and champion grounds. The wild kind beareth leaves resembling fage-the branches be of a woody substance, & the same grow high. There be moreover of this kind two other herbs named * Phlomidis, both of them hairy, their leaves be round, and they grow but low. A third sort there is besides, named by some Lychnitis, and by others Thryallis: it sheweth 3 leaues or foure at the most, and those be thick & fat, good to make wyks or matches for lights. It is said, that if figs be kept in the leaves of that which I named the female, they will not rot. To distinguish these herbs into severall kinds, is a needlesse peece of work, considering they agree all in the same effects: their root together with rue, is to be drunke in water against the poyson of scorpions: true it is, that the drinke is very bitter, but the effect that it worketh maketh amends.

There is an herbe called by some * Thelyphoton, by others Scorpion, for the resemblance that the root hath to the Scorpion; and yet if Scorpions be but touched therewith, they will die thereupon: no marvell therefore if there be an ordinary drinke made of it against their poison: [and here commeth to my mind that which I haue heard, namely, that if a dead scorpion be rubbed with the white Ellebore root, it will reuiue and quicken again.] The said Thelyphoton hath such a spiteful nature against the four-footed beasts [of the female sex] that if the root be laid to their shap or natrall place, it killeth them; if the leafe, which is like vnto the Cyclamin or Sowbread leafe aboue named, be applied in that manner, they will not liue one day to an end. This herb is parted and diuided into knots or joints, taking pleasure to grow in coole and shady places. To conclude and knit vp these remedies against scorpions; the iuice of Betonic, and

A of Plantaine likewise, is a singular remedie for their poison.

Moreover, Frogs (such especially as keep in bushes and hedges, and be called in Latine Rubetæ, i. toads) are not without their venom: I my self haue seen these vaunting Montebanks calling themselves Psylli, as comming from the race of those people Psylli who feared no kind of poison; I haue seen them (I say) in a brauery (because they would seem to surpass all others of that profession) to eat those toads baked red hot between 2 platters, but what became of them? they caught their bane by it, and died more suddenly than if they had bin stung by the Aspis: but what is the help for this rank poison? surely the herb * Phrynon drunk in wine. Some call it Neuras, others Poterion: pretty flowers it beareth: the roots be many in number, full of strings like vnto sinews, and the same of a sweet & pleasant sent. Likewise Alifura is counted another remedy in this case: an herb it is, called by some Damoforium, by others Liron: the leaues might be taken for Planta in, but that they be narrower, more jagged and plaited, bending also toward the ground; for otherwise ribbed they be and full of veins, as like as may be to Plantain. As for the stalk, it is likewise one and no more, plain and slender, of a cubit in height, in the head where of it hath knobs; roots growing many and thick together, and those but small, like vnto those of the blacke Ellebore, but they be hot and biting, of a sweet and odoriferous smell, and of a fatty substance withall: it groweth ordinarily in watery and moist places. And yet there is a second kind of it which commeth vp in woods, of a more dusky and blacker colour than the former, bearing bigger leaues: the root of both is of singular operation against the venomous frogs or toads aboue said: also against the sea-hare, if it be taken in wine to the weight of one dram.

And since we haue mentioned the sea-hares, take this withall, That Cyclamin also is soueraigne against their venom. Moreover, a mad dog letteth in a dangerous poison by the wound that his tooth maketh, against which there is not a better thing than dog-rofe of the Eglantine called Cynorrhodon, as I haue before declared. Plantain is a singular herb against the biting of any venomous beast whatsoever, whether it be taken inwardly in drink, or outwardly applied. Betonic is likewise good therefore if it be drunke in old wine. Vervain, which the Greeks call Peristeros, is an herb bearing one main stalk of a good height, furnished well with leaues, spreading forth toward the head into other branches, much sought to by doves and pigeons, whereupon it took the foresaid name Peristeros. They say, whatsoever carry this herb about them, there dare not a dog bark at them. Thus much as touching the dangers proceeding from venomous beasts.

What remaineth now but in the next place, to treat as well of such forceries and maleficall poisons, as men haue deuised and practised to the mischief of their own kind, as of their remedies: where in the first place there presenteth it self vnto vs that noble herb Moly, so much commended by the Poet Homer, as a soueraigne preferuative not only against all those wicked inventions, but also against the secret and diuinish practises; to wit, charmes and enchantments, wrought by Art magick and witchcraft. Next vnto which, the herbs * Mitridation, Scorditis, and Centaury: also the seed of Betony drunke in honied wine or sweet cutt: the powder also of the dried herb it selfe, to the weight of one dram taken in 4 cyaths of old wine, doth expell out of the body & euacuat by the legge any poison whatsoever, but the patient must be forced to vomit vp the first potion, and then to recharge again & take another draught of the foresaid medicine. And verily it is a common speech, That whoeuer vse to tast euery day a little of Betony, shall neuer catch harm by any poisoned cup. If a man or woman chance to haue drunke down any poison, the root of Aristolochia is a present remedie, vfed in that order as I haue preferred before in case of stinging by venomous serpents. The like effect hath the iuice of Cinquefoile. Semblably Agaricke, if it be taken to the weight of one denier Roman in three cyaths of honied water or mead, is of the same operation; with this charge, That the party do lay vp his stomach or cast before. There is an herb called Calves-nout, in Greeke Antirrhinon or Anarrhinon, a kind of wild Lichnis like vnto Line or flax, with little or no root at all, carrying a floure resembling the Hyacinth or Crowtoes, and the seed much like a calues nout or muzzell: the Magicians haue a great opinion of this herb, That whoeuer be rubbed all ouer with it, or annointed

thoroughly with the iuice thereof, shall looke more beautiful, louely, and amiable: and whoeuer weareth it in a bracelet about the wrist or arme, shall take no harme by charme, forcerie, witchcraft, or poison. The like conceit they haue of another herb called * Eupacea, and they affirme, That if any man or woman be annointed therewith, they shall grow in great credit and reputation with the people. Moreover, they say, that the herb Artemisia or Mugwort will pre-

* Some take it for Rana maritima, i. Sea-hare, or rather Rana den-hare.

Whereof the witch is the beginning of the first chapter of this booke.

Eupacea indeed signifies in Homer, a bon-voyage, or prosperous nauigation: but what should it here mean? I should haue read in Theophrastus, but which is no heauy, but the happie of a good name among men, whereof I say speake here, & which Theophrastus attributes to Antirrhinon, as one of the best of the herbs: but he hath but by the fault, I pray you, as well here as elsewhere, cry'd out, as if he were not his words distinctly and in his way.

all those who haue it about them, from witch-craft, forcerie, and poison, from danger by venomous beasts, yea and from the hurtfull and maligne aspect of the very Sun. The same, if it be taken in wine, helpeth and saueh those that are poisoned with Opium: being either drunke, or worn about the neck, or but tied to any part of the body, it hath a peculiar vertue against the venom of todes. There is an herb of the bulbous or onion root kind named * Pericarpum: whereof I see two sorts, the one hath a red bark or rind [about the root], the other a black, and is like unto the Poppy; of greater operation this is than the former, but both of them be very hot: which is the reason, they serue to good purpose for to be giuen vnto them that haue drunk Hemlocke: against which venomous herb, Frankincense, and Panaces (especially that which they call Chironium) be counted singular: and this Panaces also last named, is an excellent antidote for them that are poisoned with venomous Mithroms.

CHAP. XI.

Proper receipts and remedies for the diseases of the head.

Since wee are waded so far into the deep secrets of Physick, it will not be amiss to proceed forward and to let downe many good medicines for all the maladies incident either in general to the whole body, or particularly to euery speciall part and member thereof, beginning first at the head.

There is an vnseemely accident happening otherwhiles to the head, and disgraceth it much, called * Alopecia, when as the haire vnaturally falleth off. The cure of this inconuenience, is to make a liniment with the roots of Nymphaea and Hemlocke stamped together, and therewith to anoint the bald and naked places, for it will cause the haire to come vp againe & grow thick. Polyticha & Callictricha (both capillare herbs) differ one from another; for that Polyticha hath white benty filaments or threds, the leaves be also more in number & greater with all: Lesides, the very plant it selfe spreadeth and brancheth more than the other: this herb is singular to fasten the haire of the head at the root, and to make it bush and grow thick, being otherwise ready to shed. In like manner, there is an herb called in Latine * Lingula, which loeth to grow about springs or fountains, & is singular for the same imperfection of shedding haire, if the root together with the leafe burnt and beaten to powder, be incorporate with the greafe of a blacke sow (but in any wife the must be a young guilt that neuer farrowed or had pigs) and so brought into a liniment, and the head rubbed and annointed therewith with this charge besides, That after the annointing, the Patient sit bare headed in the sun; for that helps forward the cure verie much. And in the same case there is the like use of the Cyclamine or Sowbread root.

Touching the scurle or brannie scales called Dandruffe, the root of Vetrarium or Ellebore, sdden either in oile or water, maketh a most excellent medicine to rid it away, & to cleanse the head thereof.

As for head-ache, the roots of all the kinds of Panaces, stamped and tempered with oile, doe cure the same: so doth Aristolochia and Iberis, if they be applied in manner of a frontall and bound to the forehead, the space of an houre or longer if the Patient can abide it, so that a bath beuoyd presently vpon it. The yellow carot also called in Latine Daucum, is a good remedy for the pain in the head. Moreover, the foresaid herb or root Cyclaminos, if it be mixed with hony and put vp as an erbin or nasal into the nostrills, purgeth the brain, & the same brought into an ointment, healeth the scalls and sores in the head. Of the like operation is Vernaia, which they call in Grock Peristeros. The wild Caraway, named Calacia or Lcontine, beareth certain grains resembling smal seed pearls, which a man shal see hanging between the leaues, which be big & large: and it groweth lightly vpon hills: take 15 of these grains or seeds, steep them well in oile, and maketherof a liniment, it is passing good to rub and annoint the head withall, so it be done vpward against the haire. Furthermore, the herb Callictriche, is singular good to prouoke sneezing; it beareth leaues much like vnto those of Lentils or Ducks meat: the stalks be very small like fine bents, and the root is as little: it delighteth to grow in coole, shady, and moist grounds, and is of a sharp and hot tast.

For the lowfie disease, wherein lice and such vermin cawle in exceeding abundance all ouer the head, there is not a better medicine than an ointment made of hyssope and oyle stamped and incorporate together: the same likewise killeth the itch in the head. Now the best hyssop is

A that of Cilicia, growing vpon the mountaine Taurus: and in a second degree, there is reckoning made of that which cometh out of Pamphylia and Smyrna. An herb this is, nothing friendly to the stomack: being taken with figs, it purgeth downward, with hony, by vomit: howbeit, stamped with hony, salt, and cumin, and so reduced into a plaster, it is thought to be a proper remedy for the sting of serpents.

Lonchitis is not the same herb (as most men haue thought) that Xiphion or Phasganion, although the seed be pointed like to a speare head; for it beareth leaues resembling lecke blades, which toward the root be red, and more in number than about the stem it selfe: it carrieth little heads in the top, made after the fashion of masks or visors, such as players in Comedies are wont to weare, killing out pretty little tongues, and the roots be exceeding long, & yet it groweth in drie grounds far from water. Contrariwise, * Xiphion or Phasganion delighteth in waterish and moist places: at the first coming vp, it maketh a shew of a sword blade: the stem riseth vp to the heighth of two cubits: the root hath beards or fringes as it were hanging about it, and is in fashion shaped to a filberd nut: which ought to be digged out of the ground before haruest, and to be dried in the shade: the vpper part of this root (for it groweth double) stamped with Frankincense and mixed with wine of equal weight, and so made into a salve, draweth out the spills or broken scales in the brain-pan or scull: the same is good likewise to draw any impostume that is broken, and to fetch out corruption in any part of the body: and it is singular for the bones that be broken and cruised: vnder cart or waggon wheels: lastly, the same is an effectual remedy against poisons.

C But to returne againe to the head ach; the said Ellebore boiled either in common oile, or els in oile rosat, and applied in manner of a liniment, doth assuage the same, so doth Peucedanum [i. Hare-strange] being incorporat in oile of roses and vineger. The same also being laied into the head warm, doth mitigat the pain called the migram, when as the one half of the head doth ache; and it cureth beside, the dizziness of the braine. The root of Peucedanum made into an ointment and vsed accordingly, prouoketh sweate, by reason of the hot nature that it hath, which is burning and causticke. The herb Fleaw or, which some call Pphyllion, others Cynoides, Chrysalion, Sicelion, and Cynomyia, hath a small root, whereof there is little or no vse in Physick. The branches that it bringeth forth, be slender and pliable in manner of vine shoots, bearing in the top certain big berries or knobs like vnto beans; the leaues not vnlike to * dogs heads; the

D seed resembleth dogs fleas, whereupon it hath that name Cynomyia, and the same lieth within the foresaid berries. The herb it selfe is ordinarily growing in vineyards: of great vertue it is to refrigerat and to disscuse or resolute withall: but the seed it is which yeeldeth most vse in Physicke; and the same is applied in a frontall to the forehead and temples, with vineger and oile of roses, or else with vineger and water together, for to allay the paine of the head. For other accidents, when it is applied in forme of a liniment, the manner is to take the measure of one acetable, and to infuse it in a sextar of water vntill it gather together into a thicke and clammy substance; then it would be stamped, and the muciage or slime drawne out thereof serueth for any paine, impostume, and inflammation.ouer and besides, Aristolochia is a singular herb for the wounds of the head: it draweth forth broken bones and spils in any part of the head; and so doth Pifolochia. To conclude, there is an herb called * Thyssellum, not vnlike to garden Parsley: the root whereof if it be but chewed in the mouth, purgeth the head of phlegmaticke humours.

CHAP. XII.

Receipts for the diseases of the eyes, made of Centaurie, Celendine, Panaces, Henbane, and Euphorbium.

It is thought that the Rha-pontick (which is the greater Centaurie) helpeth the cie-sight verie much, if a fomentation be made therewith and water together. The iuice of the lesse Centaurie tempered with hony and applied, helpeth the imperfections of the cie; namely, when there seeme gnats to flie before them, or when they are ouer cast with a cloud; for it scattereth the dimmeff and web which darkeneth the sight, and doth subtiliate the cataraft or cieaticres that ouer grow the ball or apple. The herbe Sideritis is so appropriate vnto the cie, that it cureth the verie haw that groweth in horses cie. But so excellent is the herbe Celendine, that it passeth

* So called, because the fruit cleaveth round about the stem or flie of the head.

* Becu-foxes are much subiect vnto it, who are called in Greeke Alopeces.
* Callictrich vnto it, Maiden-haie.

* Alders tongue.

* Our Glades or Flage.

* Carpenters.

* Whereupon it is called Cynoides.

* Hydrisyns, Dracunculus.

* Water-parsley.

passeth them all, and is a foueraigne medicine for all such imperfections. The root of Panaces mixed with parched or fried barley meale, maketh a good cataplasme for to repress the rheume of watery and weeping eyes. And there is a singular drink commended for the staying of such humors, made of Henbane seed one obulus, of Opium or the juice of Poppy and wine as much: Some put thereto the like quantity of the juice of Gentian, which also they vied to mingle with collyries and eye-salues (that require some sharpnesse and acrimony) * in stead of the forehead Opium or Poppy juice. Moreover, Euphorbium clarifies the eye sight, if there be an inunction made therewith. For bleered eyes, it is good to drop the juice of Plantain into them. As for the thick mists that hinder the eye sight, Arithochia doth dissolve and resolve them. The herb Iberis bound vnto the forehead, together with Cinquilloile, stoppeth the fall of humors into the eyes, and cureth all other maladies incident vnto them. Mulln or Lungwort is likewise a great defensive against the forehead rheums which haue taken a course to the eyes and cause them to water, so is Veruain, if it be applied with oile of rose or vineger: For the cataraict or suffusion of the eyes, for the pin and web which offend the eye sight, the Troches of Cyclamine being dissolved and so applied, are foueraigne. As for the juice of Peucedanum, (i. Hare-strange) it is (as I said before) a notable medicine for to cleare the sight, and rid away the muddy mists before the eyes, if it be laid to with Opium and oile of rose. Finally, Flea-wort slaieth and keepeth vp the flux of humors into the eyes, if the forehead be annointed with the mucilage thereof.

CHAP. XIII.

¶ Of Pimpernell, named *Anagallis* and *Corchoros*. Of *Mandragoras* or *Circium*. Of *Hemlocke*, *Crismarine* or *Sampire*, named in Greeke *Critismos Agria*. Of the herbe *Melidiana*. Of *Eumittere*. Of *Acorus* or *Galangale*. Of *Floure-de-lis*. Of *Coryledon* or *Venus navel*. Of *Sengreen*, and *Purcellane*. Of *Groundsell*. Of *Ephemerion*. Of the *Taxill*, and of *Crowfoot*: with the medicinall vertues of the said herbes, appropriate to the diseases of the eyes, ears, nostrils, teeth and mouth.

THE herbe Pimpernell, some call *Anagallis*, others *Corchoros*. Of it be found two kinds; the male with a red floure, the female with a blew: neither of them both be taller than the hand-bredth or a span at most; tender they be likewise in all parts: the leaves be very smal, round, and lying vpon the ground: they grow as well the one as the other in gardens and watery places: that with the blew floure bloweth first: the juice of them both tempered with hony, dispatcheth the mist and dimnesse of the eyes, consumeth the rednesse occasioned by a stripe or bruise, and taketh away the red spots in the white of the eye; and so much the sooner, if the hony be of the best, and made about Athens, wherewith the eyes be annointed. The said medicine likewise is good for to extend and dilate the tunicles that make the ball or apple of the eye; and therefore it is an ordinary course that their eyes be annointed therewith before hand, who are to be pricked with a needle for couching of a cataraict. These herbes be singular good likewise for the haw in horses or beasts eyes. The juice of Pimpernell conueyed vp into the nostrils, cleanseth the brayne by the muncitory of the nose, so that afterwards the Patient do draw vp wine into the nostrils, for a collution to wash them. A dram of the said iuice drunk in wine, is a counterpoison against the venom of snakes. But this is strange, and I cannot chuse but marvell of it, that these should so much hate and abhor the female Pimpernell as they do: howbeit, in case they should mistake the one for the other because they are so like (for in floure only they differ) and tast the Pimpernell with the blew floure, presently they haue recourse (by a natural instinct) to an herbe for remedy called in Greeke *Aflya*, and by vs in Latine *Ferus oculus* [i. the wild and cruell eye, or Margellane.] Some there be, who set down certain ceremonies and circumstances to be observed by them who are to dig or pucker vp this herbe; namely, That they goe to this businesse before the Sun-rising, and salute or bid good morrow to it three times, before they speak any other word that morning; and then to take it vp and cast it on high: which don, to presse forth the iuice of it. Thus ordered forthwith, they say it is of better operation, and will do the deed surely.

Touching Euphorbium, what it is I haue sufficiently spoken. The iuice thereof is singular for bleered eyes, especially if they be swelled withall: likewise wornewood stamped and incorporat with hony: as also the powder of Betony. There groweth many times a fistulous vicer betweene

A twene the corner of the eye and the nose, called *Ægilops*; for to heale which sore, there is a foueraigne herbe of that * name growing among Barly: in blade or leafe it resembleth that of whear: the seed or graine whereof, beaten into powder and mixed with meale or floure, or the iuice drawne out of the herbe, they vse for the said purpose to apply vnto the affected place in manner of a salve or liniment. Now the said iuice must be pressed out of the stalk and leaues thereof, whiles they be fresh and fullest of sap: but then the haw or care that it beareth, ought to be taken away, which being incorporat with the floure of three moneths corn, is made vp into bals or troches. Some were wont in this cure to vse the iuice also of *Mandragoras*, but they gaue it ouer afterwards. Howbeit, for certain, the root of *Mandragoras* bruised or stamped, and tempered with the oile of roses and wine, cureth weeping and watering eyes; yea, and assingeth their pain: & the said iuice, how soeuer it be rejected in the former case, goeth into many collyries or eye-salues.

This herbe *Mandragoras*, some writers call *Circium*; and two kinds there be of it: the white which is supposed the male; and the black, which you must take for the female: the leaues of this female resemble those of the * *Le-tuce*, but that they be narrower; hairy also they are, and all of an * equall bignesse. Two or three roots it hath and those of a reddish or russet colour without; but white within of a fleshy substance and tender, running downe into the earth almost a cubit in length. A certain fruit or apple they beate, of the bignesse of Filberds or Hazel-nuts, within which there be seeds like vnto the pippens or Pears. The white *Mandragora* some name *Arfen*, (i. the male, others * *Morion*: and there be againe who call it *Hypophlomos*. The white leaues of this *Mandragora* be broader than the other, and indeed equall to the garden Docke or *Patience*: In the digging vp of the root of *Mandragora*, there are some ceremonies observed: first they that goe about this worke, looke especially to this, that the wind be not in their face, but blow vpon their backs: then with the point of a sword they draw three circles round about the plant: which don, they dig it vp afterwards with their face into the West. There is a iuice pressed forth both of the fruit, and also of the leaues shred and minced of the * item likewise being first headed or the top cut off; and also of the root, which sometime they do pounce and prick for to let out the liquor; otherwhiles they boile it: and the root so prepared, is as good as the iuice. The same also being cut into certain thin rundles they vse to * preserue in wine. Howbeit, *Mandragora* is not found alwaies and euery where full of iuice: but in what place soeuer such may bee gotten, the right season to seek for it is about vintage time: the sent thereof is strong, but the root and fruit do smell the stronger. The apples of the white, when they be ripe, the manner is to dry in the shadow; but the iuice drawn out of them, is permitted to stand in the Sun for to gather and harden. In like sort, the iuice of the root whether it be bruised and stamped, or sodden in grosse red wine to the consumption of a third part. The leaues moreover of *Mandragora* are commonly kept and condite in a kind of pickle or salt brine: for otherwise the iuice of them whiles they be fresh and green, is pestiferous and a very poison. And yet order them so well as you can, hurtfull they be euery way: the only smell of them stuffeth the head, and breedeth the murre and the poise. Howbeit, in some countries they venture to eat the apples or fruit thereof; but those that know not how to dress and order them aright, so be the vse of their tongue thereby, and proue dumbe for the time, surprised and ouertaken with the exceeding strong fauor that they haue. And verily if they be so bold as to take a great quantity thereof in drinke, they are sure to die for it. Yet it may be vied safely enough for to procure sleep, if there be a good regard had in the dose, that it be answerable in proportion to the strength and complexion of the patient; one cyath thereof is thought to be a moderat and sufficient draught. Also it is an ordinary thing to drinke it against the poison of serpents: likewise before the cutting or cauterizing, pricking or lancing of any member, to take away the fence and feeling of such extreme cure. And sufficient it is in some bodies to cast them into a sleep with the smell of *Mandragora*, against the time of such Chirurgery. There be that drinke it in lieu of *Elleboro*, for to purge the body of melancholick humors, taking two oboles thereof in honied wine. Howbeit, *Elleboro* is stronger in operation for to euacuate black choler out of the body, and to prouoke vomit.

F As touching *Hemlocke*, it is also a ranke poison, witnesseth the publicke ordinance and law of the Athenians, wherby malefactors, who haue defensed to die, were forced to drinke that odious potion of *Hemlocke*. Howbeit, many good vertues hath this herbe, and would not be rejected and cast aside for the sundry vses thereof in Physicke. The seed is euery way hurtfull and venomous.

* *Ægilops*.
Some say it
for wild Ocea,
others for
Dandelie.

* Whereupon
it is called
Thridactes.
* *Ægilops*
not call'd thus,
for *Mandragora*
bears no such
name.
* *Morion*
virtu, vel
Crisis.

* Other Herbes
banish desire
Mandragora
without them
or flake.
* *Morion* is
not according
to *Cassius*,
dubious
where's *Diaph-*
orides is the
dubious name
interpreted in
night, yet it
say, they lie
them vp hard
being by little
things drawne
through them.

As for the stems and stalks, many there be that do eat it both green & also boiled or stewed between two platters. Light these stems be as kexes, and full of joints like Reeds and Canes: of a darke gray or fullen colour, rising vp many times about two cubits high: and toward the top they spread and branch. The leaves in some sort resemble Coriander, but that they be more tender, and a strong stinking smell they haue with them. The feed is thicker and grosser than that of the Annise. The root likewise hollow, and of no use in Physicke. The leaves and feed are exceeding refrigerative: which if they haue gotten the mastery and vpper hand of any that hath taken them, so as there is no way but one without help, they shall feele themselves begin to wax cold in their extrem or outward parts, & so to die inward: howbeit there is a remedy euen then, before the cold haue taken to the vitall parts: namely to take a good draught of wine, which may set the body in a heat, and chaufe it again: may if they drinke it with wine, there are no means in the world to saue their liues. There is a iuce pressed out of the leaves and floures both together, for that is the right reason, namely whiles it is in floure: which is pressed out of that seed stamped, being afterwards dried in the Sun and made into bals or trofches, kills them that take it inwardly, by congealing & cluttring their blood: for this is a second venomous and deadly quality that it hath: which is the cause, that whosoever die by this means, there appear certain spots or specks in their bodies after they be dead. And yet there is a use of this iuce, to dissolve hot and biting medicines therein in stead of water: moreover, there is made of it a very convenient cataplasme to be applied vnto the stomack, for to coole the extreme heat thereof. But the principal vertue that it hath, is to repress and stay the flux of hot humors into the eyes* in summer time, and to assuage their pains if they be annointed therewith. It entrench besides into collicies or medicines devised to ease pain: and verily there is no rheumatick flux in any part of the body but it stoppeth it. The leaves also of Hemlocke doe keepe downe all tumors, appease paines, and cure watering eyes. *Anaxilans* mine Author saith, That if a pure maiden doe in her virginity annoint her breasts with this iuce, her dugs will neuer grow afterwards, but continue still in the same state. True it is indeed, that being kept vnto the paps of women in child-bed, it drieth vp their milk: as also extinguieth naturall feed, if the cods and share be annointed therewith. What remedies they should vse to saue themselves who are aduoged by law to drink it, I for my part purpose not to set down. The strongest Hemlocke and of speediest operation is that which growes about Sufa in the confines of Parthia. Next to it for fearful working, is that which cometh out of Laconica, Candy, and Natolia. In Grece the Hemlocke of Megara is counted the quickest, and then that of Attica.

Crestmarine or Sampier, called the wild Cretchoms, riddeth the eyes of the gummy & viscous water that sticketh in them, if it be applied thereto: and if it be made into a cataplasme with fried Barly meal, it assuageth also their swelling.

There groweth commonly an herbe named in Grece *Molybdæna*, that is to say in Latine, Plumbago, euen vpon euery corner land: in leafe resembling the Dock or Sorrell, with a thicke root, and the same rough and prickly. Let one chew this herb first in his mouth, & then effloose lick with his tongue the cie it consumeth and taketh away the * Plumbum, which is a kinde of discafe or infirmity incident to the eyes.

As touching the first * Capnos, which in Latine is commonly called *Pedes Gallinacis*, i. hens feet: it groweth about decayed wals and ruina buildings, among rubbish, and in hedges: the branches be very smal, & spread loosely or scattering, the floure of a purple colour, the leaves green, the iuce wherof discusseth the dimnesse and thicknesse about the eyes, and clarifieth the sight: and therefore it is vually put into cie-salues. There is another herb of the same * name, & like in effect, but different in form from it, which doth branch thicke, and is of a tender substance: the leaves for shape resembling Coriander, and those of a wan or ashie colour, but it beareth a purple floure: it groweth in Gardens, Hort-yards, and Barly-lands. If the cie be therewith annointed, it cleanseeth and cleareth them: but it causeth them to weepe and water, like as smoke doth, whereupon it rooke the name Capnos in Grece. If the haire of the cie-lids be once pulled forth, and then the edges or brims be annointed therewith, it will keep them for euer coming. M vp againe.

* *Aconitum* hath leaves like to the Flour-de-lis, but that they be only narrower, & growing to a longer stile or taile: the roots be black & not so full of veins nor grained, otherwise they agree well with the Treos root, hot & biting at the tongues end. To smel vnto they are not vnpleasant: and

A and being taken inwardly, they do gently moue rising, and cause the stomack to breake winde vpward. The best *Aconit* roots be those which come from Pontus: then they of Galatia: and in a third rank are they to be set which are brought out of Candy. Howbeit, the principall and the greatest plenty are those esteemed which grow in the region Colchis neere to the river Phasis: and generally in what countrey founer, they that come vp in watery grounds be chiefe: the fresher that the roots be and more newly drawn, the stronger sent and lesse pleasant taste they haue with them, than after they haue bin long kept about ground. Those of Candy be whiter than the other of Pontus. They vse to cut them into gobbers as big as a mans finger, and then hang them within bags or pouches of leather a drying in the shade. I find in certain writers, that the root of Oxymyrine is called *Aconit*, and therefore some (alluding to the name of *Aconit*) chuse rather to call this plant *Aconit* the wild. Well, the root of *Aconit* is of great operation and effect to hear and extenuate: and therefore the iuce thereof taken in drinke, is singular against catarracts or any accidents of the eyes that cause dimnesse. Soueraigne likewise it is taken to be against the venom of serpents.

Cotyledon, named in Latine *Vmbilicus Veneris*, is a pretty little herb, hauing a tender and a smal stem, a leafe thicke & fatty, growing hollow, like to the concavity wherein the huckle-bone turneth, and therupon it took the forefaid name in Grece. It groweth by the sea side and in rocky or stony grounds: of a liuely green colour, and the root round, much like to an Olive. The iuce is thought to cure the eyes. Another kind there is of Cotyledon, with grosse and * fattie leaves likewise, but broader than the former. Toward the root they grow thicker, which they seem to compass and inclose as it were an cie. A most harsh & vnpleasant taste it hath: the stem is high but very slender. This herb hath the same properties which the Flour-de-lis.

Of Sengreen or Moulbeck, which the Greeks call *Aizoon*, there be two kinds. The greater is ordinarily planted in earthen pans or vessels set out before the windows of houses: which some name *Buphtalmion*, others *Zophthalmion*, and *Stergethron*, because it is thought good in loose drinker or amorous medicines: others againe giue it the name *Hypogelon*, for that it is seen to grow vnder the eaves of houses. There are also who loue to term it *Ambrosia* & *Amerinon*. Here in Italy they call it *Sedum* the greater, *Oculus* also, and *Digitellus*. For the second kinde is somewhat lesse, which the Grecians distinguish by the name * *Eriethales* or *Trithales* (because it beareth floures thrice in the yeare); others *Chrysothales*, and some again, *Isoteles*. But both the one and the other they call *Aizoon*, because they be alwaies fresh and green: according to which name in Grece, some giue it the Latine name *Sempervivum*. The greater kind beareth a stem a cubit high and more, and the same of the thicknesse of a mans thumb, with the better. The leaves in the head or top wherof, be like vnto a tongue, fleshy and fat, full of iuce, a good inch broad, some bending downe and coping toward the earth, others standing vpright, but so, as if a man mark their round circle or compass wherein they lie couched, he shall obserue the very proportion of an cie. The lesse Sengreen or Iubarb groweth vpon walls, and specially such as be ruinat and broken down: likewise vpon the tiles of house-roofs. This herb is tufted with leaves from the very root euen to the top of the branches. The leaves be narrow and sharp pointed, and full of iuce. The stalk groweth a good hand breadth or span high. The root is not meddicinable nor of any vse.

Much like to this is that herb which the Greeks call *Andrachne Agria*, i. wilde Purcellane; the Italians, *Illecebra*. The leaves be smal to speake of, howbeit broader than those of the herb before named, and shorter toward the top. It groweth vpon rocks and stony places: & folke vse to gather it for to eat. All these last rehearsed haue the same operation, for they be exceeding cold and astringent withall. Good they be to stay the rhum that falleth into the eyes and causeth them to water, whether the leaves be applied to them, or the iuce in manner of a liniment: moreover, they cleanse and mundifie the vipers of the eyes, the do also incarnat, heale, and skin them vpon singular good besides to loose and open the cie-lids, when they are aglued and closed vp with viscous gum. The same do allay the head-ache, if either the temples be annointed with the iuce thereof, or the leaves be applied to them. Moreover, they mortifie or kill the poison inlited by the prick of the venomous spiders *Phalangia*: but the greater Sengreen hath this peculiar vertue, to resist the deadly poison of the herb *Aconitum*. Furthermore it is sayd, that whosoever carry it about them, shall not be stung by scorpions.

All the kinds of them are proper remedies for the pain in the ears. Like as the iuce of *Hem-* Eane

* *Ephiphora*
* *Epithymum*
* *Epithymum*
* *Epithymum*

* *Epithymum*
* *Epithymum*
* *Epithymum*
* *Epithymum*

* *Epithymum*
* *Epithymum*
* *Epithymum*
* *Epithymum*

* Scilla.

bane also, if it be applied moderately, of Achillea and the best Centaury, of Plantaine and Har-
strang, together with oile rofat and Opium: finally, the iuice of Acorns or Galangale vsed with
Roses, is much commended in that case. But this would be noted, that the manner of preparing
of all these iuices, is to heat them first, & then to conuey or infuse them into the ear by a * pipe
for the purpose [called an Orenchyte,] Semblably, the herb Vmbilicus Veneris or Cotleodon
is much commended for mundaying the ears, when they run with filthy matter especially, if it
be tempered with deere sewer, and namely of a Stag or Hind, or so infilled hot. The iuice of
the Walwort root clarified and strained through a fine linnen cloth, and soon after dried & har-
dened in the Sun, healeth the swelling impostumations vnder the ears, if as need requirith, it be
dissolued in oile of Roses, and so applied hot. The like effect in that case hath Veruain & Plan-
tain; Sideritis also being incorporat in old Hogs grease.

After the same manner Aristolochia together with Cyperus, healeth the stinking and ill fau-
red vicer of the nose, called Noli-me-tangere.

The root of Panaces, especially that which is called Chironia, if it be chewed in the mouth,
affuageth the tooth-ache: so doth the iuice thereof, if there be a collution made therewith. The
root of Henbane hath the like vertue, if one chew it with vineger, as also of Polemonia or sauge
de bois: for which purpose it is passing good to chew the Plantain root, or to wash the mouth
and teeth with the iuice or decoction thereof boyled in vineger. And the very leaues of Plan-
tain be singular for the pain of the teeth; yea, though the gums were putrified with rank & cor-
rupt blood, or in case there owld or issued out of them filthy bloody matter. And the seed of
Plantain cureth the impostumations of the gums, albeit they gathered to supuration and ran
matter. Moreover, Aristolochia doth knit and consolidaeth the gums; yea, and fasteneth the teeth
in the head. For these infirmities of gums and teeth, the root of Veruain is highly commended
if it be chewed; or if it be boyled in wine or vineger, and the mouth washed with that decoction.
The roots of Cinque-foile foddin likewise either in wine or vineger to the consumption of a
third part, worke the same effect. But looke that before you boile them, they be well rincd and
washed either in sea water or salt water at the least: and when you vse this collution, see you hold
the liquor or decoction in your mouth a long time. But some there be who thinke it better to
rub the teeth with the ashes of Cinquefoile burnt, leaues, root, and all. Moreover, the root of
Mullen or Tapewort foddin in wine, maketh a singular collution for the teeth. Likewise if the
teeth be washed with the decoction of Hyssop or the iuice of Harstrang, together with Opium
or Poppie iuice, much good and ease will insue thereupon. As also by the iuice of a Pimpernell
root: and the rather of that which is counted the female, if the same be conueighed vp into the
nostrill of the contrary side to the tooth that aketh. There is an herb called Groundswell, which
the Greeks name Erigeron, and we the Latines Senecio: they say if a man make a circle round
about it with some instrument of yron, and then dig it out of the ground, and therewith touch
the tooth that is pained, three feuerall times, and between euery touching spit vpon the ground,
and then bestow the said herb, root and all, in the very same place where he drew it, so as it may
liue and grow again, the said tooth shall neuer ache afterwards.

This Groundswell is an hearbe much like in thape vnto Germander, as soft also and tender
as it, the small stalkes or branches whereof incline to a reddish colour: and it loath to
grow vpon tiled houses or VValles. The Greekes imposed that name Erigeron, because
in the Spring it looketh hoarie, like an old gray beard: in the top it diuideth it selfe in-
to a number of heads, betweene which there cometh forth a light plume, much like vnto
Thistle-downe: VVhich is the reason that *Callimachus* calleth it *Acanthus*; and others,
Pappos. But in the farther Description of this Hearbe, it seemeth that the Greekes agreed
not: for some haue sayd that it is leaied like to Rocket; others to an Oke, but that they bee
much lesse. There bee VVriters also who hold the root to bee good for nothing in Physicke:
and there bee againe that commend it to bee singular for the sinewes: besides, some others
are of opinion, That it strangeth and choaketh as many as drinke it. Contrariwise, certaine
Physicians prescribe it for the laundise to bee taken in VVine: for all the diseases likewise of M
the bladder, and against the infirmities of the Heart and Liuer. And they assure vs, That it
couereth the Reines or Kidneies of all grauell. In case of the Sciatica they haue ordain-
ed it to bee drunke to the weight of a dramme with Oxymell, presently after some exercise
by walking: giuing out, that there is not a better thing in the World for the gripes and torments

A ments of the guts, if it be taken in sweet wine cuit: esteeming it a singular herbe for the griefe
of the midriffe and precordiall parts about the heart, if it be eaten with meat in a salad with
vineger: and in regard of these manifold commodities, they low and nourish it in their gardens
for to bee alwaies ready at hand. And some authours I find who haue made a second kind there-
of: but they haue not described what manner of herbe it is, only they appoint it to be giuen in
water against the sting of Serpents, and to be eaten for the falling sicknesse. For mine own part, I
will set downe the vse thereof in some cases, according as I haue found it by experience to work
in the practise here at Rome. The plume or downe which it beareth, if it be stamped and re-
duced into a liniment with Saffron and a few drops of cold water, and so applied, cureth the inor-
dinat flux of waterish humors into the eies. The same dried and parched against the fire, or o-
therwise fried with some cornes of salt, and laid to the swelling wens called the Kings euill, hea-
leth them.

The May-Lillie (called in Greeke Ephemeron) is leaied like vnto the Lillie, but that the
leaues be lesse: the stem is semblable and euall vnto it, vpon which it beareth a * blew floure.
The seed which it carrieth is nothing medicinable. One single root it hath of a finger thicke-
nesse, which is soveraigne for the teeth, if it be cut and minced small, and afterwards foddin in
vineger for a collution to wash the teeth with it warme. The very substance also of the root is
singular good to confirme the teeth standing loose in the head: and to be put into those that
be hollow and worne eaten. Moreover, the root of Celendine is good for the teeth, if it be brui-
ed or stamped, and so with vineger held in the mouth. If teeth be rotten and corrupt, the black
Elleboro is singular to be put into their concavities. And both of them (as well the blacke as
the white) serue in a collution to strengthen and keep them fast in their sockets, if they be boy-
led in vineger. As touching the Tazill (which is called in Latine Labrum Veneris) it grows in
ruiers and * waters: within the heads or burs which it beareth, there is found a little worne or
grub, which for the tooth-ache they vse to binde about the teeth, or to put it in their holes and
close them vp with wax. But when that herbe is pulled out of the ground, great heed must be
taken that it touch not the earth. The herbe Crowfoot is called in Latine Ranunculus, in Greeke
Batrachion; whereof be foure kinds: The first beareth leaues like vnto Coriander, but that
they be fatter, and as broad as those of the Mallow, of a swert colour: the stalk is whirtil, or
grilled and slender, the root also white: it groweth ordinarily along great rode waies, especial-
ly in cold, shadowie, & moist places. The second is better furnished with leaues, and those more
cut and indented than the former, and riseth vp with greater and higher stalks. The third is the
least, hauing a strong sent, and bearing a yellow floure like vnto gold. The fourth is like to this,
and hath likewise a yellow floure. They beall of them of a causticke and burning qualitie. For
lay but the leaues raw and Greene (as they grow) vpon any place, they will raise blisters in the
skinnie, as well as a light coale of fire: which is the reason, that they bee much vsed for lepro-
sies and foule scabs; also to take out any marks imprinted in the skinne, or vnseemely scarre.
In summe, it is one of the ingredients that go to the making of all potentiall cauteries or cautie-
sticke medicines. VVhere the haire is gone, and the place bare and naked, they vse commonly to
aplie these hearbes for to recover the haire againe: but they must be soone removed. For
tooth-ache also it is an ordinary thing to chew of their roots, but if one continue so long, it will
burnt their teeth in pieces. The same being cut into roundles, and dried, and so beaten into
pouder, serueth to prouoke sneezing. Our Herbarists here in Italy call this hearbe Strumea:
because it helpeth and cureth the wens named Strumea or the Kings euill, and the flat biles or
pusses called Pani, if the same be hanged vp afterwards in the chimney to take smoke. For
this opinion they haue, and beverly persuaded, that if it be set againe into the ground, the wens
and biles afore said which were healed, will returne and be fore againe. The like forcely and witch-
craft they vse with Plantaine: but in truth, the iuice of Plantaine is singular good for the can-
cers or vlcers within the mouth: so are the leaues and roots, if they be only chewed, yea though
the patient or diseased person were troubled with the spitting rheume; for they intercept all
F those defluitions, which take a course into the mouth. Cinque-foile is a very soveraigne herbe
for the sores of the mouth, and for stinking breath. Pyllyum, i. Fleawort, is good for the vlcers
thereof.

But since I haue named a stinking breath, which is a foule and nasty disease, putting man
or woman to shame, as no infirmity more; I will set downe one or two compound receits for
that

* Discorides
saith white.* It contains
water indeed
within the
concavities or
armpits (as
i were) of the
leaves where
they join to
the stem, but
surely in ruers
it grows not.Latines Disfe-
li white.

that imperfection, Take Myrtle & Lentisk leaues, of each a like weight, of the Gal-nuts grow-
ing in Syria, halfe as much in quantity; stamp them all together, and in the stamping, sprinkle
them with good old wine: giue the patient this composition in bole to chew and eat in the
morning, there is not the like medicine vnto it for a sweet breath. Also take Ivy berries, Casia or
Canell, and Myrhe, of each an equall weight, incorporat them with wine in manner aforesaid,
and vse this confection accordingly. For the sores that be incident to the nose, the seed of dra-
gons made into powder, and tempered with hony, is singular to be applied therunto, yea though
they were very cankers, and had eaten deep. Where the skin looketh blacke and blew, whether
it be vnder the eies, or otherwise in any part of the visage, a salve made of Hyssope applied ther-
to, restoreth it to the fresh and natue colour. To conclude, a liniment of Mandragoras taketh
out the markes or prints that be branded or feared in the face [if it be applied presently while
they be fresh.]



THE TWENTY SIXTH BOOKE OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS

SECVNDVS.

The Proeme.

CHAP. I.

¶ Of medicines appropriate and respectiue to all other parts and members of the body, Of
certaine new maladies: and namely, of the ill-fauored sester called Lichenes:
what kinde of infection it is, and when it first entred into Italy.

Of the blain or sore called the Carbuncle. Of the filthy
leprosie or wild cab named Elephantia-
sis. And of the Callicie.



Long is it not since the face and visage of men began to be annoied with certaine
new and strange diseases, vnkowne in our forefathers daies, and neuer heard of
before in Italy, nor almost in any part of Europe. And euen of late daies when
these maladies first set foot in these parts, they were not seene sort to spread
throughout all Italy, ne yet to range greatly in Illyricum, France, or Spain, al-
though some little sprinkling there was in those countries: but about Rome
only and those quarters adioining, as they raigned first, so they raged most. These new-come
diseases verily were nothing painfull to the Patients, nor dangerous any waies and deadly; but
so foule and filthy, so loathsome and ugly, that a man would haue chosen rather to die any
death, than to be so disfigured. But of them all, the worst and most detestable was that, which
by a Greeke name they called Lichenes, and in Latine (because ordinarily it began about the
chin) * Mentagra. A terme giuen vnto it (I assure you) at the first by way of jest and in a meri-
ment (as commonly we see many are disposed to play and make good game at other mens mi-
series) but afterwards it went currant in euery mans mouth: and by no other name than Mentagra
was it known, notwithstanding the disease possessed not the chin alone, but in many that had
it, took vp the whole visage, all faue the eies, yea, and ran downward to the neck & breast, spread-
ding also to the armes and the very hands: and in such sort was the skin of the poore wretches
be painted

* For Mentagra
is a leucis a
chin.

be painted and beraied with foule scurfie and filthy scales, as it would haue pittied one at the
heart to see them. This contagious disease, our fathers and ancestors in times past neuer heard
of, nor knew what it meant: for the first time that it crept into Italy, was in the daies of *Tiberius*
Cladius late Emperor of Rome, euen about the middle of his raigne; and that was by the means
of a certain knight or gentleman of Rome borne at Perusium, who being secretary or clerke vnto
the Treasurer vnder the Romans in Asia, and giuing attendance according to his place, chan-
ced there to be infected, and so hee brought the disease out with him to Rome. But will you
heare the strange nature of this foule cuil? women were not subiect vnto it; no more were slaves,
base and poore commoners, no nor citizens of mean estate and condition: the greatest gentlemen
and those of the nobility, it made choise of, and picked them from among the rest: very cat-
ching it was, and soone passed from one to another, especially by the mouth, and * by the means
of a kisse were it neuer so short: foule and ill-fauored enough was the disease it selfe, but the
scar, remaining after it was healed (for many there were who came vnder the Chirurgicalians hand
and indured the cure) looked a hundred times worse: and why? no way there was to rid it, but
by caustick medicines or potentiall cauteries; and vnlesse the flesh were eaten away to the very
bones, it was not possible to kill and root it out clean, but it would reuiue and spring again: and
verily there came Physitians and Chirurgicalians out of Egypt (a countrey apt to breed the like,
diseases and where they be common) such as professed only the skill in this kind of cure, who
filled their purses well, and mightily enriched them selues by their practise at Rome: for well
known it is, that *Mansius Cornutus* (late L. Pretor, and lieutenant general for the state in the
prouince of Guienne or Aquitaine in France) dealt with one of these Egyptian leeches for to be cu-
red of this disease, and agreed to pay him 200000 Sesterces for his paine. And thus much of
Mentagra.

Moreover, what a wonderfull thing is this obserued in these new kind of maladies, that many
times (contrary to the course of other sicknesses) they come together in troupes; that some of
them should all on a sudden light vpon a particular country; that they should take to one cer-
taine member of mans body; affaile those of such an age and no other, haue a spight to persons
of this or that quality, and spare the rest; as if they made choise, some to plague young chil-
dren, others elder folk; some to punish none but the rich and mighty, others to be doing with
the poore and needy? In our Annals or Chronicles we find vpon record, That while *Lucius Ran-*
lus and *Q. Marcus* were Censors of Rome, the pestilent carbuncle (a disease appropriat to Pro-
uance and Languedoc in France) came first into Italy. Of which maladie, there died within the
compass of one yeare (about that very time when I compiled this worke and history of mine)
two noble men of Rome and late Consuls; to wit, *Julius Rufus* and *Q. Lutatius Bassus*: of which
two, the former was cut for it by the counsell of vnskillfull Physitians, and * by that means lost
his life. As for the other, hauing it vpon the thumb of his left hand, he chanced * to prick it
himselfe with a needele, and although the wound was so small, that hardly it could be seene and
discerned, * yet it cost him his life. This carbuncle riseth ordinarily in the most hidden and se-
cret parts of the body, and for the most part vnder the tongue it is hard and red in manner of the
swelling veines called in Latine Varices: and yet in the head it looketh blackish, the skin also
about it seemeth swart and dead: it stretcheth the skinn and the flesh in some sort flasse, but
without any great swelling; no paine at all, no itching no other symptome but sleepe, where-
with it so possesseth the Patients, that in three daies it will make an end of them. Otherwhiles
it causeth the party to fall into a quivering and shaking as it were for cold, and raiseth certaine
blisters or angry pimples round about it; and verie seldome causeth an Ague: but looke in
whom soeuer it taketh to the stomacke or throat, it quickly dispatcheth and maketh an end of
them.

As touching the white leprosie, called Elephantiasis (according as I haue before shewed) it
was not seene in Italie before the time of *Pompey the Great*. This disease also began for the most
part in the face, and namely it tooke the nose first, where it put forth a little specke or pimple,
no bigger than a small Lentill; but soone after, as it spread farther and ran ouer the whole body,
a man should perceiue the skin to be painted and spotted with diuers and sundry colors, & the
same euene, bearing out higher in one place than another, thicke here, but thin there, and hard
every where; rough also like as if a scurfie or scab ouerran it, vntill in the end it would grow to be
blackish, bearing downe the flesh flat to the bones, whiles the fingers of the hands, and toes of
the

* Vbi et tra-
sin. scilicet
mentis dicit
glute omni-
mentis a-
kille.

* Either by
some morbi-
fication or efflu-
sion of blood
distacca

It seemeth
by a gangre e.
At this time
figure shew a
pancreas and
cancer, rather
than our ac-
cumbles.

the feet were puffed vp and swelled againe. A peculiar malady is this, and naturall to the Egyptians; but look when any of their kings fell into it, wo worth the subiects and poore people: for then were the tubs and bathing vessels wherein they sat in the bain, filled with mens blood for their cure. But surely this disease continued not long in Italy, before it was quite extinguished: like as another before it, and in old time *Genufra, which began between the toes: and so long agoe it is since any haue bin troubled therewith, that the very name also is forgotten and grown out of vse. Where by the way, this is to be noted as a strange and wonderful thing, That some of our diseases should haue an end and lose their course for euer; and others againe continue still: as for example, the cholique passion, which came among vs no longer agoe than in the daies of *Tiberius Cæsar* the Emperor: and the first that euer felt it, was the prince himselfe; whereupon arose no small question throughout the whole city of Rome: for when as the said Emperour published a certain proclamation, wherein he excused himself for not coming abroad to manage the affaires of the State, because he was sick of the cholique; the Senat and people reading this strange name of an vknowne malady, entered into a deep discourse with themselves, what to thinke and make of it? But what should we say of all these kinde of diseases? and what an anger and displeasure of the gods is this, thus to plague and punish vs? Was it not enough to haue sent amongst men into the world a certaine number of maladies otherwise, and those not so few as three hundred, but we must be in feare and danger still every day of new? and yet see! as many as there be of them coming by the hand of God, yet men thorow their owne excesses and disorders, bring as many more vpon themselves, and be causes still of further troubles & miseries. Well, thus you see by that which I haue written in the former bookes, what was the old Physicke in times past, namely, consisting of the simples onely found in dame Natures garden, and how she alone at the first and for a long time, was our Physitian and furnished vs with remedies for all diseases.

CHAP. II.

¶ The praise of Hippocrates, and other Physicians meere Simples.

Hippocrates verily had this honor aboue all men, That he was the first who wrote with most perspicuity of Physicke, and reduced the precepts and rules thereof into the bodie of an art: howbeit, in all his bookes wee find no other receipts, but herbes. Semblably, the writings of *Diocles* the Carystian, were no lesse stored with the like medicines, and yet a famous Physitian he was, and both in time and reputation next and second to *Hippocrates*. *Praxagoras* also, and *Chrysippus*, yea and after them *Erastriatus* held on the same course. As for *Heraclitus*, although he was the first that went more exquisitely to work and brought in a more subtil and fine method of Physick, yet none esteemed better of simples than hee. But surely, practise and experience (which as in all things else is found to be most effectfull, so in the practise of Physick especially) began in his daies by little and little to flake, until in the end all their Physicke proued nothing but words and bibble babbles; for beleeuem me, his schollers and disciples thought it more for their ease and pleasure to sit close in the schooles and heare their doctours out of the chaire discourse of the points of Physicke, than to go a simpling into the desertes and forrests to seeke and gather herbes at all seasons of the yere, some at one time, and some at another.

CHAP. III.

¶ Of the new practise in Physicke of *Asclepiades* the Physitian: and what course he tooke to alter and abolish the old Physicke for to bring in the new.

What cunning means soeuer these new Physitians could deuise to ouerthrow the ancient manner of working by simples, yet it maintained still the remnants of the former credit, built surely vpon the vndoubted grounds of long experience; and so it continued till the daies of *Pompey* the Great, at what time *Asclepiades* a great Oratour and professor of Rhetoricke went in hand to peruert and reiect the same: for seeing that he gained not by the said Art sufficiently, & was not like to arise by pleading causes at the bar, to that wealth which

he desired (as he was a man otherwise of a prompt wit and quick spirit) he resolved to giue ouer the law, and suddenly applied himselfe to a new course of Physick. This man hauing no skill at all, and as little practise, considering he neither was well studied in the Theoricke part of this science, nor furnished with knowledge of remedies which required continuall inspection & vse of simples, wrought so with his smooth and flowing tongue, and by his daily premeditated orations; gained so much, that he withdrew mens minds from the opinion they had of former practise, and ouerthrew all. In which discourses of his, reducing all Physick to the first and primitive causes, he made it a meere coniectural Art; bearing men in hand, that there were but few principall remedies which serued indifferently for all diseases, to wit, in Diet, Abstinence in meat, Forbearing wine otherwhiles, Rubbing of the body, Walking, and the *Exercise of gestations. In sum, so far he preuailed with his eloquent speech, that euery man was willing to giue care & applause to his words: for being ready enough to beleue those things for true, which were most easie, and seeing withall, that whatsoever he commended to them, was in each mans power to performe, he had the general voice of them: so as by this new doctrine of his, he drew all the world into a singular admiration of him, as of a man sent & descended from heauen aboue, to cure their griefs and maladies. Moreouer, a wonderful dexterity and artificiall grace he had to follow mens humors, and content their appetites, in promising and allowing the sick to drink wine, in giuing them estoons cold water when he saw his time, and all to gratifie his patients. Now for that *Heraclitus* before him had the honor of being the first Physitian who searched into the causes of maladies and because *Cleophrastus* had the name among the Antients, for bringing wine into request and setting out the vertues thereof: this man for his part also, desirous to grow into credit & reputation by some new inuention of his own, brought vp first the allowing of cold water before said, to sick persons; & (as *M. Parro* doth report) took pleasure to be called the Cold-water Physitian. He had besides other pretty deuises to flatter & please his patients, one while causing them to haue hanging litters or beds like cradles, by the mouing & rocking whereof too and fro, he might either bring them asleepe, or ease the pains of their sickness; otherwhiles ordering the vse of baines, a thing that he knew folk were most desirous of: besides many other fine conceits very plausible in hearing, and agreeable to mans nature. And to the end that no man might think this so great alteration and change in the practise of Physick, to haue bin a blind course and a matter of smal consequence, one thing aboue the rest that wooed him selfe a great fame, and gaue no lesse credit and authority to his profession, was this, that meeting vpon a time by chance with one he knew not, carried forth as a dead corse in a bier for to be burned, he caused the body to be carried home from the funerall fire, and restored the man to health again. Certes, this one thing, wee that are Romanes may be well ashamed of and take in great indignation, That such an old fellow as he, coming out of Greece (the vainest nation vnder the sun) & beginning as he did of nothing, should only (for to enrich himself) lead the whole world in a string, and on a sudden set down rules and orders for the health of mankind, notwithstanding many that came after him, repealed as it were, and annulled those lawes of his. And verily, many helps had *Asclepiades*, which much fauored his opinion and new Physick; namely, the manner of curing diseases in those daies, which was exceeding rude, troublesome, & painful; such adoe therewas in lapping and couering the sicke with a deale of cloaths, and causing them to sweat by all means possible: such a worke they made sometime in chafing and sunning their bodies against a good fire, but euery foot in bringing them abroad into the hot Sunne, which hardly could be found within a shade and close citie as Rome was. In lieu whereof, not onely there, but throughout all Italy (which now commanded the whole World, and might haue what it list) hee followed mens humours in approouing the artificiall baines and vaulted stoues and hot houses, which then were newly come vp and vsed excessively in euery place by his approbation. Moreouer, he found means to alter the painefull curing of some maladies, and namely of the Squinancie; in the healing whereof other Physitians before him went to worke with a certain instrument which they thrust down into the throat. He condemned also (& wrought) that dog-physick which was in those daies so ordinar, that if one ailed neuer so little, by and by he must cast and vomit. He blamed also the vse of purgatiue potions, as contrary and offensive to the stomack, wherein he had great reason and truth on his side: for to speake truly, such drinks are by most Physitians forbidden, considering our chiefe care and drift is in all the course of our physick, to vse those means which be comfortable and wholesome for the stomack.

¶ *The foolish superstition of Art-Magicke, which here is derided, Of the settar called Lichen: remedies proper for it, and the diseases of the throat.*

ABoue all other things, the superstitious vanities of Magicians made much to the establishing of *Asterades* his new Physicke; for they in the height of their vanity, attributed to strange and incredible operations to some simples, that it was enough to discredit the vertues of them all. First, they vaunted much of *Ethyopus*, an hearbe which (by their saying) if it were but cast into any great river or poole, it would draw the same dry; and was of power (by touching onely) to open lockes, or vnloose any dore whatsoever. Of *Achoemenis* also another herb, they made this boast, That being throwne against an armie of enemies ranged in battell array, it would drinke the troups and squadrons into feare, disorder their ranks, and put them to flight. Semblably, they gaue out and said, that when the king of Persia dispatched his Embassadors to any forreign states and Princes, he was wont to giue them an herb called *Latace*, which so long as they had about them (come where they would) they should want nothing, but haue plenty of all that they desired: besides a number of such fooleries wherewith their bookes were peppered. But where I beseech you, were these herbs when the Cimbrians and Teutons were defeated in a most cruell and terrible battell, so as they cried and yelled again? What became of these Magicians and their powerfull herbs, when *Lucullus* with a small army consisting of some few legions, ouerthrow and vanquished their owne kings? If herbs were so mighty, what is the reason (I pray you) that our Romane captaines prouided euermore about all things how to be furnished with victuals for their camp, and to haue all the waies and passages open for their puerous? In the expedition of *Pharfalla*, how came it to passe that the souldiers were at the point to be famished for want of victuals, if *Cesar* by the happy hauing of one hearbe in his campe, might haue inioined the abundance of all things? Had it not bin better thinke ye, for *Scipio Aemilianus* to haue caused the gates of Carthage to flie open with the help of on: herbe, than to lie so many yerres as he did in leaguer before the city, and with his engins & ordinance to shake their wals, & batter their gates. Were there such vertue in *Ethiopi*us asore said, why dowe not at this day dry vp the Pontine lakes, and reconer so much good ground vnto the territory about Rome? Moreouer, if that composition which *Democritus* hath set downe and his bookes maketh praysc of, to be so effectual, as to procure men to haue faire, vertuous, and fortunat children, how happeneth it that the kings of Persia themselves could neuer attaine to that felicity? And verily we might maruell well enough at the credulity of our Ancestors in dotting so much vpon these inuentions (howsoeuer at the first they were deuised and brought in, to right good purpose) in case the mind and wit of man knew how to stay and keepe a meane in any thing els besides: or if I could not proue (as I suppose to doe in due place) that euen this new leech-craft brought in by *Asterades* which checketh those vanities, is growne to farther abuses and aburdities than are broached by the very Magicians themselves. But this hath bene a waies and euer will bee, the nature of mans mind, To exceed in the end and go beyond all measure in euery thing which at the beginning arose vpon good respects and necessary occasions.

But to leaue this discourse: let vs proceed to the effects and properties remaining behind of those herbs which were described in the former booke, with a supplement also and addition of some others, as by occasion shall be offered and presented vnto vs. Howbeit, to begin first with the remedies of the said Tettars (so foule and vncemly diseases) I mean to gather a heape of as many medicines as I know appropriat for that malady, notwithstanding I haue shewed already of that kind not a few. Well then, in this case, *Plantaine* stamped is very commendable: so is *Cinquefoile* and the root of the white *Daffodill*, punned and applied with vineger. The young shoots or tender branches of the fig-tree boyled in vineger: likewise the root of the * *Marish-mallow* sodden with glou in a strong and sharpe vineger to the consumption of a fourth part. Moreouer, it is singular good to rub tettars thoroughly with a pumish stone first, to the end that the root of *Sorrell* stamped and reduced into a liniment with vineger, might be applied afterwards therupon with better success; as also the floure of * *Milisto* tempered & incorporat with quick-lime: the decoction likewise of *Tithymale* together with rosin, is much praised for this cure: but the herb *Liuwort* excelleth all the rest, which therupon tooke the name *Lichen*: it groweth

* *Milisto* some take it for the Hollyboke.

* *Milisto* some read *Milisto*.

A groweth vpon stony grounds, with broad leaves beneath about the root, hauing one stalke and the same final, at which there hang downe long leaves: and sure: this is a proper herb also to wipe away all marks and cicatrices in the skin, if it be bruised and laid vpon them with hony. Another kind of * *Lichen* or *Liuwort* there is, cleauing wholly laid vpon rockes and stones in manner of moss, which also is singular for those tettars, being reduced into a liniment. This herb likewise stauncheth the flux of blood in green wounds, if the iuice be dropped into them: and in a liniment, it serueth well to be applied vpon apostumal places: the jaundise it healeth, in case the mouth and tongue be rubbed and annointed with it and hony together: but in this case the Patients must haue in charge, To bathe in salt water, to anoint themselves with oile of almonds, and in any case to abstain from all salads and potherbs of the garden. For to heale tettars, the root of *Thapsia* stamped with hony is much vied.

B As for the *Squintie*, * *Argemoneia* is a soueraigne remedy if it be drunk in wine: *Hyssop* also boyled in wine and so gargarized: likewise *Harstrang* with the rennet of a Scale or Sea-cal, taken both of them in equal portion: moreouer, Knot-grasse stamped with the pickle made of Cackles and oile, and so gargled, or els but held only under the tongue: Semblably, the iuice of *Cinquefoile*, being taken in drink to the quantity of three cyaths: this iuice besides, in a gargarine, cureth all other infirmities of the throat. And to conclude with *Mullen*, if it be drunk in water, it hath a speciall vertue to cure the inflammation of the amygdals or almond kernels of the throat.

CHAP. V.

¶ *Receipts for the scrophulous ar wens called the Kings-cuill: for the paines and griefes of the fingers: for the diseases of the breast, and namely for the Cough.*

Plantaine is a soueraigne herb to cure the Kings cuill: also *Celandine* applied with honey and hogs lard: so is *Cinquefoile*. The root of the great Clot-brd serueth for the same purpose, if it be incorporat with hogs greafe, so that the place after it is annointed therewith, be covered with a leafe of the said brd laid fast vpon it in like manner *Artemisia* or *Mugwort*: also a *Mandragora* root applied with water, is good for that purpose. The broad leaved *Sideritis* or *Stone-sauge*, being digged round about with a spike of yron and taken vp with the left hand, and so applied vnto the place, cureth the kings cuill, prouided alwaies, that the Patients when they be healed, keepe the same herbe still by them, for feare least it being replanted againe by these Herbarists (such is the malicious forerie of some of them as I haue already shewed) the malady returne and be as bad as it was before: the like caueat I find giuen vnto them, who are cured of this disease either by *Mugwort* or *Plantaine*. The herb *Damascion*, called likewise * *Alisma*, if it be gathered about the Summer solstide, applied vnto the foresaid wens with rain water, is singular good for them; for which purpose, the leaves are to be stamped, or the root bruised and incorporat with hogs greafe and so applied in a liniment with charge, that the place be covered with a leafe of the same: in which manner prepared and vied, it serueth to allay all pains in the nape of the neck, and to keepe downe or dissipat the swelling in any part of the body. There is an herb growing commonly in meadows, called the *Daffie*, with a white floure, & partly inclining to a red, which if it be ioined with *Mugwort* in an ointment, is thought to make the medicine far more effectual for the kings cuill. *Condurdum* is an herb of final continuance, for about the Summer Solstice it sheweth a red floure and soon sheddeth the same: which (as they say) if it be hanged about the neck, refresheth and keepeth vnder the foresaid disease: the like doth *Vernaine* together with *Plantaine*, vied and worne in the same manner.

Touching all the accidents happening to the fingers, and namely the excrescences & scirrhuses of the skin about the roots of the nailes, called in Greeke *Prerygia*, *Cinquefoile* is a singular good herb for them.

F Amongst all the infirmities of the breast, the cough is most troublesome and grievous, for which, the root of *Panaces* in sweet wine is a soueraigne remedie. The iuice of *Henbane* is excellent for them also: that reach vp blood out of the breast: and the very smoke thereof, as it burneth, is as proper for them that cough. In like manner, *Scordoris* being dried and made into powder, afterwards mingled with cresses and rosin, and so reduced into a liquid confection or

* Other names for this work.

* Which some take to be wild Poppy, call it *Alisma*.

* *Alisma* in some readings.

Iohoc, cureth the cough. The said herb taken simply by it self alone, raiseth tough flegme out of the brest, and causeth it to break from the Patient with ease. The like effect hath Centaury the greater, yea though a man did bring vp blood: for which infirmity, the juice of Plantain also is thought to be singular. Betony taken in water to the weight of three oboli, is of great force against the spitting of blood, and raising vp of filthy matter out of the chest. The root of the great bur hath the like vertue, if it be eaten to the weight of one dram with 11 Pine-nuts. The juice of Harstrang, as also Galangale, is good for the pain in the brest, and therefore they go both of them into preclarities and antidotes which serue for counterpoisons. The Carot likewise helpeth those that cough, like as the herb Scythica (which is the wild Caraway,) for being drunk to the weight of 3 cyaths in sweet wine curit, it is generally good for all diseases of the breil, for the cough, and helpeth such as fetch vp filthy and rotten matter.

CHAP. VI.

¶ Of Mullen or Lungwort: of Calasia: of Folefoot called Tussilago or Bechium, and of Sange: herbs all appropriate for the cough.

MYlien or Lungwort with the yellow golden floure, being in like maner taken to the same quantity, eases the foresaid infirmities. Certes this herb is of that efficacy in these cases, that if a drench thereof be given to horses, which not onely have the cough, but also been broken winded, it will help them: the same effects I find attributed to Gentian. The root of Calasia foked in wine and chewed, is good not onely for the cough but also for the infirmities in the throat. Take 5 branches or slips of hyssop, and two sprigs of rue, with 3 figs, seeth these together, it is an excellent drink for to discharge the brest of flegme that stuteth it. Folefoot, called in Greck Bechion, that is to say in Latin * Tussilago, doth appease the violence of the cough. Two kinds there be of this herb: the wild, which wherefoever it is sene to grow, sheweth that there is water vnder it: a thing that they know well enough who seek for springs, for they take it to be an assured sign and direction to water: it beareth leaves like to Iuy, but somewhat bigger, either 5 or 7 in number, which vnderneath or toward the ground be somewhat whitish, but above in the vpper side, of a pale colour, without floure, stem, or seed, and the root is but small. Some would haue it and Cham-leuce both, to be one and the same herb called by diuers names: take this herb, leafe and root together, when they be dried, set all on fire and receiue the smoke by a pipe, as if you would suck or drinke it downe, it is (they say) a notable medicine to cure an old cough; but between every pipe you must tip a pretty draught of sweet wine. The second Bechion some would haue to be called Salua, an herb like vnto Mullen: stampe the same, and let the juice run through a streiner, which being made hot, drinke it for the cough and pain in the sides. This herb likewise is very effectually against scorpions & sea dragons. Also an inunction made therewith and oile together, is commended much for the sting of serpents. A bunch of hyssope foddren with three ounces of honny, is a fine medicine for the cough.

CHAP. VII.

¶ For the paine of the sides and brest: for those that cannot draw their wind but sitting upright: for the paine of the liver: the heart ach: for the lights: difficulty of urine: the cough: the brest: the cures: for the eyes: for the flux of the belly, occasioned by a feeble liver: against immoderate vomits: for the yex, the pleurisie, and all griefes of the side.

LYngwort or Mullen drunke in water with Rue, is very good for the pain of the sides and the brest: for which purpose also, they say, that powder of Betony is as good, if it be taken in water well warmed. The juice of Scordotis is holden to be a great corroborative of the stomack: so is Centaury also & Gentian, drunke in a draught of water. Plantain either eaten alone by it self, or with a gruell & broth of Lentils, or els with a frumenty potage made with whear, is commensable to the stomack. Betony, although otherwise it lie heavy in the stomack, yet if one either chew the leaves, or drinke them in some broth, it helpeth much the defects & infirmities thereof. In like case Aristolochia if it be taken in drinke. Also Agarick chewed drie, so as betwixt whiles the patient sup a little of pure wine of the grape, hath like vertue: as for Nympha

A ph ea or Nemphar syrnamed Heraclia, it strengtheneth the stomacke, applied outwardly in a liniment: vnto doth the juice of Harstrang. For the hot distemper of the stomacke, it is good to lay vnto it the herbe Flea wort or Cotyledon, otherwise called Vmbilicus veneris, stamped with fried Barly meale into a cataplasme: or els to take Iubarba, Sengreen, to the same effect.

The herbe Moloa hath a stem * chamfered or channelled along: soft leaues, & those small: a root four fingers long, in the * end whereof it beareth an head like vnto Garlick. Some call it Syroa. Taken in wine, it helpeth the stomack and difficulty of drawing breath: In which cases the greater Centaury is singular, if it be reduced into a Iohoc or liquid eleatary. Plantain also eaten any way, either in a green-sauce or salad. This composition is reputed a soueraign medicine. Take of Betony stamped the weight of one pound, of Atticke honny as much, incorporate them together, and hereof drinke every day the quantity of halfe an ounce in some conuenient liquor, or in water warm. Aristolochia or Agarick are soueraigne meanes to be vsed in these infirmities, if one drinke the weight of three oboli thereof, either in warme water or asses milke. The herb Cissanthemos is good to be drunk for those that be streight winded, and must sit vp right when they draw their breath. In the like case Hyssop is commended: as also for pursue, nelle and thortnesse of wind. The juice of Harstrang is an ordinary medicine for the griefe of the liuer, the pains also of brests and sides, in case the Patient be cleare of the ague. As for Agarick, it helpeth all such as spit blood, if the powder thereof, to the weight of one Vidoriat, be given in fine cyaths of honied wine. Of the same operation is Anomum. But particularly for the liuer, the herb Teueria is thought to be soueraign, if it be taken fresh & green to the weight

C of foure drams in one hemine of water and vinegar mixed together. One dram of Betony giuen in three cyaths of warm water, or in tw ain of cold, is thought to be a singular cordiall. The iuice of Cinquefoile helpeth all the imperfections of the liuer and lights, it cureth them that voyd or reach vp blood, and generally it serueth for al inward corruptions and distemperatures of the whole masse of blood. Both Pimpernels be wonderful medicinable for the liuer. Fumiterre the herb whosoever do eat, shal purge choler by urine. Galangale is helpfull likewise for the liuer, to the chest also, and the midriffe or precordial parts. The herb Caucon, named also * Ephedra, and by some Anabasis, groweth ordinarily in open tracts exposed to the wind: it wil climb vpon trees, and hang down from their boughs and branches. Leafe it hath none, but is garnished with a number of haire which are no other but rushes indeed full of ioints and knots: the

D root is of a pale colour. Let this herb be beaten to powder, and giuen in red wine that is greene and hard, it is good for the cough, for the thortnesse of wind, and the wrings of the belly: it may be taken also in some other supping, whereto it was conuenient to put wine. In like sort the infusion of one dram of Gentian which hath lien steeped the day before, may be very well taken in three cyaths of wine for those purposes. Herb Benet or Auens hath a small root of a blackish colour, which hath a good sent: this herb not onely cureth the pains of the brest and side, but also disseuereth all crudities proceeding of vnperfect digestion, by reason of the pleasant saour that it hath. As for Veruaine, it is medicinable vnto all the principall and noble parts within the body: good for the sides, the lungs, the liuer, and the bread: but most properly it respecteth the lungs, and namely, when the patient is in a phthysick or consumption, by the means of their

E vicer. The root of Bearfoot, an herb which I said was but lately found out, is a present remedie for swine, sheep, goats, & all such cattle, in case they be diseased in the lights, if it be but drawn crosse through any of their carcs. The same ought to be drunke in water, and a piece thereof continually held vnder the tongue. As for any other part of this hearbe above ground, be it leafe, stalk, floure or seed, it is not yet certainly knowne, whether it be good or no for any purpose in Physicke. As for the kidneies, the hearbe Plantaine is good to be eaten; Betonic to be drunke; Agarick also to be taken in drinke, like as for the cough. * Tripolium groweth vpon the rocks by the sea side, on which the sea-water beateh: so as a man cannot say, that it is either

F in the sea or the drie land: in lease it resembleth wood, but that it is thicker: the stemme is a span or hand-breadth high, forked, and diuided at the point: the root white, odoriferous, grosse, and hot in taste: when it is foddren in a frumenty potage of whear, they giue it with good successe to those that be diseased in the liuer: this is thought of some to be all one with Polium, whereof I haue spoken in due place. Symphonia or Gromphena, an herbe hauing leaues, some red, others greene, growing to the stem in order, one red and another greene, is a soueraign medicine for such as reach and voyd vp blood, if it be taken in oxycrat, or vinegar & water mingled together.

* Striato haply for hyssop, alterd, as Orisbelli de- scribeth it, such name. * Dris leaues defend, th his Moly with such a head vpon the top of the stem.

* B: these names hecal- lites also Hor- talis.

* A kind of Tubie.

* Here Pliny is deceived: for it is a kind of lace winding about Thyme as Doder about Flax.

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* I beareth
neither flour
nor seed,

gether, the weight of one denarius at once in white wine, is singular in that case: the powder of Betony taken in drink with honey and vinegar of Squilla, is commended for that purpose: as also the root of Lenchitis drunk in water; and I euerium applied as a liniment.

Scordium incorporat with wax, and Agarick with the powder or floure of Fenigreek, help the infirmities of the bladder, and namely, the intolerable pains of the stone and grauell, as I haue before said. Polemonia drunk in wine; and in like manner Agaricke, is good for that purpose: the root or leaues of Plantaine taken in sweet wine cut; also Betonie, prepared in that manner as it was appointed for the disease of the liver, be remedies for the infirmities of that part. Betonie also giuen in drink and applied in a liniment, healeth a rupture; and the same is most effectuall in curing the strangury: some prescribe and giue counsell to drink Betony, Vernaue, Yarrow, or Millesoile, of each a like portion in water, as an excellent remedy for the stone and grauel. And well knowne it is, that for to ease the strangury and remove the cause thereof, Diacamus is an approved medicine: so is the decoction of Cinquefoile, if it be boiled in wine to the consumption of a third part, found by experience to be an vndoubted remedy in that infirmity: the same also is singular good to be applied in that rupture where the guts be false downe. The vpper root of Glader or Flags, causeth young infants to make water, if it be laid to the bottom of the belly: the same giuen inwardly with water, cureth those that are burst and haue their guts slipped downe; and helpeth the infirmities of the bladder in an outward liniment. The iuice of Harfrang healeth little children who are bursten; and of Fleawort there is made a good ointment to annoynt their Nauell, when it beareth out our much. Both the Pimpernel do prouoke vrine: so doth the decoction of Acorus root: the very root it selfe also beaten into powder, and taken in drink, worketh the like effect; and besides, healeth all the accidents of the bladder. Cotedon or Vmbelicus Veneris, both herb and root, breaketh the stone, and expelleth it by grauell, being otherwise singular good for all inflammations of the genital parts or members of generation, if the stalks and seed be taken with Myrbe, of each a like quantity: Walwort stamped together with the tender leaues thereof, and so drunk in wine, driueth out the stone: the same applied outwardly cureth the accidents befalling to the cods. Groundswell, with the powder of Frankincense and sweet wine reduced into an ointment cureth the inflammation of the Lyd cods. The root of Camfrey brought into a liniment, staeth the rupture whereby the guts come downe: and white Hypocistis, representeth the cancerous sores in those parts. Semblably Mugwort is singular to be giuen in sweet wine, for the stone and strangury. The root of Nenuphar or Nymphaea Heraclia taken in wine, assuageth the paine and griefe of the bladder: of the same power is * Sampter, so highly commended by *H. pocrates*: now is this one of the wild woorths which are vually eaten in salads: and certes, this is that very herbe which the good country wife *Hecale* forgot not to set vpon her boord in a feast that she * made (as we may read in *Callimachus* the Poet): And what is it but a kind of garden Batis? It groweth vp with one stem halfe a foot high, or a span at most: the feed is exceeding hot, round, and odoriferous like vnto Rosemary: if it be dried, it bursteth, and hath within a white kernell, which some call Cachrys. The leaues be fatty, and of a grayish white in manner of the olive leafe, but that they be thicker, and saltish in tast: roots it hath three or foure, of a finger thicke: it groweth vpon the sea coast among rocks and cliffs. This herbe may be eaten raw or boiled, it killeth not how, with Beets, Cotes, and other such woorths; and in tast likewise it is aromaticall and pleasant: it is vually preferred and kept continue in a kinde of pickle: and the principall vse that it hath, is to cure the strangury, if either leafe, stalk, or root, be drunk in wine: also, being thus taken, it maketh folke look with a more louely, & cheerful colour: but if ore be too bold with it, & vse it not with moderation, it breedeth ventosities. The decoction of Sampter maketh the body soluble, and is diureticall, for it mightily draweth water from the kidnies. In like manner, the powder of dried Althaea or Marsh-Mallow, drunk in wine, cureth the strangury, and easeth them that pisse paineale, which it wil do more effectually, if the Carot be ioined withall: the same is wholesome for the spleen; and a counterpoison against serpents, if it be taken in drink. If the powder thereof be strewed and mingled among the barley which is giuen in Prouander vnto cart horses and M

* To wit, when the be hard or swelling.

* Or *Cressmaria*.

* To prince *Tubissin*.

A mepitys, carrying purple flours, senting strong, and hath a root like to Cichory, which is good in these cases. But it seemeth that * Brooklime, called otherwise *Cepaea* (an herbe resembling Purcellane, but that the root is blacker, and good for nothing in Physick, growing vpon the sandy shore, and hauing a bitter taste) is better for the said infirmities than the former named Anthyllis, for if it be taken in wine with the root of Sperage, it is excellent for the diseases of the bladder: of the same operation is * Hypericon, which some call Chamapitys, others Corion. This herb * shooteth forth many branches, which be small and slender, of a cubit in length, and red within: in leafe it resembleth rue; the smell is quick, hot, and piercing: the feed which it beareth within certain cods, is black, and the same ripeneth together with barley. The nature of the feed is astringent: it doth incrassat and thicken humors, and stoppeth a lask: vrin it prouoketh; and being drunk in wine, scoureth away the stone and grauell in the bladder. A second Hypericon there is, which some call Coris, in leafe it resembleth * Tamarix, vnder which it gladly groweth, but that the leaues be more fat, and not so red: it groweth not aboue a * span high: odoriferous to smell vnto, and of a mild sweet tast, and yet * sharp withall. The feed is hot, and therefore causeth ventosities, and * inflation in ruptures: howbeit, vnto the stomack it is not hurtful; and singular good for the strangury, in case the bladder be not exulcerat: drunk in wine, it cureth the pleurisie. Moreover, for the bladder and the diseases thereof, Maiden-haire made into powder together with Cumin, and giuen in white wine, is a souveraine remedy; also Vernaue, sodden leaues and all, vntill the third part of the liquor be consumed, or the very root only thereof taken in honied wine hot, expelleth the stones and grauel in the bladder. In like manner the herb Perperissa, which groweth at Aretium and in Sciaonia, being boiled in water from 3 hemines to one, and so taken inwardly as a drink, is an appropriate medicine for the bladder. Clauer or Anthemum expelleth the stone; an herb this is, which putteth forth immediately from the root five small leaues, and two long stems, with a red rose colour floure: the roots stamped alone, are as effectual in this case as green * Lauer. As for Silaus, it groweth along those rivers which run continually and be neuer dry, especially such as glide vpon sand & grauell: it riseth to the height of a cubit, and resembleth garden Parsley: they vse to seeth it after the manner of * Soure-docke, and so prepared, it doth much good to the bladder, which, if it be excoriat and cabbed, the root of Panaces will heale it; for otherwise it is hurtful to that part. The herb called * Malum Erraticum [i. as one would say, the wandring poison, or apple] it expelleth the stone, if one pound of the root be thoroughly sodden in a congus or gallon of wine, vnto the consumption of the halfe, so that the patient take thereof for three daies together one hemine at a time; and that which remaineth of the decoction, in wine, with Lauer & sea-nettles. Also Carots and Plantaine feed taken in wine, driueth down stone and grauell. The nettle called Fulviana (an herb well knowne to them especially that handle it, and which took that name of him who first found out the verue thereof) if it be stamped and drunk in wine, prouoketh vrine. Scordium is singular for the swelling of the generours or cods. Henbane is good for the diseases of the members serving to generation. The iuice of Peucedanum [i. Harfrang] incorporate with honey, like as the feed also taken inwardly, helpeth those who are pained with the strangury; likewise Agaricke, if three oboli thereof be drunk in one cyath of old wine: the root of Trifoile or Clauer giuen to the poise of two drams in sweet wine: and one dram of Daucum, id est, Carot [either the herb, root, or feed, haue the like effect].

Such as be troubled with the Sciatrica or gout in the huckle-bone, finde remedy by a plaster or cataplasma, made with the seed and leaues both of Madder; also with a drink of Panaces: like wife if the place be well rubbed with Polemonia, and bathed with the decoction of the leaues of Aristolochia, it finds much ease thereby. The broad finew or cord at the end of the muscles which is called in Greek *Platys*, likewise the shoulders if they be pained, feele sensible alleviation, by Agaricke, if the weight of three oboli be drunk in one cyath of old wine. Cinquefoile both taken in drinke, and also applied as a plaster, allaieth the paine of the Sciatrica: so doth the herb Scammony boiled with barley meale. The feed of both the Hypericons drunke in wine, is proper for that malady.

The accidents of the seat or fundament, especially when that part is fretted or galled, a saluac of Plantaine healeth most speedily.

The swellings or blind piles appearing like bigs or knuckles within the fundament, are cured with

* *Decubanga*.
* *S. tuberosa*
* *Swallowtail*
* *St. John's wort*
* *Tamarix*
* *but Diof. saith*
* *Ericaceae*
* *as a non al-*
* *tern, for Diof.*
* *Acutum*
* *inflation*
* *face: either*
* *ad inflammation*
* *face.*

* Water cress.
* *Olus acidum*,
* *or rather, Olus*
* *as a m. j. Ali-*
* *gander.*
* *Some take it*
* *for Aristolochia*
* *the round,*
* *(which in the*
* *25 booke hee*
* *named venen-*
* *stre venen-*
* *for wildings*
* *or crabs.*

with fine-leafed grass: & if the said part be turned the insight outward, or displaced, there is not a better thing to settle and reduce it to the former state, than a fomentation with the Cyclamin or Sowbread root and vinegar together. Pimpernell with the blew floure, restoreth the tiwill or fundament into the right place, if it be false downe and hang out of the body: and contrariwise, that with the red floure drieth it downe. Vmbilicus Veneris is of wonderful operation in the cure both of the blind pises, and the running hemorrhoids. The root of Acorus, [i. Galengale] foddin in wine, stamped and brought into a liniment, assuageth the tumors or swellings of the coods. And *Cata* affirmeth. That whosoever haue the Ponticke wormwood about them, shall not be galled betwene their legs.

CHAP. IX.

¶ Of Penroyall and Argemone.

Others adde moreover Penroyall to the foresaid wormwood, & say, that if a man gather Penroyall fasting and bind it fast to the reins and small of the back, he shall feel no griefe in the share, or if he were pained already in that part, shall find ease thereby. * Inguinaria, which some name Argemoney, is an herb growing euery where amongst bushes, briars, and brambles, which if it be but held in the hand, is thought to be excellent good for the accidents that befall the groin. Panaces made into a cataplasme with hony, healeth the flat biles and botches that arise in the emunctories of the share: and the like effect hath Plantaine, applied with salt, fine leafe, & the root of the great cloot-bur, like as in case of the kings cuell: euens is * Damasonium to be vsed. As for Taperwort or Mullen, if leafe root and all be stamped, with some sprinkling of wine among, and be afterwards lapped within a leafe of the own, and so heate vnder the embers & laid to the grieved place hot, it is very good for the same purpose: & some affirm vpon their own knowledge, by the experience that they haue seen, that this cataplasme will work much more effectually, if a yong maiden all naked haue the applying of it to the said bile; provided alwaies, that both she and he the patient be fasting: also that the touch the fore or impostume with the back-side of her hand, & in so doing say these words following, *Negat Apollo pestem posse crescere quam nuda virgo restitui*: (i. i.) *Apollo* will neuer suffer, that a botch which a naked virgin thus cureth shall possibly grow farther: which charm the must pronounce thrice, after she hath withdrawn her hand backe, and withall, both he and she are to spit as often vpon the floure, that is to say, euery time that she repeareth the foresaid spell. Furthermore, the root of Mandragoras being applied with water, healeth these botches: so doth the decoction of the Scammonium root, reduced into a pulsette with hony. Also the herb Sideritis laid too, with old hogs greafe: last of all, Chryssippea, incorporat with fat figs: where, by the way note, that this herb retaineth the name of him who first brought it to light.

CHAP. X.

¶ Of the water-Rose, otherwise called Nenuphar. Of such herbs as either heat or coole the appetite to lust and venery. Of Satyrion or Ragwort, * with the seed roots of Crategis and Sideritis.

Nymphaea, which also is named Heraclea, if it be but once taken in drinke, disablaeth a man altogether for the act of generation (as I haue said before) 40 daies after the same if a man drink fasting, or eat with his meat, freeth him from the dreams of imaginary *Phantasies*, which cause pollution. The root applied in a liniment to the genitals, doth not only coole lust, but also keep down and represseth the abundance of natural seed: in which regard, it is thought good to nourish the body and maintain a cleare voice. On the contrary side, the upper root of Glader giuen to drinke in wine, kindleth the heat of lust: like as the herbe which they call Sampilier Saugie: as also wild Clarie, being stamped and incorporat with parched barley meale. But in this case wonderfull is the herb Orchis both male and female, and few be like vnto it, for two kinds there be of it: the one beareth leaues like vnto the olive, but that they are longer, riseth vp with a stem fower fingers high, carrying purple floures, a double bulbous root formed like to a mans genitals, whereof the one swelleth and the other falleth by turns each other yeare; and ordinarily it groweth neere the Sea side. The other is knowen by the name of Orchis Scirapias, and

A is taken to be the female: the leaues resemble lecke blades, the stalke is a spaw or hand-breadth high, and the floures be purple; the root likewise is bulbous & twofold, fashioned like to a mans floures or cullions; of which, the bigger, or (as some say) the harder, drunk in water, prouoketh the desire to venery: the lesser or the softer taken in goats milk, represseth the foresaid appetite. Some say it is leaved after the manner of Squilla or sea-onion, saue that the leaues be smoother and smaller, and it putteth vp a stalk full of prickles or thorns: the roots whereof, do heale the fores in the mouth, and discharge the chest of fleame; but drunk in wine, do stop a laske. A power it is also to stir vp fleshly lust, like as Satyrion: but this herb differeth from the other, in that it is divided by joints or knots, and besides busheth more, and is fuller of branches: the root is thought to be good for forcery and witchcraft: the same also, either by it selfe alone reduced into powder, or els stamped & incorporat with fried barley groats into a liniment, is singular good for the tumors and other risings and impostumes in the said priuie parts or members of generation. The root of the former Orchis giuen to drinke in the milke of an ewe bred vp at home of a cade lambe, causeth a mans member to rise and stand; but the same taken in water, maketh it to go downe againe and lie. As for the Greekes, they describe Satyrion with leaues like vnto the red Lilly, but that they be smaller, & no more in number than three, which spring directly from the root: the stem smooth, a cubit high, naked and bare without leaues, and it hath withall two bulbous roots: of which the nethermore, which also is the bigger, serueth to get boies; the upper (and that is the lesser) is as good to engender girls. They haue likewise another kinde of Satyrion, which they name Erythraicon, and it beareth certain grains or seeds resembling that of C * Chast-tree, or Agnus Castus, but that they be bigger and smoother: the root is hard and white say) vpon mountains and by their saying, the root is of that vertue, that if it be held once in a will it set him in a heat if he drinke it in some hard and green wine: in regard of which propertie, the manner is to giue it in drinke to goats and rams, if they be vn lusty and nothing forward to leape the females. The Sarmatians likewise ministred a drench made with this herb vnto their stone-horses or stallions, when by reason that they are ouertruelled and tired out of heart by continuall labour, they perceiue them to be slow and vnapt to couer mares, which defect the Greekes call by a proper and fit term Proselamon. But say that one by taking of this root is ouer lusty and too much prouoked that way, the means to abate and quench the heat & strength thereof, is to drinke mead or the iuice of lettuce. In sum, the Greekes generally when they would signifie any extraordinary wanton lust or appetite to venery, haue a pretty name for it and call it Satyrion. And euery they haue giuen a denomination to Cratogonon, which is an herbe divided by knots or joints, busheth and spreadeth with a number of branches, the seed whereof is hot, and the root of no validity or vie in Physick: likewise they imposed vpon other the names of Arthenogonum and Thelygonum; the seeds or grains of which resemble coods or cullions. Moreover, it is said, that whosoever haue about them the marow or pith of the Tithymal branches, shall be very prone and forward to the sports of Venus. *Theophrastus*, a renowned author, and otherwise a graue and modest writer, exceedeth in this point, and telleth vs of strange and incredible wonders; and namely, of a man who was able to company with women seventy times together, by touching or handling one only herb; but he hath not put downe either the name or portraiture of that herb.

Sideritis the herb, if it be bound to the swelling and painfull veins called Varices in Latine, doth not only diminish their tumor, but also appease and take away their dolor.

Touching the gout, the time hath bin when it was not so common a disease as now it is; and not only in our fathers and grandfathers daies, but euery in our age and within my remembrance it was no ordinary sickness here in Italy, as being a forrain malady and come out of strange countries hither vns: for certainly if it had bin known to the Italians in old time, I doubt not but it would haue found a Latine name to be called by. Neither is the gout a disease incurable, as some haue beleueed, for known it hath bin in some to haue wone away of it selfe without any medicines; but in many more, to haue been cured by the means of Physicke. Among the appropriate remedies for this malady, are to be ranged the roots of Panaces, applied in a cataplasme with raisins; the iuice of Henbane or the seed, with the floure or powder of Sesama; Scordium laid too in a pulsette with vinegar; and the herbe Iberis, as hath beene sayd before: also

Howeuer
Dolcampius
and others
haue laboured
to restore this
place after
this manner,
yet there re-
maineth some
confusion: by
intermingling
O chris and Sa-
tyrion toge-
ther, both in
their descrip-
tions and pro-
perties.

Partic. Dist.
hath sayd, it
is not a Flax,
nor any.

Podagra (i. e. d)
ordinarily in
Latine for the
gout is a
Greeke name,
and signifies
the griete or
maladie of the
feet.

* Or Colamus
Aromaticus.

* Some call it
the worst of
Cudwort, o-
ther take it
to be wild
Panacea, and
some for
Phytolacca.
* Some take
it for Euphorbia
palustris.

* Peltem, haply
is anella
i. e. anem. pel-
tatiolum, a
pluget fow.

* Sythiacis.

* m. p. p.

H

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K

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M

* Glader of
Flage
* Fleawort.

* Anagallis,
Diole v. earth
* Cicula
c.
o
Do.

Vervaine stamped and incorporat with hogs greafe, is good for the gout: so is the root of Sow-bread, the decoction whereof healeth kibed heels, if they be bathed therein: the root of * Xiphion cooleth the hot gout; the seed of * Psyllium doth the same: Hemlock also, incorporat with Litch-coleth the hogs greafe: but above all other, Houfleeke or Sengreen is right fouveraigne to be applied at the first assault or fit of the red gout: when it is occasioned by a flux of hot humors: and whether it be hot or cold gout, Groundswell tempered into a liniment with swines greafe, and so applied, is a very fit and convenient medicine: as also Plantain leaves stamped, with a little salt mixed amongst Argemona panned in a mortar & applied with hony: moreover, Vervaine reduced into an vnguent, is singular in that case; yea and if the goutie feet be well soaked in the decoction thereof, much ease will infuse thereupon: also Lappago, an herb resembling * Pimpernell, but that it is fuller of branches, and tufted more with leaves, which also be rough, rugged, and wrinkled, yielding a juice in tast more harsh, and in smell strong and vnpleasant: as for that of this kind which is * soft, that call Mollugo: like vnto vetch (but for the leaves that be more rough in handling) is Asperugo, whereupon it took the name. Now for the gout, let the Patient take euery day 11 deniers weight of the juice pressed forth of the former Lappago in two cyaths of wine: but for this disease the most excellent remedy, and that which rids it quite, is the sea-weed, which in Greeke they call Phycos Thalasston, and in Latine Fucus Marinus; an herb like vnto Lettuce, & commonly Murets & other shel-fishes lye bedded vpon these weeds, which being applied before they are dried, do cure not the gout of the feet onely, but also any disease of all other joints. Now of this Sea-grasse so named, there be found three kinds: the first is broad and large; the second longer, and somewhat red; the third hath curled and frizled leaves, which in Candy they do vse in dying of their clothes; but all are of one and the same operation in Physick. *Nicander* was wont to giue them in wine, as a counterpoison against the venome of serpents. Moreover, the seed of that herb which I named Psyllium, is singular good for the gout, if the same be well steeped in water; so that in euery hemine of the seed there be mingled the quantity of two spoonfulls of Colophonian rosin, and one of frankincense. Finally, the leaves of *Mandragoras* be highly commended in this case, if they be stamped and incorporat with fried Barly groats into a cataplasme.

CHAP. XI.

¶ *Generall medicines and receipts for all the infirmities incident to the Feet, the Ankles, joints, and Sinews: Item, the remedies for those diseases which possesse and trouble the whole body. Of the herbe Mirbrida. Medicines for those that cannot sleep: and for the Palse, Of cold fevers: and the ague that is incident to horses: of the Phrensie. Of the herbe Walwort and Houfleeke. Last of all of the Shingles or S. Antonies fire.*

IF the feet be swoln about the ankles, the mud that is found in the bottom of waters, wrought and incorporat together with oile, is of wonderful operation to allay the same. For the pain in the joints, or griefe of sinews, the juice drawn out of Centaury is passing good: in like manner, the herb Centaury. As for Betony, it is comfortable vnto the nerves, which run and spread behind our the shoulder-blades, the shoulders, the back-bone, the loins and hanches, if it be taken in * drink, after the manner as it was ordained for the liuer. Cinquefoile, is fouveraigne for the pain of the joints, if it be applied outwardly: likewise the leaves of *Mandragoras* made into a pulstiffe with parched barley meale, or the root it selfe newly drawn out of the ground & stamped with the wild Cucumber, or els boiled in water, for the chaps that appeare in the feet or vpon the elbows, the root of *Polypodie* is singular good; for the griefe of the joints, the juice of Henbane reduced into an ointment with swines greafe, is a proper remedy: likewise the iuce of the herb * *Amomum*, together with the decoction: also Cotton-weed or Cudwort, boiled in water: or fresh gathered mossie soaked in water and bound to the grieved place, and there kept salt without removing, vntill it be drie: as also the root of the Bur called Lappa Boaria, drunke in wine. Sow-bread foddren in water, cureth the cluifh & angry kibes beginning to rise vpon the heels, and all other chilblanes and bloudy fols occasioned by cold. Semblably, *Vniblicus Veneris* applied with hogs greafe, healeth the foresaid kibed heels: so do Crowfoot leaves: and the juice of *Epithymum*. *Ladanum* made into a salve with Castoreum, and so applied, fetcheth out the core of agnells or corns by the roots: the like effect hath Vervaine, if it be laied roo with

wine.

A wine. And now that I haue run through those maladies which are offensive to euery particular member, I purpose to write in the next place of such as occupy the whole body; and of the remedies common to them all, which I find to be these ensuing.

And first these presenteth it selfe vnto me the noble herb * *Dodecatheos*, wherof I haue spoken before as a fouveraigne remedy for those vniuersal diseases, if it be taken in drink. Next to it are the roots of all kinds of the Panaces, which are thought to be excellent, and principally for long and languishing maladies: like as their seed for the obstructions of the bowels and the inward accidents of the guts: for the pains generally of the whole body, the iuce of *Scordium* is right commendable, and so is that of Betony, which herb taken in drink, hath a peculiar property to mend the wan and leaden hew of body, reducing it to a more fresh and pleasant color. The herb * *Geranium*, which some call *Myrrhis*, others *Merthyrs*, is like vnto Hemlocke, save that it hath smaller leaves, and a shorter stem, which also is round, of a sweet sent to the nose, and good fauor in the mouth; for so we Latines doe describe it: but according to the description of the Greeks, the leaves rather resemble the Mallow, but that they are whiter somewhat, the stalks slender and hairy: * it brancheth out big at the distance of euery two handbreadths, howbeit full of leaves between: and among the leaves are to be seen in the top of the branches and sprigs little buttons or heads like vnto Crane-bills. Another kind there is of them leaved after the manner of passe-floures, or wind-floures, but that they be intailed or indented deeper: and a round root it hath fashioned like an apple, which is sweet in tast, and is an excellent restorative for all such as haue bin weakened and decayed in nature by long sickness: and this I take to be the true *Geranium*, which is a rare herb. A dram weight thereof drunke twice a day [first and last] in three cyaths of wine, is a singular medicine for the phthy sicke. And in that order it is good for ventosities: and hath the same effect though it be taken raw. The iuce of the root is fouveraigne ne for the infirmities of the ears. The seed giuen in drink to the quantitie of 4 drams with pepper and Myrrh, cureth the cramp which pulleth the head and body all backward. The iuce of Plantain if it be drunke, or the herb it selfe boiled and eaten, is wholsome for those that be in a Phthysick. Plantain eaten with salt and oile in a morning, so soon as a man is awakened, is a great cooler. The same is an ordinary medicine for those that mislike, and whose meat is not scene vpon them, if they take it each other day. Of Betony and hony there is a liquid confectiō or lochoch helped, which being licked and let down leisurely, to the quantitie at a time of a good big beane, D helpeth those that are in a Phthy sicke or consumption of the lungs. Also Agarick, if it be drunke to the weight of 2 oboli in wine cuit, is good in the like case: so is Dauncum also taken in wine with Rhapontick. For the hungry worms Phagedenae (a name in this place signifying an inordinat * disposition, to be alwaies eating and neuer satisfied, although otherwise I vse it for cankerous and corroding vlcers) the Tithynalls or Spurges taken inwardly with Sesame seed, is counted fouveraigne. Among the maladies which affect & infect the whole body, want of sleep, or an indisposition thereto, is by most Physitians counted one for which defect, they then use these herbs following: to wit, Panaces, water Betony, and Aristolochia, which they prescribe to the patient both for to smel too, and also to annoint his head all ouer withall. Likewise Houfleeke called *Aleizoon* & also *Sedum*, giuing direction to wrap it within a blacke cloth, and so to lay it E vnder the pillow or boulder of the sick person, but in no wise to let him or her know so much. Likewise *Oenothera*, otherwise named *Onuris*, is effectually for this purpose: an herb good all in wine to make the heart merry. It groweth with leaves resembling those of the Almond tree, and beareth floures like vnto Roses. Store of branches it putteth forth, and hath all along, which being dried, senteth much of wine. Of such vertue is this herb, that if it be giuen in drink to the wildest beast that is, it will tame the same and make it gentle. As for the crudities or raw humors lying in the stomack, which cause loathing and abhorring of meat, Betony is singular to digest them: the same drunke immediately after supper, helps concoction, namely, if one dram weight of the herb be taken in 3 cyaths of oxymel: and so it resolueth and scattereth the fumes arising vpon into the head, occasioned by strong wine. Of the same operation is *Agarick*, drunke at the end of a meale in hot water. The foresaid Betony hath the name of a speciall remedie for the palse: so is *Iberis* also reputed, as I haue shewed once before; the same herbeberreth the limbs which are benumbed and in manner dead. And verily, Argemone is of that vertue, that it disscueth all those cold humors which mortifie any member, and put them in danger to be cut off or launced. The root of that Panaces which I named *Heraclis*, drunke with the ret

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chiefly or the
twelve pin-
pallies and
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id. *Strainum*
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gether with
the other
Physicians, and
the both *Ela-*
nias comprid
in this Disti-
cho: *Luce, De-*
fa, *Miseran,*
Cris, *Disag,*
Venus, *Mari,*
Miseran, *la-*
vot, N. p. u.
vot, *laucant*
Apollin.
Heric Ro-
cit, as some
think, or the
first kind by
Dionysius.
Dionysius or
or *Momedica*

The Carot.
* Adoncus.

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the weight of three drams; but this care ought to be had, that the room be hot, and so close that no winde may come in, for feare of catching cold: and then it will driue out the jaundise by sweate, lustily. The leaues of Fole-foot taken in water: the seed of Mercuries, both the male & female, if a cup of drink be spiced therewith, or if it be foddren with Wormewood or such pease: the berries of hyssop drunk with water: the herb Luerwort, so that the patient abstain from all worts or potherbes, so long as he taketh it: Capillus veneris giuen in wine: and the Fullers herb in wine hincd, be all of them good medicines for the jaundise.

As for the fores called Fellons or Cats-hairs, they will breed euery where in any part of the body, and put folk to great anguish and trouble who haue them, yea, and otherwhiles indanger their life, especially if they meet with lean and worn bodies. But what remedy? Take the leaues of the herb Pynocomos, let them be stamped and incorporate with fried Barley meale, and so applied, in case the said fellows are not drawne to a pointed or sharpe head. The leaues also of * Ephedros brought into a liniment and laid too, do disburse & dissolve them, if they be taken in the beginning.

Moreouer, you shall not see a part of the body but it is subiect to the Fistulae, which creepe inwardly and hollow as they go: but especially, when by the vnskilfull direction of Physitians, or the lewd hand of chyrurgions there be an incision vtowardly made in the body. The help is to make tents of Centaure the lesse, with honey boiled, and put them into the concauity. Also to use an injection of Plantain juice. To apply Cinquefoile with salt and hony. Ladanium also with Castoreum: to lay vnto the fore, Vmbilicus veneris, with deere Marow, especially of Stag or Hind, hot. The string or pith of a Mullen root fashioned slender to the form of a tent put in to the vlcet, or the root of Aritholochia in that manner vsed, or the juice of Tithymall conuocied into it, serue all to cure the Fistula.

All inflammations, biles, & impostumes, are healed by a liniment made of Argemoney leaues. So be all hard and scirrhous tumors, occasioned by the gathering of humors, with Verruine or Cinquefoile foddren in vineger: with the leaues and roots of Mullen: with hyssope applied in wine: with the root of Acorus, so that there be a fomentation with all made of the decoction of the said herb: and finally with Houfleeck. In like manner, these herbs before rehearsed do heale bruises, hard tumors, or bunches and hollow fores. The leaues of * Illecebra draw forth any arrow heads and whatsoeuer sticketh within the body: so do the leaues of Fole-foot: the Carot also, and the leaues of * Lions paw, stamped and incorporat with fried Barly meale in water. The leaues of Pynocomos punned, or the seed beaten to powder, & with Barly meale parched, and so reduced into a cataplasim, are good to be applied to biles and impostumes broken & running matter. In like manner the Ragworts are to be vsed.

As touching the accidents that happen in the bones, the root of Satyrion if it be laid outwardly upon them, are thought to work a most effectual & speedy cure. All cankerous & eating fores, likewise impostumes growing to supuration, are healed with the seaweeds, if they be applied before they be dried & withered. Also the root of marsh Mallow, doth dissipate and scatter all gatherings of humors to an impostume, before it be come to an head and to suppurate.

Plantain and the Clot Bur are singular for burns or scalds, healing them vp so cleane without a skar, that a man shall not perceiue the place: the manner is to take the leaues, seeth them in water, stamp them into a liniment, and so to apply them. Likewise the roots of Sowbread, together with Houfleeck the herb it selfe Hypericon, which I called before * Corion, haue the like effect.

For the infirmities incident to sinews and joints, Plantain is a foueraigne herb, if it be stamped with salt: so is Argemoney punned and incorporat with hony. The juice of Harftrang is singular to annoynt those that be sprained, such also as be stretched with an vniuersall cramp as if they were all of a peece. For to mollifie the hardnesse of sinews that be shrunk vp, there is not a better thing than the juice of Agilops: and to assuage their paine, a liniment made with groundswell and vineger, is excellent. For those that be sprained and troubled with that crampe which draweth their necke backward, it is good to rub and annoynt them well with Epithymum, with the seed of S. Johns wort, which also is called Coris, and to drinke the same. As for the hearbe Phrynyon, they say it hath vertue to conglutinate and vnite sinews again, if they were cut in sundry, if it be laied too presently, either stamped or chewed in the mouth. For such likewise as be spasmatike, pucked backward with the cramp, or troubled with trembling and shaking of the limbs, it is good to giue them the root of the marsh Mallow to drinke in mead: and in that manner taken

A taken, it healeth those that be stiffe and stark for cold. Finally, the red seed of the herbe Pæony stancheth any flux of blood, the root thereof hath the like operation. As for Cyclaminos, that is to say Sowbread, it staies any bleeding, whether it be at the mouth raght vp from out of the body, or at the nostrills, whether it run by the fundament, or gush from the matrice of women. Likewise Lyfimachia stancheth blood either in drink, liniment, or Errhin put vp into the nose. The like effect hath Plantain seed. Cinquefoile also both taken inwardly and applied outwardly. Moreouer, if the nose bleed, take the seed of Hemlocke, beat it into powder, mixe it with water, and so put it vp handfomly into the nostrills. Also Sengrene and the root of Astragalus. To conclude, wild Hirse called in Greek * Ichæmon and Achillæa, do stay any issue of blood.

CHAP. XIII.

Of the herbe Equisetum: of Nenuphar, Harftrang, Sideritis, and many more effectuall to stanch blood. Of Stephanomelis and Erisibale. Also remedies against wormes and vermine.

Horse-tail, named in Latine Equisetum, and by the Greeks Hippuris, an herb which heretofore I diallowed to grow in any meadows (and it is esteemed the very haire, proceeding out of the earth, like for all the world to the haire of an Horse-tail) if it be boiled in a new earthen pot neuer occupied before, so as the pot be brim full when it is set on the fire and so to continue seething, vntill a third part be consumed, doth waite the spleen of lackies & footmen, it for 3 daies together they drinke one hemine of the decoction at a time: and besides, this charge they ought to haue in any wife, to forbear all fat and oily meats for 24 houres before they begin this diet drink. In describing of this herb, the Greeks do not agree, but are of diuers opinions: some giue that name to a certain herb with blackish leaues resembling those of the Pine tree: and they report a wonderfull vertue thereof; and namely, that if it doe but touch a man, it will stanch any issue of blood. And as some name it Hippuris, so others called it * Ephedros, and there be again who giue it the name Anabasis: because forsooth, as they say, it climbs vpon trees and hangeth down from thence, with many blackish slender haire in manner of rushes, resembling horse-tails. Small branches it hath full of joints, and few leaues, which be also fine and small. The seed that it beareth is round, like vnto Coriander; and the root of a woody substance: this kind, say they, groweth principally in thickets and groues. An astringent and binding power it hath. The juice if it be conueighed vp into the nostrills, stenteth bleeding at nose, though it gusheth out from thence: it kniteth also the belly, and stoppeth a lask. Taken in sweet wine to the quantity of 3 evaths, it helpeth the bloody flux. Vine it prouoketh, the cough it staieh, and cureth straitnesse of winde when the patient is forced to sit vp right for to draw his breath. It healeth ruptures, and represseth those fores that loue to spread and run over the body. The leaues are good to be drunk for the infirmities that offend guts & bladder: a speciall vertue it hath to cure those that be bursten bellied and haue their guts slipping downe in the bag of their cods. The said Greek writers describe also another Horse-tail, by the name of Hippuris, with shorter, softer, and whiter haire than the former; and they commend it as a foueraigne herb for the sciatica and for wounds, to be applied vnto the place with vineger; & namely for to stanch blood: in which case the root of Nenuphar serueth very well, if it be stamped and laid vpon a green wound. If a man or woman void blood at the mouth, which doth rise from the parts below, there is not a better thing than Harftrang taken in drinke with the seed or berries of the Cypresse tree. And as for Sideritis the herb, it is so powerfull that way, that it stancheth blood out of hand, if it be applied & kept fast to the wounds of these sword fences that fight at sharp, bleed they neuer so fresh: to which effect we may see in the ashes and coles of Fennell: geant: but the toadstoles or Mushrooms growing about the root of the said plant, doth the feat more fully: in case the nose gush out with blood, Hemlock seed also beaten to powder, tempered with water and so put vp, is counted very effectuall to stay the bleeding: in like manner

* Stephanomelis, if it be applied with water. The powder of Betonie dried and drunk in Goats milk, stancheth blood issuing out of womens breasts by the nepples. The same doth Plantaine bruised and laid too in a pulsette. The juice of Plantaine is good to be giuen them that vomite blood. For a blood that runneth vp and downe, breaking out one while here and another while there, a liniment made of a Burre root and a little swines greafe, is commended to be excellent.

For

Rare, rather
cyme, the
tops, as before.

Hippuris, Horse-
tail.

A kind of
Houfleeck.
Our Ladies
Mantle.

* Or Coris.

Darnell, as
some thinke.

* Sanch-
blood, a kind
of Yarrow.

Or rather
Ephedros.

Ande' it is
just none.

Dalci: to the
austere, hard
or green wine.

Which some
take to be
gastriac,
white Tanley.

uers places: it beareth in the head certain berries as it were in bunches and clusters, odoriferous, and as they sent somewhat strong and hot, so the smell is not vncpleasant: take this herbe, chew it with your teeth, and then lay it to any wounds made by the edge of the sword or such like weapon, and so let it lie and remoue it not vntill the fifth day, you shall see it to heale excellent wel. Camfrey applied vnto a green wound, skinneth it most speedily: so doth Sideritis, as for this herbe, it should be applied with honey. The feed and leaues of Mullen, sodden in wine, & stamped to the forme of a cataplasme, draweth forth all thorns, spils, and arrow heads, which sticketh within the body. The like effect work the leaues of Mandragoras, incorporat with parched barley meale, and Sow bread roots stamped and mixed with honey. The leaues of Germander punned with oile, are excellent to be applied vnto those vicers which doe corrode the flesh vnder them and eat forward, like as the Reiks or sea-weeds, Betonie is a souveraine herbe for cancerous vicers also for the blacke spots which haue continued a long time vpon the sk in, if there be salt put thereto. Argemonia tempered with vineger, taketh away warts: so doth the root of Crowfoot, which also is singular good to fetch off with ease, the ragged and fretted nailes that be offensive. The leaues of Mercurie, the male and female both, or the iuice thereof brought into a liniment, haue the like operation. Al the sorts of the Tithymals take away any warts whatsoever: so do they rid the troublesome risings and impostumations like whitflawes about the naile roots, and all flecks, spots, wheles, and specks whatsoever. Ladanum reduceth any scars to look faire and fresh coloured againe.

CHAP. XV.

Many experiments and approved receipts, for the prouoking or staying of womens monethly tearmes: for curing the diseases of their matrice: for sending out the birth, or retaining the same within the bodie the full time. Also sundry deuises for to amend the faults that blemish the skin of the face: to colour the haire of the head, or to scize it off. Last of all, diuers medicines for the farcines or scab in foure-footed beasts.

IT is said, That if a traeller or wayfaring man weare fast tied about him, Mugwort or Sauge, he shall neuer be weary nor thinke his journey long. But to come now vnto the infirmities of women: the black seed of the herb Priony, is generally good for all their *maladies, if it bee taken in mead: the root also is of the same operation, and besides prouoketh the ordinary course of their months. The feed of Panaces drunk with wormwood, moues their fleurs, & prouoketh them to sweat: the like effect hath Scordotis either in drink or liniment. A dram of Betony giuen to women in 3 cyaths of wine, helps all the maladies incident to their natural parts, *but especially those that insue vpon their deliuey of child birth. Achilla being applied accordingly, staith the excessive flux of their monthly termes: for which purpose also, it is good for them to sit in a bath made with the decoction of the said herb: & in this case, to their breasts or paps. *There would be laid a plaster of Henbane seed tempered with wine: the root also pressed in manner of a cataplasme to their secret parts, is counted souveraine for that infirmity: like as Celendine the greater laid vnto the foresaid breasts. If the after birth, when the child is borne, be loth to come away, or if the infant be dead within the mothers womb, the roots of Panaces applied accordingly to the priuy parts, fetch forth both the one and the other. The very herb it self Panaces drunk in wine, or outwardly vsed to the region of the matrice, *clemeth the same. Sauge de bois taken with wine, expelleth the after-birth, and by a suffumigation, munieth the matrice. The iuice of Centaury the lesse, bringeth women to their desired sicknesse, if they drink it, or soment the parts beneath, therewith. Likewise the root of the bigger Centaury vsed after the same manner, appeareth the pains of the mother. If the same be scraped smooth, & put vnto the right place as a pessary, it draweth away the dead child within her body: for the griefe and anguish which women feele in their womb, there is no better thing than to apply the iuice of Plantaine in a locke of wooll: and in danger of suffocation by rising of the mother, to giue it in drinke. But Dictamnus is souveraine and hath no peer: it prouoketh monthly fleurs: it sendeth out the dead child, yea though it lay ouerthwart and stuck crosse in the birth: for which purpose, the woman must drink to the weight of one obolus, in water: and verily of such power is this herb in such cases, that so long as women go with child, it must not come within the chamber where they are, for feare it put them to trauell before their time. And not onely in

* To their matrice, as namely, the rising of the moeth, &c.

* To wit, the stay of the after burden, after the show, suppression of their purgation, or immoderate shifts, &c. Swelled and hard.

* Purges, some vnto the right place being vsed, and persweted.

darke

A drink is it thus effectual, but also in a liniment; yea and the very perfume and smoke thereof received in the body, will do the deed. Next to it, there is not a more souveraine herb than the bastard Dictamnus, called Pseudodictamnus: but it must be boiled to the weight of one denier, with pure wine and strong of the grape, and then taken in drinke, it prouoketh women desired sicknesse. And yet Aristolochia is many waies good for the infirmities of women: for if there be myrrh and pepper put thereto, and then either taken in drink or put in a pessary, it draws downe their fleurs, bringeth forth the after-birth, and fetcheth away the dead infant: it keepeth vp and staith the matrice ready to fall and slip out of the body, either in fomentation, perfume, or pessary, especially the *small kind thereof. But in case a woman be in danger of suffocation by the *ascend of the mother, or otherwise diseased for want of her monethly purgation, let her drinke Agaricke to the weight of three oboli in one cyath of old wine: make a pessary of Vernain incorporat with fresh hogs lard, and applie Calus snout, otherwise called Snap-dragon with oile rosar and hony, she shall haue ease, and be cured speedily. Semblably the root of Nenuphar, especially that which groweth in *Hesse, applied vnto the natural parts of women, clemeth the paines thereof: and if it be drunke in grosse red wine, it staith their shifts or immoderate flux of the moneths. Contrariwise, the Sow-bread root, both taken in drinke, and also outwardly vsed, prouoketh the same, if they do stay vpon a woman. Also a decoction thereof, if a woman do sit therein, helpeth the accidents of the bladder. Cissanthemos taken in drinke, sendeth out the after-birth, and healeth the maladies of the matrice. The vpper root of the Flag or Gialer, drunke in vineger to the weight of one dramme, bringeth women to the ordinary course of their fleures. The fume of Harthtrag burnt, fetcheth women againe when they lie as it were strangled and dead in a fit of the mother. Flea-wort taken to the weight of a dram in three cyaths of bonied water, prouoketh their monthly termes, but especially it maketh them soluble if they were coftine. The seed of Mandragoras cleanse the matrice, if a woman take it in her drinke: the iuice whereof applied to the natural parts, prouoketh her moneths and fetcheth away the dead child within her body. Again, the seed taken with wine and brimstone, staith the immoderate flux of the monthly termes. Crowfoot either drunk or eaten with meat, knitteth the belly and stoppeth a lask: an herb otherwise (as I haue said) of a causticke and burning nature, if it be vnto raw, but certainly, being boyled with salt, oyle, and cumine, a commendable meat. Yellow Carrots taken in drinke, doe exclude the after birth, and prouoke womens fleurs with exceeding great facilitie. A perfume of Ladanum, setteth straight the matrice when it is out of the right place, and turned to a side: and for the paine and exulceration thereof, it is of great force either applied outwardly or injected inwardly. Scammonie, either in drinke or cataplasme, sendeth forth of the body the dead fruit or the wombe. Both kinds of S. Johns wort, stirreth the issue of womens fleurs, onely by an outward application. But about all (in the judgement of Hippocrates) *Crichmos passeth for that, if either the seed or the root be taken in wine. As for the pill or rind thereof, it fetcheth away the after birth also: and drunk in water, it helpeth the suffocation occasioned by the rising of the mother. The root of *Geranium likewise more particularly, is a very conuenient remedy for to bring away the after-birth, and to cure the inflammation of the matrice. Horsetail hath a secret vertue to munieth the natural parts of women, either drunke, or applied outwardly. Knot-grasse giuen in drinke, *staith the inordinate and excessive voidance of the fleurs: so doth the root of Marsh Mallow. The leaues of Plantain, *drawe downe the same: so likewise Agaricke in bonied water. Mugwort stamped and incorporat with oile of Icos, Figges, and Myrbe, hath the same effect, if it be applied accordingly: The root of which herbe, if a woman take in drinke, is so purgative and will bring her to such a lask, that she shall withall exclude the dead infant within her bodie. A decoction made with the branches of Mugwort, bringeth downe womens monethly sicknesse, and fetcheth away the after-birth, if they sit therein: a dramme weight of the leaues taken in drinke, is of the like vertue and operation: if they be but laied vnto the belly in manner of a cataplasme, especially with barley meale, they will doe as much. Moreover, Acoron, both the kinds of Conyza, as also F. Sampier, are singular good for all the inward grieues and maladies whatsoever of women. Also both kinds of Anthyllis drunke in wine, are souveraine for the accidents of the matrice, namely to assuage the throws and wrings thereof, and to bring away the after-birth when it staith behind. A fomentation made with Maidenhaire, is comfortable to the natural parts of women: like as it hath vertue to clemeth the scurfe and dandruffe, to rid away the white patches appearing

* Clematis.

* With yellow ll.

* S. Johns wort.

* Hab.

* S. Johns wort.

* I. Icos.

* S. Johns wort.

* S. Johns wort.

* S. Johns wort.

* S. Johns wort.

* S. Johns wort.

* S. Johns wort.

in the skin or haire, and to color the same black, if it be brought into powder, & with oile made into a liniment. Herb Robert drunk in white wine, and Hyocisthis in red, do stay the flux of reds or whites. Hyssop is a soveraign herb to open and relax the obstructions of the matrice causing suffocation. The root of Veruaine taken inwardly with water, is the best thing in the world for all the maladies incident to women, either in their trauell or after their deliuerance. To which effect, some there be, who together with Haritrag mix the grains of the Cypresse tree beaten to powder, and giue it to drink in grosse red wine. For the seed of Fleawort, boiled in water, and laid too warme, doth moderate and qualifie all the violent fluxes of the matrice. Camfre stamped and giuen in grosse wine or allegant, bringeth down the sicknesse of women when it staith upon them. The juice of Scordotis taken to the quantity of one dram in foure cyaths of honied water, giueth women speedy deliuerance in childbirth: and for that purpose, the leaves of Dictamnus are excellent, if they be taken in water and knowe it is for certain, that the weight of one obolus of those leaves giuen to a woman in hard trauell, wil presently cause her to be deliuered with ease, yea though the infant were dead in the belly. The like operation hath the bastard Dictamnus, but that it worketh more slowly: and in this case, they vse to tie the root of Cyclamin about the woman in labour; to cause her also to drinke Cissanthemos; yea and the powder of Betony in honied water. As for Arkenogonon and Thelygonon, they be two herbes, bearing certain grapes or berries like to oliue blossomes, but that they be more pale; and white seeds or kernels within, resembling those of white Poppy. If a woman drink Thelygonon, some say, she will therupon conceiue a maid child. Arsenogonon differeth from the other in nothing but in the seed, which commeth neare vnto that of the oliue: and (forsooth) if she take this herb in drink, she shall haue a man-child; beleeue it who that list. Others there be, who say, that both the one and the other be like vnto Basil; and that Arsenogonon carrieth a double seed knit together like as they were two genitors.

* Some think this is meant of hairs within the eyes, which should be few, bowed down by a drop of oile, and forrunkle in the eye, &c. aduise called by Aristotle *oculus*. And *Rosmarinus* is of an opinion, that one who shall get himselfe in haire may be cured with the herb. *Paricula* is another name for the same. *B. it* is commonly that which is called *Paricula*, but *Placemant* is another name for the same. *oculus* is another name for the same.

That kind of Housleek which I called *Digitellus*, is singular for the diseases incident to womens Breests. Groundswell bringeth abundance of milke into womens paps, if they drinke it in wine cutt: so doth Sowthistle foddren in frumenty. The grape called *Bumastos*, taketh away the haire about the nipples of nourses breasts, which spring sometime after they haue once borne children, which also otherwise is very good to cleanse the skales and scurfe in the face, and to scoure away other spots and pimples arising vpon the skin. Gentian, and Nymphaea called *Heraclaea*, the root also of Cyclamin, riddeh all such cutaneous specks and blemishes. The grains of wild Carawaies, called *Cacalia*, incorporate in wax melted and made liquid, lay the skin of the face plain and euen, and smooth all wrinkles. The root of *Acorum*, serueth likewise to purrifie the skin from all outward deformities. Herb Willow giueth the haire of the head a yellow colour. Hypericon, which also is named *Corion*, dieth it black: likewise doth *Ophrys*, an herbe growing with two leaves and no more, like vnto jagged Beets or Coleworts. Also *Polmonia* setteth a black colour vpon haire, if it be boiled in oile. As for depilatorie medicines, which are to take away the haire from any part, the proper place to treat of them is indeed among those that pertain especially to women: but now adays men also are come to it, and vse such deuises as well as women. The most effectfull of all others be they accepted, that are made of the herb *Archezostis*. The juice of *Tithymall* is likewise very good to fetch off haire: and yet there be some, who pluck them out first with pinners, and then with the said iuice incorporat with oile, rub the place often in the hot sun. Finally, Hyssop tempered with oile into a liniment, is excellent to heale the mange or scab in four-footed beasts: and *Sideritis* hath a peculiar vertue for to cure twine of their squinies or strangles. Now is it time to pursue all other kindes of hearbes which remaine behind.

THE

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THE TWENTY SEVENTH BOOK OF THE HISTORIE OF NATVRE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proeme.

CHAP. I.

Ertes, the farther that I proceed in this discourse & history of mine, the more am I forced to admire our forefathers and men of old time, for considering as I do, what a number of simples there yet remain behind to be written of, I cannot sufficiently adore either their careful industry, in searching and finding them out; or their liberal bounty, in imparting them so friendly to posterity. And verily, if this knowledge of Herbes had proceeded from mans invention, doubtlesse I must needs haue thought, that the munificence of those our ancestors had surpassed the goodnesse of Nature her selfe. But now apparent and well knowne it is, That the gods were authors of that skil and cunning, or at leastwise there was some diuinitie and heavenly instinct therein, euen when it seemed to come from the braine and head of man: and to say a truth, confesse we must, That Nature (the mother and nource of all things) both in bringing forth those simples, and also in reuealing them with their vertues to mankind, hath shewed her admirable power as much as in any other work of hers what soeuer. The herbe *Scythica* is brought hither at this day out of the great fens & meers of *Mozotis*, where it groweth. *Euphorbia* commeth from the mountain *Atlas*, far beyond *Hercules* pillars & the straits of *Gibraltar*, and those are the very vtmost bounds of the earth: from another coast also, the herbe *Britannica* we haue transported vnto vs out of Brittain, and the Islands lying without the continent, and diuided from the rest of the world, like as *Aethiopia* out as far as *Aethiopia*, a climat directly vnder the Sun, and burnt with continual heat thereof: besides other plants and drugs necessary for the life and health of man, for which merchants passe from all parts too and fro, and by reciprocal commerce, impart them to the whole world; and all by the meanes of that happy peace which (through the infinite maiesty of the Roman Empire) the earth inioyeth: in such sort, as not only people of sundry lands and nations haue recourse one vnto another in their traffick & mutual trade, but high mountains also & the clifses surpassing the very clouds, meet as it were together. & haue means to communicate the commodities, euen the very herbs which they yeeld, one to the benefit of another: long may this blessing hold, I pray the gods, yea and continue world without end: for surely it is their heavenly gifts, that the Romans as a second Sun should giue light and shine to the whole world.

CHAP. II.

¶ Of the poison *Aconite*, and the Panther which is killed thereby.

A Conite alone, if there were nothing els, is sufficient to induce any man to an endlesse admiration and reuerence of that infinit care and diligence which our antients employed in searching out the secrets of Nature; considering how by their means we know there is no poison in the world so quicke in operation as it, inasmuch as if the shap or nature of any liuing creature

Aa 3

creature

createure offemale sex be but touched therewith, it will not liue after it one day to an end. This was that poison wherewith *Calpurnius Bestia* killed two of his wiues lying asleep by his side, as appeareth by that challenge and declaration which *M. Caelius* his accuser framed against him. And hereupon it was, that in the end of his accutatory inuēdiue, he concluded with this bitter speech, That his wiues died vpon his finger. The Poets haue feined a tale, That this herb should be ingendered first, of the some that the dog *Cerberus* let fall vpon the ground, frothing fo as he did at the mouth for anger when *Hercules* pluckt him out of hell: and therefore it is sortooth, that about *Heraclea* in *Pontus* (where is to be seen that hole which leadeh into hel) there groweth *Aconit* in great plenty: howbeit, as deadly a bane as it is, our forefathers haue deuised means to vte it for good, and euen to saue the life of man: found they haue by experience, that being giuen in hot wine, it is a counterpoison against the sting of scorpions: for of this nature it is, that if it meet not with some poison or other in mens bodies for to kill, it presently lets vpon them and soon brings them to their end: but if it incounter any such, it wrestleth with it alone, as hauing found within a fit match to deale with: neither entrench it into this fight, vnlesse it find this enemy possessed already of some noble and principall part of the body, and then beginneth the combat: a wonderfull thing to obserue, that two poisons, both of them deadly of themselves and their own nature, should die one vpon another within the body, and the man by that mean only escape with life. Our ancestors in times past flaid not thus, but found out and deliuered vnto vs proper remedies also for wilde beaſts; and not so contented, haue shewed meanes how those creatures should be healed which are venomous to other: for who knoweth not, that scorpions if they be but touched with *Aconite*, presently become pale, brummed, alonied, and bound, confessing (as it were) themselves to be vanquished and prisoners: contrariwise, let them but touch the white *Elleboro*, they are vnbound and at liberty: againe they recouer (I say) their former vigor and vertue: whereby we may see, that the *Aconite* also giueth the bucklers to enemies twaine, pernicious poisons both, the one to it selfe, and the other to all the world. Now if happily any man should say, That the wit and head alone of man could possibly compasse the knowledge of these things; surely he should shew therein his ingratitude and impiety vnto the gods, in not acknowledging their beneficence. The people about *Heraclea*, to kill the Panthers which breed in those parts, vse to rub with *Aconite* certain goblets of flesh, which they doe lay about the mountains as a bait and bane for them: and vnlesse by this meanes they did destroy them, no doubt they would fill the whole countrie, which is the cause that some call it *Pardalanchas*, *Libard-bane*: but they again on the other side, presently haue recourse to the excrements of a man, as I haue before declared, the only counterpoison whereby they saue themselves: who doubteth now, but the knowledge of this secret came first to them by meere chance? and considering that it is not possible to render a reason of the nature and vſage of such wild beaſts (and whensoever we see the like to fall out, we count it still a new & strange accident) we must needs attribute the finding thereof to Fortune.

CHAP. III.

¶ That of all Creatures and Inuentions in this life, the author is a god.

His Chance and Fortune then, by means wherof we attaine to so many inuentions that we haue, is a diuine power, and no lesse indeed than a God: by which name also we vnderstand and call that great mother and mistress of all things, same Nature: and surely considering that conjecturall it is and doubtfull, Whether these wild beaſts come by this knowledge day by day at a venture, or were indued naturally at the first with that perceiuaunce? we haue as great reason to attribute a diuinity and godhead to the one, as the other. Well, be it Chance, or be it Nature, that hath thus ordered the matter, ceres a great shame it had bin, that all other creatures should haue knowne thus (as they do) what is good and profitable for them, and man only remain ignorant. But such was the industrie and goodnesse of those ancientours of ours in times past, that they not only deuised means, but also deliuered to posterity, how this venomous herbe *Aconitum* might be most safely and commodiously mingled in those collyries and medicines which be ordained for the eyes: an euident argument and plaine prooffe, I assure you, that there is nothing so bad but it hath some goodnesse in it, and may be vſed well. And therefore dispensed withall I looke to be, if I who hitherto haue written of no poisons, put downe the description

A scription thereof; to the end that a man may know it, and by knowing, take heed and beware, This herb hath leaues, resembling *Cyclamin* or the *Cucumber*, in number no more than foure, and those toward the root in some sort rough and hairy. The root but small, and the same like vnto a sea crabfish: and therefore some haue named it *Cammaron*, whereas others, for the reason before shewed, call it * *Theliphonon*. And for that the root doth turn and crook inward in manner of a scorpions taile, there be that giue it the name *Scorpion*. There wanted not others who chose rather to call it * *Myo-tonon*, because with the very lent it is able to kill mice and rats: which is the reason (as some haue said) why it was named *Aconitum*. And for that in the place where it groweth or neare vnto it, there is no mould, nor so much as any dust found for to giue it nourishment, some haue thought it took the name therupon. Yet there be others who assigne another cause of that denomination, to wit, for that it is as forcible and as speedy in working the death of those whom it toucheth, as the hard stone or tag in turning or wearing the edge of any iron tooke; for no sooner commeth it neere vnto the body and is applied vnto it, but the quicke operation is sensibly found.

CHAP. IIII.

¶ Of *Æthiopsis*, *Ageraton*, *Aloe*, *Alcea*, *Alypon*, *Alfina*, *Androsace*, *Androsomon*, *Ambrosia*, *Anonit*, *Anagion*, and *Anonyon*.

The leaues of *Æthiopsis* are great and many in number, hairy also neere vnto the root, and otherwise correspondent to those of *Mullen*. It riseth vp with a four cornered stem, rough in handling, and after the manner of the main stem of the *Cloot-bur*, hauing many concavities or holes like arm-pits in the grafting of the branches to the said stem. It beareth seeds like vnto *Erui*, which ordinarily grow double two by two, and are white. The roots be many, and those long, full and well nourished, soft, and clammy in tast: being dried, they wax black & grow hard withall; in such sort, as a man would take them for horns. They grow ordinarily in *Æthiopia*, also vpon the mountain *Ida* in the region of *Troas*, and in *Messenia*. The right season to gather these roots, is in Autumne; and then they ought to be laid a drying in the Sun for certain daies together, to keep them from moulding. Being taken in white wine, they help the infirmities of the matrice; and the decoction thereof drunk, is good for the *Sciatica*, the pleurisie, & the hoarsenesse in the throat. But that which commeth out of *Æthiopia* is counted best and hath no fellow for it worketh presently.

As for *Ageraton*, it is an herb of the *Ferula* kind, growing vp to the height of a spans like to *Origanum*, but that the floures resemble buttons or brooches of gold. The time of this herbe when it burneth, prouoketh vrin and mundifieth the matrice, especially if a woman sit in a bath thereof, and do soment the natural parts therewith. The reason of the name *Ageraton*, is this, because the floures continue very long before they seem to fade and wither.

Aloe is an herbe which hath the resemblance of the sea-onion, but that it is bigger and the leaues be more grosse and fat, chamfered or channelled biais all along: the stem that it beareth, is tender, red in the middlest, not vnlike to *Anthericon*: one root it hath and no more, which runneth directly deep into the ground in manner of a big stake: strong it is to smell vnto, and bitter in tast. The best *Aloe* is brought out of *India*: but there groweth good store thereof in *Asia*, howbeit of no vse, but that they lay the leaues fresh vnto green wounds, for they do incarnate and heale wonderfully, like as their iuice also. And for that it is such an excellent wound-herbe, folk vse to set and sow it in barrels or pipes pointed beneath, and broad aboue, like as they do the greater *Houfleeke*. Some there be who for to draw a iuice or liquor out of it, stay not vntill the seed be ripe, but cut the stem for that purpose: others make incision also in the leaues: moreover there is otherwise hidden in *Aloe* a certain liquid gum issuing out of it self, and sticking fast to the stem thereof: and therefore they hold it good to pause or ram the ground hard all about the place where *Aloe* groweth, that the earth should not drink vp the liquor which distilleth from it. * Some haue written that in *Iury* about *Ierusalem*, higher into the country, there is a certain minerall *Aloe* to be found, growing in manner of a metal within the ground: but there is none worse than it, neither is there any blacker or moister. If you would know the best, chuse that which is fat and cleare, of a red colour, brittle and apt to crumble, close compact in manner of

* *Femalbane*.

* *er Myophaon*
* *Ab-pruasi-*
* *partialis*, &
* *unus*, &
* *adul*;
* *whē up bare*
* *stones with-*
* *out any mould*
* *vpon them, be*
* *also called in*
* *Greek & in*
* *to be white*
* *stones like-*
* *wit*; *Ter The-*
* *ophrastus* is of
* *opinion, That*
* *it tooketh the*
* *name Aconit*
* *of Aconit*, a
* *certain tower,*
* *neer to which*
* *it groweth a-*
* *bundantly.*

* *Ab a, Hereticis,*
* *& iſtan* *ab-*

* *Petronius Ni-*
* *ger, as Disce-*
* *rius faith in*
* *his prefate*
* *It seemeth*
* *that he means*
* *here the con-*
* *creted up*
* *herbe, which*
* *is also do call*
* *Aloe.*

a liuer,

fant is born: or if a woman desire to see her monthly sicknes, it is good to drink a dram weight of the leaues in wine cut. And in that manner they are giuen to those who be short winded: I he root is singular to be put to those plasters which either do resolue or maturat any impositumed place. The feed chewed, staeth immoderat vomits.

* Anonymos, finding no name to be called by, got therupon the name * Anonymos. a Plant this is brought out of Scythia tovs; highly commended by *Hicetus* a Physician of great name and authority, also by *Aristogiton*, for an excellent vulnerary, if it be bruised or stamped in water, and so applied; but taken inwardly in drinke, it is good for womens breasts and the precardial parts about the heart, if they haue gotten a stripe, or be bruised also for such as reach vp blood. Some haue ordained a vulnerary drinke to be made thereof for those that be wounded. But what is said moreover as touching this herb, I hold mere fabulous; and namely, that if two pieces of yron or brass be put into the fire and burn together with this herbe, fresh and new gathered, they will foulder and joine againe.

CHAP. V.

¶ Of *Erioth* or *Goose-grasse*. Of the *Clot-bur*. Of * *Ceterach*: of *Aclepias* and *Aster* or *Bubonium*. Of *Ascyrum* or *Acyroides*. Of *Aphace*, *Alcibium*, and *Alectorolophus*.

Erioth is by some called in Greeke *Aparine*, by others *Omphalocarpos* and *Philanthropos*. I An herb giuen to be full of branches, rough and prickly, carrying fise or six leaues growing round together about the said branches in order like a star, and a pretty distance there is between euery of these roundles. The feed is round, hard, holow, and sweetish. It groweth in corn fields, in gardens and meadows: rough it is, that it is ready to * catch hold of folkes clothes as they passe by, and to stick vnto them. An effectfull herb against serpents, if a dram of the feed be drunk in wine: also for them who are pricked with the spiders *Phalangia*. The leaues haue a singular vertue to repress the abundant flux of blood out of wounds, if they be outwardly applied: like as the iuice hath a speciall property to helpe the infirmities of the ears, being dropped or poured into them.

Arction, which some rather name *Arcturus*, is like in leafe to the great Mullen or Taperwort, K but that it is more rough: the stem tall and soft, and the feed resembling *Cumin*. It grows ordinarily in stony grounds, with a root tender, soft, & sweet. Being sodden in wine, it easeth the tooth-ach, so that the patient hold the decoction in his mouth. For the *Sciatica* and strangurie it is good to be taken at the mouth in wine; and outwardly applied, it healeth burns and curth kibed heeles: in which cases the root is much commended, if together with the feed it be stamped with wine, and a fomentation made with the decoction thereof.

As touching *Asplenum*, some there be who call it *Hemionion*: an herbe putting forth many leaues * foure inches long; the root is giuen to haue cranks and holes, and those full of mud or durt: much what do the leaues grow like to Fearn: the root is white and rough. It beareth neither stalk, stem, nor seed. It delighteth to grow among rocks and stones, vpon walls standing in the shade, and in moist grounds. The best is that which we haue out of Candy. It is commonly said, that if the decoction of the leaues boiled in vinegar be drunke forty daies together, it wasteth the swelled spleen. The same may be applied in a liniment for that purpose, & so also they do stay the excessive yex or bocket. This herb would not be giuen to women, for it causeth them to be barren.

Aclepias beareth leaues resembling *Iuie*, long branches, many small roots, and those odoriferous; howbeit the flours haue a strong and rank stinking smell with them, the feed much like to the *Awitch*. It loueth to grow vpon mountains. The roots of this herbe not only taken inwardly in drinke, but also applied outwardly in a liniment do ease the wrings of the belly, and resist the sting of serpents. *Aster*, is by some named *Bubonium*, for that it is a present remedy for the tumours arising in the shere. This herbe putteth vp a small stemme, with two or three leaues so new hat long. In the top thereof it beareth certaine little heads inuironed with spokie leaues, and those disposed round in manner of a starre. Taken in drinke, it is thought to be a preseruative against the venom of serpents. But to make a medicine for the shere before named, it

A it must (they say) be gathered with the left hand: and then kept fast bound neere vnto the middle or girding place of the patient. And surely it helpeth the *Sciatica*, in case it be tied sure to the affected place.

Acyron and *Acyroides*, be herbes resembling one another, and both like vnto *Hypericon*: howbeit that which is named *Acyroides*, hath the bigger branches, and those straight and direct, much after the manner of *Fenell* and such like, red throughout: and in the top thereof appeare little heads or knobs, of a yellow color. The feed contained in certain pretty cups, is smal, black, and gummie: bruise the said tops or knobs between your fingers, they seem to stain them with blood; which is the cause that some call this herb * *Androsamon*. The feed is singular for

B the *Sciatica*, namely if the patient drinke two drams weight thereof in a sextar of *Hydromel*, that is to say, mead or honied water: for it loosneth the belly and purgeth cholour. A liniment made therewith, is much commended for a burne.

Apace is an herb which hath very fine and small leaues: and a little taller it is than the *Lentill*, but larger gods it beareth, wherein lie three or foure seeds, blacker, moister, and smaller than the grains of the said *Lentill*. It groweth vpon corn lands. More astringent it is by nature than the *Lentill*, and bindeth stronger; for all other matters it worketh the same effects. The feed boiled, staeth vomits and lasks.

Touching * *Alcibion*, what manner of herb it should be, I neuer could yet finde in any writer. But they giue direction to stamp the roots and leaues thereof, and so in a cataplasme to apply them vnto any place stung with serpents, and to drinke them also. Now they prescribe for the C drinke, to take of the leaues one good handfull, and to stamp them, and so to giue them in three cyaths of meere wine full of the grape: or of the root three drams weight, with the like measure of wine.

Alectorolophus in Greeke, called by vs in Latine *Crista Galli*, Cocks-comb, hath leaues for all the world resembling the crest or comb of a cock, and those in number many: a slender stem and black feed, inclosed within certain cuds. A foreign herb it is for them that cough, if it be boiled with bruised beans, and taken in manner of an electuary with honey. It scattereth the cloudy films that trouble the eie-sight, & the manner is to take the feed whole and found as it is, and to put it into the eie: it is nothing offensive nor troubleth that part one whit, but gathereth to it selfe all those grosse humors which impeached the sight. And in very truth, this feed whiles D it is within the eie changeth colour, and being black before, beginneth to wax white, it swelleth withall, and in the end commeth out of the eie by the owne accord.

CHAP. VI.

¶ Of *Alum*.

The herb which we name in Latine *Alu*, that the Greeks call *Symphytum Petraeum*, as if one would say, *Comfrey* of the rock: and verily like it is to wild *Origan*. The leaues be small, and three or foure branches spring immediately from the root: the tops whereof resemble those of *Thyme*. Much branched it is otherwise, odoriferous in smell, and sweet in tast: it draws E down water into the mouth and causeth spitting. The root which it putteth forth is long & red. This herb taketh pleasure to grow in stony places among rocks: in which regard it took the addition of the name *Petraeum*. Singular good it is for the sides and flanks, the spleen, reins, and wrings of the belly: for the breast, the lights, for such as reject or cast vp blood, and are troubled with the asperity and hoariness in the throat: for which infirmities, the root is to be stamped, boiled in wine, and so drunk; yea, and otherwhiles to be reduced into a liniment, and so applied. Moreover, the chewing of it only, quencheb thirst, and hath a principal vertue to coole the lungs. Being applied outwardly in the form of a cataplasme, it knitteth dislocations, helpeth convulsions, is comfortable to the spleen, & the bowels or guts, if they be fallen by any rupture. F The same root roasted or baked vnder the ashes, staeth a lask, in case it be first thrigged from the hairy strings thereof and pilld; and then after it is beaten into powder, be drunke in water with nine *Pepper* corns. And for healing of wound is, so soueraigne it is, that if it be put into the pot and sodden with pieces of flesh, it will foulder and reioine them, whereupon the Greeks imposed vpon it the name *Symphytum*, i. Confound: finally, it serueth to vnite again broken bones.

CHAP.

* Mans blood

* Flay bath forgotten himselfe considering that in the 22 booke, & 21 chapter, he describes it (according to *Discordia*) to be like in root and leaues to *Orchane*, &c., and there hee nameth it *Arction*.

* Some take it for Bug or Scie heath. * Namelisse.

* or *Scalopsedrian*.

* Whereupon they call it *Philanthropus*, & a louer of man.

* *Tridentibus*.

¶ Of Reits or sea-grasse, and Wallwort. Of the wild vine, and Wormewood.

The sea-weed that looketh red, named in Latine Alga, is very proper for the prick and sting of Scorpions.

Touching Wallwort, it hath leaues carrying a strong and stinking smell with them: the stems be rough and parted into ioints: the seed black like to that of the luy, saue that the berries containing the same be soft. This herb delighteth in shady, cool, rough, and watery places. Being giuen to the full quantity of one Accetabulum, it is singular for the inward maladies which be proper to women.

The wild Vine, called by the Grecks Ampelos-Agria, is an herbe (as I haue sufficiently described already in my Treatise of Vines planted and wel ordered by mans hand) which putteth forth hard leaues of Ash-colour, long branches and winding rods clad with a thicke skin, and the same bered, resembling the floure Phlox, which in the chapter and discourse of Violets, I called Iouis Flamma; and a seed it beareth much like vnto the graines within a Pomegranate. The root boyled in three cyaths of water and two cyaths of the wine coming out of the Island Coos, is a gentle emollientie of the belly, and maketh the body soluble, in which regard it is giuen with good successe to such as be in a dropic. A very good herb for women, as well to rectifie the infirmities of the matrice, as also to scoure and beautifie the skin of their face. Moreover, for the feiatica it is good to stamp it leafe and all, and to annoint the grieved place with the iuice therof.

As for Wormewood, there be many kindes thereof. One is named Santonicum of a city in France called Saints: another, towit Ponticum, taketh that name of the kingdome Pontus; where the sheep feed fat with it, which is the cause that they be found without gall: neither is there a better Wormewood than it: much bitterer than that of Italy, and yet the marow or pith within of that Ponticke Wormewood, is sweet to ours. Meete and requisite it is that I should set down the vertues and properties thereof, as an herb (I must needs say) as common as any, and most ready at hand, howbeit, few or none so good and wholesome: to say nothing of the speciall account which the people of Rome make of it about their holy sacrifices and solemnities: for in those festiuall holydaies named Latina, at what time as there is held a great running with chariots for the best game, he that first attaineth to the goale and winneth the prise, hath a draught of Wormewood presented vnto him. And I beleue verily, that our forefathers and ancestors deuised this honourable reward, for the good health of that victorious chariotier, as judging him worthy to liue still. And in truth, a right comfortable herb it is for the stomack, and doth mightily strengthen it: in which regard, there is an artificiall wine that carrieth the strength and tast thereof, named Absinthites, according as I haue shewed heretofore. Moreover, there is an ordinary drinke made of the decoction of Wormewood boyled in water: for the right making whereof, take six drams weight of the leaues and sprigs together, seeth them in three sextars of raine water, and in the end put thereto a small quantity of salt, which done, the liquor ought to stand a day and a night afterwards to coole in the open aire, and then is it to be vsed: Certes, there is not a decoction of any herbe of * so great antiquitie as it, and knowne to haue bene vsed so long. Moreover, the infusion of Wormewood is in great request, and a common drinke: for so we vse to call the liquor wherein it lay steeped a certain time. Now this would be considered, that be the proportion of water what it will, the said infusion ought to stand close couered for three daies together. Seldome or neuer is there any vse of wormewood beaten to powder, ne yet of the iuice drawn by way of expression. And yet those that presse forth a iuice, take the Wormewood when the seed vpon it beginneth to swell and wax full, and being newly gathered, let it lie foking in water three daies together: but if it were drie before, to steep it a whole seuen night: which done, they set it ouer the fire in a brasen pan, with this proportion, namely, ten hemines of the herbe, to five and fortie sextars of water, and suffer it to boyle vntill a third part of the liquor be consumed: after this the decoction must run through a strainer, with hearbe and all well pressed: then ought it to be set vpon the fire againe, and suffered to seeth gently and leisurely to the height or consistence of honey, much after the order of the fyrup made of Centaurie the lesse. But when all is done, this iuleb or fyrup of Wormewood

* Vetus Hist. in usu est. Some read Vetus sine usu est, that is, it is thus drinke be used, and not vsed presently, it is good for nothing.

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A wood, is often vsue to the stomack and head both, whereas that decoction first above-named, is most wholesome: for astringent though it be, and binding the mouth of the stomack aloft, yet it doth euacuat choler downward, it prouoketh vrine, keepeth the body soluble, and the belly in good temper, yea and if it be pained, giueth great ease: the worms ingendered therein, it expelleth: and being taken with Selseli, and Celtick nard, so there be a little vinegar put thereto, it dispatcheth all ventositities in the stomack, and cureth women with child of that inordinat desire and strange longing of theirs: it cleneth the stomack of those humors which cause loathing of meat, bringeth the appetite againe and helpeth concoction: if it be drunke with Rue, Pepper, and salt, it purgeth it of raw humors & crudities occasioned by want of digestion. In old time, Physicians gaue wormwood for a purgative: but then they tooke a sextar of sea water that had bin kept long, six drams of the seed, with three drams of salt, and one cyath of hony: and the better will this purgation worke, in case the poise of salt be doubled, but it would be puluerized as fine as possibly may be, to the end that it might passe away the sooner, and worke more easily. Some vsed to giue the weight before said in a cruell of Barley groats, with an addition of Peniroyall: others against the Pallicie and others againe had a deuise to put the leaues of wormewood in figs, and make little children to eat them so, that they might not tast their bitterness. Wormwood being taken with the root of Floure-de-lis, discharge the breest of rough fleagme, and cleneth the pipes. For the jaundise, it would be giuen in drinke raw, with * Parsley or Maiden-haire. Supped hot by little and little in water, it breaketh wind and resoluet ventositities: and together with French Spikenard, it cureth the infirmities of the liuer: and taken with vinegar, or some gruel, or els in figs, it helpeth the spleen: giuen in vinegar, it helpeth those that haue eaten venomous Mithrums, or be poisoned with the gum of Chamæxilion called Ixia. In wine if it be taken, it sauech those who haue drunk Hemlock: it resisteth the poison inflicted by the sting of the hardi shrow, the sea dragon, and scorpions. It is holden to be singular for the clarifying of the sight: if the eyes be giuen to watering, it represteth the rheum or flux of humors thither, so it be applied with wine cunct: and laid vnto contusions, and the skin blacke and blew under the eyes, with hony, it reduceth the place to the natie colour againe. The vapour or fume of the decoction of wormewood receiued into the eares, assuageth their paine: or if they run with corrupt matter, it is good to apply the same, reduced into powder and incorporat in hony. Take three or foure sprigs of wormwood, one root of Nardus Gallicus, boile them in six cyaths of water, it is a soveraigne medicine to drinke for to prouoke vrine, and bring downe the desired sicknesse of women: or being taken simply alone with hony, and withall put vp in a pessaire made with a Locke of wooll, it is of speciall operation to procure their monthly terms: with honey and salnitre, it is singular for the Squinancie: it healeth couill-blaines, if they be bathed with the decoction thereof in water: applied vnto fresh or green wounds in a cataplasme, before any cold water come vnto them, it healeth them: and besides, in that manner, it cureth the scabs in the head: being incorporat with * Cyprian wax or figges, and so applied to the flanks or hypochondriall parts, it hath a particular vertue by it selfe to helpe their griefes. Moreover, it killeth any itch. Howbeit, this would be noted, that wormewood in no case must be giuen to those that haue an ague. Let a man or woman vse to drinke wormewood, they shall not be sea-sicke nor giuen to heauing, as commonly they be that are at sea. If wormewood be worne in a tresse to the bottom of the bellie, it allayeth the swelling in the share. The smell of wormewood procureth sleepe: or if it be laid vnder the pillow or bolster, provided alwaies that the patient be not ware of it. Either basted within cloaths, or strewed vpon them, it keepeth away the moth. If one rub his body therewith and oile together, it drieth gnars away so doth the smoke thereof also when it burneth. If writing ink be tempered with the infusion of wormewood, it preserveth letters and bookes written therewith, from being gnawne by mice. The ashes of wormewood burnt, and incorporate with oile Rosat to an ointment, coloureth the haire of the head black. There is yet another kinde of Sea-wormewood, which some call Seriphium: and excellent good is that which groweth about the city * Taphositis in Egypt. Of this wormewood it is, that the priests of Isis in their solemne marches and processions, vse to beare branches before them. The leaves be somewhat narrower than those of the former, and the bitterness not altogether so much. An enemy it is to the stomacke: howbeit, the belly it looseth, and chafeth worms out of the guts; for which purpose, it is good to drinke it with oile and salt: or else the infusion thereof in a * supping or grewell made with the floure of the three moneth corne. To make the decoction

* Cum sapia, hoc igitur.

* Or the cerot, Cyprian waxe Discoloured.

* So called, because of Isis waue: it is d and his sepulchre renewed there.

* Or rather, a kind of sweete cuir called Hyppocistis, which Plinius saith is also a water-cucull.

coction of wormwood well, there would be taken a good handfull of wormwood, and foddin in G
a sextar of water to the consumption of the one halfe.

CHAP. VIII.

¶ Of stinking Horehound: of *Mille-graine*, or *Oke of Ierusalem*: of *Brabyla*, *Bryon*, *Bupleuros*, *Catanance*: of *Calla*, *Circum*, and *Cerium*: of *Cratogeomom* and *Thelygonum*: of *Crocodylion* and *Cynforchis*: of *Chrysolachanon*, *Cucubalion*, and *Conserua*.

S Tinking Horehound, which some Greeks call *Ballore*, others *Melampasjon*, *i. Black Horehound*, is an herbe tufted full of branches: the stems be black and cornered; the leaves wherewith they be clad and garnished, are somewhat hairy, resembling those of sweet or white **H**
* Horehound, but that they be bigger, blacker, and of a stinking sauer: but the leaves stamped and applied with salt, be very effectfull against the biting of a mad dog: also, if they be wrapped in a Colewort or Beet leafe, and so roasted vnder the embers, they are commended for the swelling piles in the fundament. This Horehound made into a salue with honey, cleneth filthy vlcers.

Botrys is an herb full of branches, and those of a yellowish colour, and beset round with feed: the leaves resemble Cicchorie. Found it is commonly growing about the banks of brookes and riuers. Good it is for them that be freight winded and cannot draw their breath but sitting vpright. The Cappadocians call it *Ambrosia*, others *Artemisia*.

As for * *Brabyla*, they be astrigent in manner of *Quinces*. More than so, I find not any **A**
* Some take them for Damascen plums, or rather for Ballons, Strigs, or such like wilde Plums.

author to write thereof.
Bryon no doubt is a Sea-herbe, like in leaves to Lettuce, but that they be riuelled and wrinkled as if they were drawne together in a purse: no stem it hath, and the leaues come forth at the bottom from the root: it groweth ordinarily vpon rocks bearing out of the sea: and ye shall find it also sticking to the shels of certaine fishes, especially such as haue gathered any mud or earth about them. The herbe is exceeding astrigent and desiccative, by vertue whereof it is a singular reperfusiu in all impostumes and inflammations of the gout especially, & such as require to be repressed or cooled.

Touching *Bupleuros*, I read that the seed thereof is given against the sting of serpents: and that the wounds inflicted by them, are to be waited or fomented with the decoction of the herb, putting thereto the leaues of the Mulberrie tree, or *Origan*.

Catanance is a meere Thessalian herb, and groweth nowhere els but in Thessalie; and forasmuch as it is vsed only in amorous matters, and for to spice loue drinks withall, I meane not to busie my selfe in the description thereof: howbeit, thus much it would not be amisse to note, for to detect and lay open the folly and vanities of Magitians; namely, that they went by this coniecture onely, that it should be of power to win the loue of women, because forthwith when it is withered, it draweth it selfe inward * like a dead Kites foot. For the same reason also, I will hold my tongue and say neuer a word of the herb * *Cemos*.

* *Calas* is of two sorts: the one like to *Aron*, which loath to grow in toiled and ploughed **L**
grounds: the time to gather this herb is before it begin to wither: the same operation it hath that *Aron*, and is vsed to the like purposes: the root thereof is commended to be giuen in drink for a purgation of the belly, and to prouoke the monthly termes of women: the stalkes boyled leafe and all together with some pulse or other into a pottage, and so taken, cure the inordinate prouocations to the ftoole, and streynings therupon without doing any thing. The second kind some call *Anchusa*, others, * *Rhinochisa*: the leaues resemble Lettuce, but that they be longer, full of plume or down; the root red, which being applied with the floure of barley groats, beate thin, or any other kind of *S. Ambrosie* fire: but drunke in white wine, cureth the infirmities of the liuer.

Circum is an herb like to winter Cherry or *Alkakengi*, but for the flours which are black: **M**
the seed small, as the graine of Millet, and the same groweth in huskes or bladders resembling little hornes: the root is halfe a foot long, forked for the mouth part into three or foure grains or branches: the same is white, odoriferous and hot in the mouth: it loatheth to grow vpon rocks and stonie grounds lying pleasantly vpon the Sun. The infusion of this root in wine, is good to be

A be drunke for the paine and other diseases of the matrice; but of the said root there ought to be taken three ounces stamped, and the same to steepe a day and night in 3 sextars of wine, for to make the infusion aboue-named. This portion also serues to send down the after-birth, if it stay behind. The seed of this herbe drieth vp milke, if it be drunke in wine or mead.

Crison cometh vp with a slender stalk two cubits high, and seemeth to be made 3 cornered triangle-wise: the same is beset round about with prickie leaues: howbeit, the said prickies are but tender and soft. The leaues in forme resemble an ox tongue or the herb * *Langue-de-bœuf*, but that they be smaller and somewhat white, in the top whereof there put forth purple buttons or little heads, which in the end turne to a plume like thistle down. Some writers hold, **B**
that this herb or the root onely, bound vnto the swelling veines called *Varices*, doth allay the paine thereof.

Cratogeomom spindeleth in the head like vnto the eare of wheat, and out of one single root ye shall haue many thoots to spring and rise vp into blade and straw, and those also full of oints. It gladly groweth in coole and shadowie places: the seed resembleth the grain of the Millet, which is very sharp and biting at the tongues end. If a man & his wife before they company together carnally, drinke before supper for 40 daies together the weight of three oboli of this seed, either in wine, or as many cyaths of water, they shall haue a man childe betweene them, as some say. There is another * *Cratogeomom*, called also *Thelygonos*; & the difference from the other may soon be known by the mildnesse in taste. Some authors affirme, that if women vse to drinke the floures of *Cratogeomom*, they shall within 40 daies conceiue with child. But as well the one as the other applied with honey, do heale old vlcers: they incarnate and fill vp the hollow concavities of fitulous fores: and such parts as do milke and want nourishment, they cause to gather flesh and fill the skin again: foule and filthy vlcers they mundifie, the flat biles and risings called *Pani* they rarifie and disperse: gouts of the feet they mitigate; & generally all impostumations, in women breests specially, they resolu and assuage. *Thelygonos* would haue a kind of stre to be called *Cratogeomom* or *Cratogeomom*, which here in Italy they call * *Aquifolia*.

Crocodylion doth in shape resemble the thistle herbe or *Artichoke* called the blacke *Chamaeleon*: the root is long and thicke in all parts alike, of an hard and vnpleasant smel: it groweth ordinarily in sandy or grauelly grounds. If one drinke of it (they say) it will fer the nose a bleeding, and send out a deale of thicke and grosse blood, that the spleene will diminish and **D**
weare away by that means.

As touching *Testiculus Canis* or *Dogs-stones*, which the Greeks call *Cynforchis*, & others simply *Orchis*, it hath leaues like vnto those of the oliue; soft & tender they are, and about halfe a foot long, and therefore no maruell if they lie spred vpon the ground: the root is bulbous and growing long-wise, in a double ranke, or two together: the one aboue, which is the harder, the other vnder it, and that is the softer: when they be foddin, folke vse to eat them after the manner of other bulbs: and lightly a man shall find them growing in vineyards. Of these two roots, if a man eat the bigger, it is said, that he shall beget boies; and if the woman eat the smaller, she shall conceiue a maiden childe. In Thessalie, men vse for to drinke in goats milke, the softer of these roots, to make themselves lustie for the act of generation; but the harder, when they would **E**
coole the heat of lust: whereby we may see, that they be contrarie, and one hindereth the operation of the other.

Chrysolachanon cometh vp like a Lettuce, and commonly groweth in plots of ground set with Pines: the vertue of this herbe is to heale wounds of the finewes though they were cut quite afunder, if it be presently laied too. There is another kinde of * *Chrysolachanon*, bearing floures of a golden colour, and leaied like vnto the Beet: when it is boiled, folke vse to eat it in stead of meat, and it loosneth the belly as well as Beets, Coleworts, and such like: and if it be freed that is reported, whosoever beate this herbe tied fast about any place of their bodies which is euer in their eie, so as they may see the same continually, it will cure them of the jaundice. Touching this herbe *Chrysolachanon*, well I wot that I haue not written sufficiently, that men might know it by this description, and yet could I neuer meet with any author who hath said more, or described it better. This verily hath been the fault and oversight euen of our moderne Herbarists of late daies, To write sleightly of those herbes and simples which they themselves knew and were acquainted with, as if forsooth they had been knowne to euery man; setting downe onely their names and no more: which is euen as much as to tell vs a tale and say, **Bb 2**
that

* *Origan*, called in Greece *Bu-glossin*.

* Some take this for our *Perficaria*, or *Art-men*.

* *i. Holly or Holver*: nay rather, *Aquifolia* in Greece: and the *Cratogeomom* of *Thelygonos*, which he meaneeth here, is a kinde of *Cercaria* tree now called *Terminalia*.

* I thinke he meaneeth *Quercus*.

* As if it would catch women and hold them fast by force.

* *Cratogeomom* in Greek signifies a bird or bit: and it is thought to be *Cratogeomom* through others take it for *Thelygon*.

* *Origan* rather *Cratogeomom* out of *Discordia*.

CHAP. XI.

¶ Of Hypoglossa and Hypocoon, Idae, Ioppyron, Lathyrus, Leontopetalon, Lycopsis, Lithospermum. The vulgar stone. Of Limeum, Leuce, and Leucographis.

Bistongue.
Horse-tongue,
or Double-
tongue.

Hypoglossa hath leaues fashioned like vnto Butchers broome, and those turning hollow, and prickie: within which conceites there come forth certaine little leaues resembling tongues. A garland or chaplet made of these leaues, and for vpon the head, each the pain thereof.

Hypocoon groweth amongst come, and is leaved like vnto Rue. It hath the same nature and H properties that Opium or the juice of Poppie.

As for the herb Idae, the leaues therof resemble those of ground-Myrtle or Butchers broom: vnto which there grow close certaine tendrils, and those carry floures. It stoppeth a lask, staith the immoderate flux of womens moneths, and stancheth all vnmeasurable bleeding: for by nature astringent it is and reperculsiue.

Ioppyron, some there be who call it Phasolium, because the leaf (otherwise like vnto Annise) doth turne and writhe like vnto the tendrils of Phasils. In the top of the stemme it beareth small heads or buttons full of feed, resembling Nigella Romana. A foweraigne hearbe, taken either in hony or mead, against the cough and other infirmities of the breast: likewise for the accidents of the liuer.

* Lathyrus.
* For the mil-
ky iucheaply.
For Diofior,
fash angela-
le of the al-
mond tree.
* Purgati-
ficia. Some
thinke gentle
purgatiue.

* Spurge hath many leaues resembling * Leduce: besides which, it putteth forth as many other slender and small branches, containing in little tunicles or husks certain feeds in manner of capers: which being dried and taken forth, resemble for bigneffe coms of Pepper, white in colour, sweet in tast, & easie * to be clenfed from their husk. Twenty of these feeds drunk either in cleare water or mead, do cure the dropfie: besides waterish humors, they euacuat cholier. They that desire to be thoroughly purged & would haue them to work strongly, vse to take them husk and all, but certainly so taken, they hurt the stomack: and therefore there is a deuise of late found out to giue them either with fish, or els in some broth of a cock or capon.

Leontopetalon, which some call Rhapion, carseth leaues like to Coleworts, and a stalk halfe a foot high, garnished with many branches resembling wings: and feed it beareth in the head contained within cods, after the manner of ciches. The root is made much after the fashion of a rape or turnep, big and black withall. This herb groweth in corne grounds. The root is a singular counterpoison to be giuen in wine against the sting or venome of any serpents: and verily there is not in the world a more speedy remedy. Very good it is for the Sciatica.

* Lycopsis hath leaues like to Leduce, but that they be longer and thicker: it riseth vp with a long stem, and the same hairy, with many branches growing thereto of a cubit in length: and beareth little Purple floures. It loueth to grow vpon champion plaines. A liniment made with it and barley meale, is good for the shingles and S. Anthelmis fire. In agues it procureth sweat, so that the patient drink the iuice thereof mingled with hot water.

But of all herbes that be, there is none more wonderful then Greimile: some call it in Greek Lithospermum, others Agonychor, some Diofpyron, and other Heracleos. It groweth ordinarily * five inches high: and the leaues be twice as big as those of Rue. The foresaid stalks or stems be no thicker than bents or rushes, and the same garnished with small and slender branches. It bringeth forth close ioining to the leaues, certain little beards one by one, & in the top of them little stones white and round in manner of pearls, as big as eich pease, but as hard as very stones. Toward that side where they hang to their steles or talles, they haue certain holes or * conceites containing seed within. This herb groweth in Italy, but the best in the Island Candy. And verily of all the plants that euer I saw, I neuer wondred at any more: so lightly it groweth, as if some artfull goldsmith had set in an alternative course and order, these pretty beads like orient pearls among the leaues: & so rare a thing it is & difficult to be conceiued, that a very hard stone should grow out of an herb. The Herbarists who haue written thereof, do say that it lieth along and creepeth by the ground: for mine owne part, I neuer saw it growing in the plant: but shewed it was vnto me plucked out of the ground. This is for certaine knowne, that these little stones called Greimile seed, drunke to the weight of one dram in white wine, breake the stone, expell

* Some take it
for a kind of
Orchard,
others for
Hounds-
tongue.

* Quincuncialis
is fire: others
read Quincque
canibus fire,
i.e. commonly it
beareth five
balles.
* This stone
take to bee
meant of that
Greimile cal-
led Job's teares.

A expell the same by grauell, and dispatch those causes that be occasions of strangurie. Certes, a man no sooner leth this hearb, but he may presently know the vertues thereof, and for what it serueth in Physicke: a thing that he shall not obserue again in any other whatsoeuer: for at the very first sight of these little stones, his eie will tell him what it is good for, without information from any person at all. There be common stones found about riues, bearing a certain drie hoary mosse vpon them. Rub one of these stones against another, hauing spit first therupon, and then therewith touch the tetar or ringworme in any part of the body, it will kill the same: but the party must as he roareth it, utter this charme following:

* Quere Karadactile, Nix & Sigeo vnae dicit.

That is to say,

Cantharides sit apace: for a wide Wolfe followeth in chase.

B The French-men haue a certaine herbe which they call Limeum, out of which they draw a venomous iuice, named by them Stags poison, wherewith they vse to envenome their Arrow heads when they go to hunt their red Deere: Take of this as much as goeth to the poisoning of one arrow, and put it in three measures or Modj of a maw wherewith they vse to drench catfel: and make sops thereof, and conuey them down the throat of sick oxen or kine, it will recouer them. But presently after the receipt of this medicine, they must be tied vp sure vnto their boucies vntill the medicine haue done purging: for the beasts commonly fare all the while that it is in working, as if they were wood. In case they fall a sweating vpon it, they must be certain while with cold water.

* Leuce is an herbe like vnto Mercury, but it tooke that name by reason of a certaine white strake or line that runneth croste through the mids of the leafe, for which cause some call it vle-foleucas. The iuice of this herbe healeth fistuloses: and the substance of the herbe it selfe stamped, cureth cancerous sores. It may be peraduenture the same herb which is named Leucas, that is so effectual against all venomous itings proceeding from any sea-fishes. The herbarists haue not described this herb otherwise than thus, That the wild kind thereof with the broader leafe, is more effectual in the leaues; and that the seed of the garden kind, hath more acrimony than the other.

* Membr. Sa-
racenia.

D Touching Leucographis, what manner of herbe it should be, I haue not found in any writer: and I wonder therat the rather, because it is reported to be so good for them that void & reach blood vpperward, namely, if it be taken to the weight of three oboli with Saffron: likewise stamped with water and so applied, it is singular good against those fluxes that proceed from the imbecility of the stomack: foweraigne also for to stau the immoderate flux of womens termes. And it entereth into those medicines which are appropriate for the eies, yea and into incarnariues, such especially as be fit to incarnat those vlcers which are in the most tender and delicate parts of the body.

CHAP. XII.

¶ Of Medium, Myosota, Myagros, Nigella, Natrix, Odontitis, Orthonne, Omosma, Onopordos, Oxyris, Oxys, Battrachion, Polyzoon, Pancration, Pepsos, Periclymenes, Laucanthemon, Phytumia, Phyllon, Phellandrian, Phalaris, Polyrrhizon, and Proserpinace: of Rhacomia, R. fida, and Stachis.

Medion hath leaues like vnto * garden Floure-de-lis. A stem three foot * high, garnished with faire large floures, of purple colour, and round in forme: the seed is small, and the root halfe a foot long: it groweth willingly vpon stony grounds lying in the shade. The root taken in a liquid electuary or lochoh made with hony to the quantity of 2 drams, for eie daies together, staith the immoderate flux of womens monethly termes. The seed also reduced in powder and drunke in wine, represseth their extraordinary thifts.

* Myosota, otherwise called Myosotis, is a smooth herbe, shooting forth many stems from one single root, and those in some sort of a reddish colour and hollow: garnished with leaues, which toward the root be narrow, long, and blackish, hauing their backe part sharpe and edged; which leaues grow along the stems two by two together: and out of the conceites or armpits be-

* Indisferue,
others read Se-
ridis & Eudione.
* Irigiditum.
But D. n. n. n.
sach. Tricubus.
stem, three
cubic high.
* Motic. eae.

between the stalk and them, there put forth other small branches with a blew floure. The root is of the thickeffe of a mans finger, bearded with many small strings resembling hairs. This root is of a corrosiue nature, fretting and exulcerating any place wherunto it is applied: in which regard it healeth vp the fistulous vlcers called *Ægilops*, growing between the nose and angles of the eies. The *Ægyptians* are of opinion, that if vpon the 27 day of that moneth which they call *Thiatis* (and which answereth very neare to our moneth August) a man or woman do annoint themselves with the iuice of this herb in a morning before they haue spoken one word, he or she shall not be troubled with bleared eies all that yare long.

Myagros is an herb growing vp with stems in manner of Fenell geant, in leaues resembling *Madder*, and riseth to the height of 3 foot. The feed which it beareth is oleous, & out of it there is an oile drawne, which is good for the sores in the mouth, if they be annointed therewith.

The herbe called *Nigina*, hath three long leaues like vnto those of *Succorie*; wherewith if sores (remaining after vlcers and wounds) be rubbed, it will reduce them to the natural colour of the other skin.

There is an herb, which in Latine is named *Natrix*, the root whereof being pulled out of the ground, hath a rank smell like vnto a Goat; with this herbe they vse in the Picene country to drive away those hob-goblins which they haue a maruellous opinion to be spirits, called *Fatui*; but for mine own part, I am verily persuaded they be nothing else but fantastical illusions of such as be troubled in mind and bestraght, the which may be chased and rid away by the vse of this medicinale herbe.

Odonitis may be reckoned among the kinds of eye-grasse, putting forth many small stems growing thicke together from one root, and those knotted and full of joints, triangled and blackish withall: in euery ioint small leaues it hath, resembling those of knot-grass, howbeit somewhat longer: in the concavities between the said leaues and the stem there is contained a feed like vnto Barly corns: the floure is of a purple colour, and very small. It groweth ordinarily in meadow grounds. The decoction of the branches and tender stalks of this herb, to the quantitie of one handfull, boiled in some astrigent wine, cureth the toothach, if the patient hold the same in the mouth.

Othonne groweth plentifully in Scythia, like vnto *Rocket*: the leaues be full of holes, and the floure resembleth *Safron*; which is the cause that some haue called it *Anemone*. The iuice of this herbe entrench very well into those medicines which are appropriate to the eies; for it is somewhat mordicative, and heateth gently: besides exiccatue it is, and by that meanes astrigent. It clenseth the eies of those films and clouds which darken the sight, and remoueth whatsoever hindereth the same. Some ordain for this purpose that it should be washed first, and after it is dried againe made into certain balls or trochisks.

Onofma beareth leaues wel-neare three fingers long, and those lying flat vpon the ground: three in number, and indented or cut after the manner of *Orchanet*, without stem, without flour, without seed. If a woman with child eat thereof, or do but step ouer it, she shall cast her vntimely birth out of her wombe.

As for *Onopordon*, they say if a fies eat thereof, they will fall a fizing and farting. Howbeit of vertue it is to prouoke vrine, and the monthly sicknesse of women: to stop a laske, to disscuffe and resolute impostumes, and to heale them when they be broken and duron.

* *Oxyris* putteth forth small branches of a browne colour, slender, pliable, and easie to wind; the same be garnished with leaues * resembling those of *Line* or *flax*, of a dark & duskyish green at first, but afterwards changing colour, and inclining to a red colour, and the seed is contained in those branches. Of these leaues are made certain washing balls, to scoure womens skin, and make them look faire. The decoction of the root being drunk, cureth those that haue the jaundise. The same roots, gathered before the seed be ripe, cut into roundles, and dried in the Sun, do stop the laske: but drawn after that the seed is ripe, they repress all catarrhes and fluxes of the belly, if the patient drink the supping wherein they are boiled. Also stamped simply, and so giuen in rain water, they haue the same effect.

* *Oxys* beareth three leaues and no more. This herb is singular to be giuen for a feeble stomach which hath lost all appetite to meat. They also who haue a rupture, and whose guts be fallen down, eat thereof to very good successe.

Polyanthemum, which some call *Batrachion*, hath a causticke quality, whereby it doth blis-

* *Linaris* or
* *Troas* flax.
* According
to *Diaphorides*.

* Cuckowes
meat, or
Wood-Sorell.

ster

After any vnseemly scars, by means whereof, reduceth them to their fresh and former colour: the same also applied, scoureth away the morpheus, and bringeth the skin to the natieue hue, answerable to the rest of the body.

Knor grasse is that herb, which the Greeks name *Polygonon*, and we in Latine, *Sanguinaria*: in leaf it resembleth *Rue*, in seed common quich grasse, & riseth not from the ground but creepeth along: the iuice of this herb conueied vp into the nostrills, stancheth bleeding at the nose. They who fet down many kinds of *Polygonon*, do hold that this is to be taken for the male, and by reason of the multitude of feed which it beareth is called * *Polygonon*: or for that it groweth so thicke in tufts, *Calligonon*. Others name it * *Polygonaton*, for the number of * knots or knees which it carrieth. There be again, who giue it the name *Theuthalis*: some call it *Carineiron*, others *Clema*, & many *Myrtopetalon*; and yet I meet with some writers, who say this is the female knot-grass: and that the male is the greater, and not altogether so dark of colour, growing also thicker with knots, & swelling with feed vnder euery leaf: wel, howloever it is, the property of them both, the one as well as the other, is to bind and coole: and yet their seed doth loosen the belly, which if taken in any great quantity, is diuretical and represseth any rheums, provided alwaies that the patient be troubled therewith, otherwise it doth no good. The leaues are singular good to be applied vnto the stomach, for to assuage the heat thereof: in a liniment they mitigat the griefe of the bladder, and stop the course of thingles and such like wilde-fires. The iuice is soueraigne to be dropped alone by it selfe into the eares that run, and into the eyes to abate their pain. It is vsually giuen to the quantitie of 2 cyaths in tertian Agues, and Quartans especially, before the fit commeth: likewise for the feeblenesse of the stomach when it will keep nothing for the bloody flux, and the rage of cholerick humors both vpward and downward.

A third kind there is, which they call * *Oreon*, growing vpon the mountains, resembling a thurst reed: rising vp in one single stem, but full of little knots or knots, and those * couched & tender together. Leased it is like the Pitch tree: the root needlesse, and of no vse: and generally the whole herb of lesse strength and operation than the former. Howbeit, this singular propertie hath it, to help the sciatica. A fourth *Polygonum* there is, called the wild, and this bueth like a shrub or a pretty tree: rather the root is of a woody substance, & the stock or plant of a reddish colour, resembling the *Cedar*: it beareth branches much like to *Spart* or *Spanish broome*, two spans long, jointed into three or four knots, and those of a blackish colour. This also hath an a-

stringent nature, and tasteth in the mouth like to a *Quince*. The decoction thereof in water, till the third part be consumed, or the powder of it dried, is commended for the sores in the mouth, and for any part that is fretted and galled. And the very substance thereof is good to be chewed in case the gums be sore. It represseth the malignity of eating corrosiue vlcers and cankers: and in one word, stancheth the malice of all sores that run on end, and be vntoward for to be healed: but a peculiar property it hath by it selfe to cure any vicer occasioned by the snow. Our Herbarists vse this kind much for the squinancy, and to ease the head-ach, make a garland thereof, appointing it to be fet vpon the head: but to repress any violent catarrhs, they prescribe to wear it about the neck. In Tertian agues, some giue direction to pluck it out of the ground with the left hand, and then to tie it to the arm or other part of the patient. And there is not an herb or plant E that they be more careful to keep dry and to haue alwaies ready at hand, than *Polygonon*, for to stanch any issue or flux of blood whatloever.

Pancration, which some chuse rather to call the little *Squilla* or sea-onion, beareth leaues resembling the white *Lilly*, but that they be longer and thicker, with a great bulbous root, & the same in color red. The iuice of it taken with the floure of *Erulle*, maketh the belly laxatiue; and outwardly applied, mundifieth vlcers. For the droplic and hardnesse of the spleene, it is giuen with hony in manner of a syrup. Some take the root and boile it in water vntill the liquor be sweet, which they poure forth; and then stamp the said root, and reduce it into balls or trochisks, which they lay to dry in the Sun: and vse them afterwards as occasion serueth for the skals or vlcers of the head, and all other sores that require mundification. Semblably, they giue thereof as much as one may take vp with three fingers in wine, for the cough, and in a liquid exiccatue or lioch for the pleurisie and peripneumonie. They prescribe it likewise to be drunke in wine for the Sciatica: to allay also the gripes and wrings of the belly, and to procure the monthly terms of women.

* *Peplis*, called by some *Syce*, by others *Meconion* * *Aphrodes*, from one small root bueth into

of male many
and yesseds
And as *Serapion*
saith it is
called *Phily*
good, i.e. safe
it groweth v-
ery we. e. fo
commen.

* *Polypio* sig-
nifieth a knee
or knot.
* *Aluon* ful-
vans. If the
place be not
corrupted, I
doubt it is.

* *Oreon* as *Plin.*
some name
it *Phyllis*, i.e.
others, iust for
that it grows
like to an herb.
tail, or the
herbe *Hypocis*.

* *Infarsitis*.

* A kind of
Etilis.
* i. Frothie
lappie.

into many branches; the leaues be like vnto Rue, but that they be somewhat broader: the feed appeareth vnder the leaues round, & (but that they be smaller) not vnlike to the white Poppie. Ordinarily it is found among Vines, and they gather it in haruest time. They hang it forth feed and all together a drying, setting water underneath, that the said feed or fruit may fall down in and it. If it be taken in drinke, it purgeth the belly, and doth euacuat both choler and fleagme. The measure of one acetab is counted an ordinary and indifferent portion to be drunk in three hemines of mead or honied water. With this seed they vse to powder meats and viands, thereby to keep the body soluble.

* Perilymenos is also a bushie plant, and louth to branch much: it beareth whitish & soft leaues, disposed two by two at certain spaces & distances very orderly. In the top of the branches it beareth hard feeds between the leaues, which hardly may be plucked off. It groweth in corn fields & hedges, winding about euery thing that it can catch hold of, for to support it vp into trochisks. In case that the spleen be swollen or hard, they take of these troches, and after they be dissolved, giue thereof a sufficient quantity in 3 cyaths of white wine for 30 daies together: which drinke is of such operation, that it will waite and spend the spleen, partly by vrine which will appeare bloody, and partly also by teeges: and this will be perceiued sensibly by the tenth day of the cure. The leaues also be diureticall, and a decoction made with them, prouokes vrine. The same likewise are good for those that cannot draw their wind but sitting with their vaine. Being drunk in like manner, they help women who are in fore trauell, to speedie deliuerance, and fetch away the after-birth.

As touching * Pelecium, it groweth as I said before among corn, branching thick, and garnished with leaues like vnto the cich peece. It beareth seed in certain cods, which crook in manner of little horns, and those be four or fise in number together. The said seed resembleth Gith, so far as euer I could see, and is bitter, but good for the stomack: one of the ingredients that goe into antidotes and preseruatiues against poison.

Polygala reacheth vp with a stem a span high, in the top whereof it beareth leaues resembling the Lentils, of an astringent tast, which being drunk, causeth nources to haue plenty of milk in their breasts.

Poterion, or as some call it, Phrynon or Neurada, brancheth and spreadeth much: armed it is with sharp prickles, and besides, full of a kind of thick down: the leaues be small and round: the branches slender, long, soft, and pliable: the floure in form long, of a grassie green color. The feed is of no vse in Physick, but of a quick and sharp tast, odoriferous also, and pleasant to the smell. It is found growing as well in watery places, as also vpon little hills. Two or three roots it hath, which run down two cubits deep into the ground full of cords or sinews, white, and of a firm and hard substance. About Autumne they vse to dig round about it, hauing before cut the plant it selfe about ground, which yeeldeth thereby a iuice like vnto a gum. The root is (by report) of wonderful operation in healing wounds, and especially of sinews cut in sunder, if it be applied thereto in a liniment. Also the decoction thereof drunke with honey in manner of a syrrepe, helpeth the feeblenesse and dissolution of the sinewes; and namely, when they be wounded and cut.

Phalangia by some is called Phalangion, by others Leucanthemon, or, as I find in some copies, Leucacantha. Little branches it putteth forth, neuer fewer than twaine, and those tending direclly a contrary way. The floures white, fashioned like the red Lilly: the feed blacke, broad, and flat, shaped after the manner of halfe a Lentill, but much lesse: and the root is of a greenish colour. The leafe, floure, and feed of this herbe is a singular remedie against the venomous sting of Scorpions, the spiders Phalangia, and serpents; also for the wringing torments of the belly.

As for Phyteuma, somewhat els I haue to do rather than to describe it, considering there is no vse of it but in amatoriou medicines to procure womens loue.

There is an herbe called by the Greekes Phyllon, growing vpon stony mountaines standing much vpon a rocke. The female of this kinde is of a deepe Greene colour, the stem is slender, the root small, the feed round, and like vnto that of Poppie. This herbe serueth for the getting and conceiuing either of boyes or girles, according as the male or the female is vsed: which differ only in feed or fruit, which in the male resemblen an oliue that is new come forth

A and biggineth only to fiew. But both of them are for the said purpose to be drunke in wine. Phellandron groweth in moory grounds, and in leafe commeth neere vnto garden Parsley: the feed thereof is good to be drunke for the stone, and the infirmities incident to the bladder. As for Phalaris, it hath a long slender stem like vnto a reed, in the top whereof it beareth a floure bending downward; and the feed resemblen that of Scfama: and this also breaketh the stone, if it be drunke in wine or vinegar, or otherwise with milk and honey. The same cureth the accidents of the bladder.

Polyrhizon is leafe like vnto the Myrtle, and hath many roots, which being bruised, are giuen in wine against the poison of serpents; not only if men but also if fourfooted beasts be stung by them.

* Proserpinaca likewise, being otherwise a common herb, is counted a foueraigne remedie against scorpions: the same stamped and incorporat with fish-pickle and oile, is (by report) a singular medicine against the prick of scorpions.ouer and besides, it is said, that if it be but held vnder the tongue, it refresheth those who be ouertrauelled or any waies wearied, so as they haue lost their speech with very faintnesse: but in case it be swallowed downe the throat, it procureth vomit, which alwaies is good and wholesome for the Patient.

As touching Rhacoma, it is brought vnto vs out of those countries which are beyond the kingdom of Pontus: a root it is much resembling the black Costus, but that it is smaller and somewhat redder, also without any smell, hot at the tongues end and astringent, being punned, it is of a wine colour inclining to saffron: a liniment made of this root, doth mitigate all impostumes and inflammations; healeth wounds, and appeaseth the violence of any rheums taking a course to the eies, especially if it be applied with cutral marks remaining after stripes; & other places of the skin black and blew, it taketh away, if they be annoiued with it and vineger together: the powder thereof is good to be cast vpon old morralls and vlcers vtoward to be healed: & being to the weight of one drach taken in water, it is singular for them that cast vp blood: moreover, in case of the dysentery and the flux proceeding from imbecility of the stomacke, it is an excellent medicine to be taken in wine, if the Patient bee free of the ague; otherwise, it would be giuen in water. For to pun or stamp this root more easily, it had need to lie and soke in water ouernight: the decoction thereof is giuen to drinke in double measure or quantity for those that be plucked with the cramp, bursten, & bruised, or to such as haue tumbled down from some high loft. In pains of the breast, there had need some Pepper and myrrh to be put thereto: in case the stomack be feeble and clean done, it ought to be taken in cold water: and whether it be giuen inwardly or applied outwardly, it helps all those that void vp filthy matter from the parts beneath: likewise it cureth such as haue weak liuers, hard or swelled spleens, and the Sciatia: it healeth the infirmities of the kidnies, shortnesse of wind, & straitnesse of breath, namely, when a man is driuen to sit upright for it. The hoarresse and roughnesse of the throat it cureth, if either the powder be taken to the quantity of 3 oboli in cuir, or the decoction drunk. The filthy tetter called Lichen it scoureth away, applied vnto them in a liniment with vineger. In drink it dissolueth ventosities, riddeth away through-colds, and namely the shuerings and shakings in cold agues: it refresheth the yex or hiequet, appeaseth the wrings of the belly, cleareth the windpipes, dispatcheth the poise, the murre, and heauinesse of the head, stilleth the dizzines of the head and turning of the brain occasioned by melancholy humors: and finally assuageth all painful labitudes, and is singular good for cramps or convulsions.

About the towne Ariminum there groweth an herb commonly knowne by the name of Reseda: it resolueth and discusseth all impostumes: it reduceth also into temperature any inflammation. But they that vse to cure with this herb, must when they lay it to the place, say withall these words following; *Reseda, morbos Reseda, scisse scisse, quis hic pullos egerit? Radices nec caput nec pedes habent.* That is to say, *Reseda, cause these maladies to cease: knowest thou, knowest thou, who hath driuen these pullets here? Let the roots haue neither head nor foot.* This charm (I say) they must pronounce three times ouer, and spit vpon the ground as often.

To conclude, Stoechas groweth in those Islands only which carry that name and be called Stoechas: an odoriferous herb it is, bearing leaues like vnto hyssop, and is bitter in tast: taken in drinke, it procureth womens moneths, and doth mitigat the pains of the breast. Also it is one of the species or ingredients entring into the preseruatiue compositions called Antidotes.

* Thought to be the same that Polygala or Knot-grass abouemented.

* Wood-kind.

* Some take it for Scutellaria, i. Aschich.

that their feeds be nothing so effectuall, if incision were made in the roots for to draw iuice out of them, before the said seed is fully ripe.

Furthermore, this is known & found by experience, that the ordinary vse of all simples doth alter their properties and diminish their strength, in so much, as whosoever is daily accustomed vnto them, shall not find when need requires, their vertue powerfull at all, either to do good or to work harme, as others shall who seldome or neuer were acquainted with them.

Ouer and besides, all herbes be more forcible in their operations, which grow in cold parts, exposed to the Northeast winds, likewise in dry places, than in the contrary.

Also there is no small difference to be considered betwene nation and nation: for, as I haue heard them say who are of good credit, as touching worms and such like vermin, the people of Egypt, Arabia, Syria, and Cilicia, be troubled & infested with them: whereas contrariwise, some Gracians & Phrygians haue none at all breeding among them. But lesse maruel there is of that considering how among the Thebans and Boeotians (who confine vpon Attica) such vermine is rife and common; and yet the Athenians are not giuen at all to ingender and breed them: the speculation whereof, carrieth me away again vnto a new discourse of liuing creatures, and their natures; and namely, to fetch from thence the medicins which Nature hath imprinted in them, of greater prooffe and certainty than any other for the remedy of all diseases. Certes, this great Mother of all things, intended not that any liuing creature should serue either to feed it selfe only, or to be food for to satisfie others; but her will was and she thought it good, to infernt and ingraffe in their inward bowels, whollom medicines for mans health, to counterpoise those medicinal vertues which she had ingrauen and bestowed vpon those furd and fencelesse herbes: nay her prouidence was such, that the foueraigne and excellent means for maintenance of our life, should be had from those creatures which are indued with life, the contemplation of which diuine mysterie, surpasseth all others, and is most admirable.



THE TWENTY EIGHTH BOOK OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIVS
SECVNDVS.

CHAP. I.

¶ The medicinal vertues of liuing creatures.



HAuing discoursed as well all those things which are ingendred between Heaven and Earth, as also their natures; there remained nothing for me to discourse of, saue only the Minerals digged out of the ground, but that this late Treatise of mine, as touching the medicinal properties of Herbs, Trees, and other plants draweth me quite aside from my purpose, and haleth me back againe, to consider the foresaid liuing creatures themselves (euen the subiect matter of Physicke) in regard of greater meanes found out euen in them, to aduance Physicke and cure diseases. For, to say a truth, since I haue described and pourtraied both Herbes and Floures, since I haue discouered many other things, rare and difficult to be found out; should I conceale such meanes for the health of man, as are to be found in man himselfe? or should I suppress other kind of remedies which are to be had from creatures liuing amongst vs, as wee doe, if they may benefit vs? especially seeing that our very life is no better than torment and miserie, vnlesse

A we be free from paine and sicknesse? No verily; and far be it from me that I should so do. But on the contrary side, I will do my best indoeur to performe and finish this task also, how long and tedious doeuer it may seem to be: for my full intent and resolution is, so I may benefit posteritie and doe good to the common life of man, the lesse to respect the pleasing of fine eares, or to expect thanks from any person. And to bring this my purpose about, I mean to search into the customes of forreine countries, yea and to lay abroad the rites and fashions of barbarous nations, referring the readers who shall make scruple to beleuee my words, vnto those Authors whom I alledge for my warrant. And yet herein, this care I haue euer had, To make choice in my reports of such things as haue bin held and in manner adjudged true, by a generall consent & approbation of all writers; as coueting to stand more vpon the choice of substance, than the variety and plenty of matter. But before I enter into this argument, I thinke it very necessary to aduertise the Reader thus much, That whatsoever I haue heretofore written of liuing creatures, concerneth the instinct of Nature wherewith they be indued, and certain simples whereof they haue giuen vs the knowledge (for surely, as much good haue they done vnto vs by the medicinal herbes by them found out, as possibly they can by the remedies which themselves do afford from their own bodies.) But now it remaineth to shew simply the medicinale & helpful properties in themselves, which notwithstanding in the former treatise were not altogether left out and passed ouer. And therefore this my present discourse of those creatures, howeuer it is in nature different, yet it dependeth of the other. Begin then I will at Man himselfe, to see what Physicke there may be found in him to help his neighbor. In which first entrance of mine, there presenteth it selfe vnto mine eie, one object that troubleth and offendeth my mind exceeding much: for now adiaies you shall see them that are subiect to the falling euil, for to drink the very blood of fencers and sword-plaiers as out of liuing creatures: a thing, that when we behold within the same shew-place, euen the tygres, Lyons, and other wild beasts to do, we haue it in horreur as a most fearful and odious spectacle. And these monstrous minded persons are of opinion, That the said blood forsooth is most effectuall for the cure of that disease, if they may sucke it breathing warme out of the man himselfe, if they may set their mouth (I say close to the veine, to draw thereby the very heart blood, life and all: how vnaturall fouer otherwise it be holden for a man to put his lips so much as to the wounds of wild beasts, for to drinke their blood: nay, there be others that lay for the marrow bones, the very braine also of young infants, and neuer make strange to find some good meat and medicine therein. Ye shall find moreover among the Greeke writers not a few, who haue deciphered distinctly the seuerall tastes as well of euery inward part, as outward member of mans body, and so neare they haue gone, that they left not out the paring of the very nailes, but they could pick out of them some fine Physicke: as if health consisted in this, That a man should become as bloudie as a sauage beast; or that be counted a remedy, which indeed is cause of a milchiese and malady. And wel deserve such blood-suckers and cruell leeches to be frustrat of their cure, and thereby to worke their owne bane and destruction; for if it be held vnlawfull and abominable to pricke and look into the entrails and bowels of a mans body, what is it then to chew and eat them? But what monster was hee, who first broched this gear, and deuised such accursed drugs! Ah wicked wretch, the inuenter and artificer of those monstrosities; thou that hast ouerthrowne all law of humanity; for with thee wil I haue to do, against thee wil I whet my tongue and turne the edge of my stile, who first didst bring vp this brutish leech-craft, for no other purpose but to be spoken of another day, and that the world might neuer forget thy wicked inuentions. What direction had he who thus began to deuoure mans body lim by lim: nay, what conjecture or guesse moued him so to do? what might the originall and foundation be, whereupon this diuelish Physicke was grounded? what should he be that bare men in hand, and would persuade the world, That the thing which is vsed as a poison in witchcraft and sorcerie, should auale more to the health of man, than other knowne and approved remedies? Set case that some barbarous people vsed so to do: say that strange nations and far removed from all ciuility, had these manners among them, must the Greekes take vp those fashions also, yea and credit them so much as to reduce them into a method, amongst other their goodly Arts? And yet see what *Democritus* one of them haue done? there be extant at this day books of his indiring and penning, wherein you shall read, That the seuf of a wicked malefactor, is in some cases better than that of an honest person; and in other, That of a friend and guest, preferred before a stranger. As for *Apollonius*, another of that brood, hee hath writ-

* Of the special providence of God: I time speaketh like himselfe, a hea-thenish indell.

* Fame labor of.

and cursed passage on this behalf: like as to sit at the table and eat nothing at all. * See how ce-
 remonious those men were, and what precise ordinances they instituted, who were of beleeft, that
 in all our affaires and actions, and at all times, the diuine power of God was present: that by
 these means they left them pacified for all our sins and vices. Neither is there an end here: for
 ouer and besides it hath been marked, that many times all the table is huilt, and there is not a
 word heard from one end to the other: but this is noted neuer to happen but when the guests
 make a iust euen number. But what doth this silence preface? Surely, euery one of them * shall
 be in danger to lose or impair his credit, good name, and reputation. Moreover, if a peece of
 meat chanced to fall out of the hand down to the floor, it was taken vp and deliuered vpon the
 boord again, where it passed from one to another, and went through the table: but in any wise
 they were forbidden to blow therupon, for to cleanse it from the dust or filth that it caught. H
 Furthermore, they haue proceeded thus far as to gather prefaces from such things as happen iust at
 the time whiles one either speaketh or thinketh of the same. But of all others, this was counted
 a most execrable token, in case it chanced that the Pontific or high Priest sitting at the table
pro forma, and for order sake, at any iolemne feast or sacrifice, let fall a morcel of meat: but if the
 same were laid vpon the boord again, and afterwards burnt and sacrificed to the familiar gods
 of the house *Lares*, it was thought a sufficient expiatory satisfaction. Semblably, men are of opi-
 nion, That if any medicines purgative or others, fortune to be set vpon a table before they bee
 giuen to the patient for to drink, they will do no good at all, but lose their operation. Also there
 is a superstitious ceremony in paring the nailes of the fingers, during the market daies held at
 Rome, with this charge, that the party hold his tongue and be silent all the while, & begin at the
 fore-finger, and this forsooth concernes the many of many a man. Likewise, as great a matter as
 that, lieth in stroking or handling the haire of the head, either on the 17 day after the change of
 the Moon, or the 29: for a special means this is to keep the haire on, which is giuen to *falas*, also
 to ease the head-ach. Moreover, the peasants in the country obserue this custome in many man-
 ners and farnes of Italy, to forbid their wifes and women to spin as they walke vp and downe
 abroad in the street or any common way of passage, or to carry their rockes and distaues vndre-
 ned or bare, for this opinion they haue, that in so doing they preiudice the hope of all fruits, and
 the corne especially growing in the field for that year. Not long since, *M. Scruilius Nonianus*,
 (who in his time was a principal citizen of Rome) to prevent the bearednesse of his eies which
 he feared, before that either any man else foretold him of that disease, or himselfe once named K
 it, took a little peece of paper, and wrote therein these two capital Greek letters P and A, which
 he lapped round & fast tied with a linnen thred, and so wore it hanging at a lace about his neck
 vnder his throat. *Mutianus* (who had bin thrice Consull of Rome) obserued the same effect by
 wearing a flie aloue within a little rag of white fine linnen cloth: and both of them did highly
 commend these medicines of theirs; reporting, that by those means they were free from bea-
 red eies. Finally, we read of certain charms and spels against storms of hail against sundry sorts
 of diseases, and namely for any part that is burnt or scalded, and verily some of them haue been
 proued by experience to be effectual. But for mine own part abashed I am and ashamed to put
 them downe in writing, considering how diuersly men are affected in minde. And therefore to
 conclude this matter, I leaue euery man to himselfe to giue credit or otherwise vnto them at
 his owne pleasure and discretion. L

CHAP. III.

¶ Remedies proceeding from man, for the cure of diseases.

IN my former Treatise as touching strange and wonderfull nations, I spake of certaine races
 of men which were of a monstrous nature, and carried a venomous regard and looke in their
 very eies: besides many other properties of beasts, which here to repeat were needlesse. How-
 beit, in this place I think it not amisse to note, that so me people there be whose bodies be from
 top to toe all medicinable and wholesome to others. As for example, the men of those families M
 which do terrifie serpents, and drue them away with their very presence: who also are of this na-
 ture, that they be able to cure and ease such as are stung already either by touching only, or else
 by a medicinable sucking of the place: of which kind are the *Pysylli* and *Marisithae* also in the
 Island * *Cyprus*, whom they call *Ophugenes*: and of this race and house there came an Embas-
 sadour

* Of *Persia*.

* *Euxgion*.

A sadour out of the said Island, whose name was * *Exagon*, who by the commandement of the Con-
 suls was put into a great tun or pipe wherein were many serpents, for to make an experiment and
 trial of the truth: and in very deed the said serpents licked his body in all parts gently with their
 tongues, as if they had bin little dogs, to the great wonder of them who beheld the manner of
 it. A man shall know those of this family (if any of them remain at this day) by this signe, that
 they breath a strong and stinking sent from them, especially in the Spring season. Now, these
 people before named had not only a gift to cure folk with their spittle, but their very sweat also
 had a medicinable vertue against the sting of serpents. For as touching those men who are born
 and bred in *Tentyrus* (an Island lying within the river *Nilus*) so terrible they be vnto the *Cro-*
codiles, that they will not abide so much as their voice, but flee from them so soon as they heare
 B it. Moreover, it is knowne for certaine, that all the sort of these people, who haue their bodies
 thus priuiledged by that secret antipathie in nature between them & serpents, are able to ease
 those who are stung, if they do but come in place where they be: like as a wound will be more
 angry and fore, if they come neare who at any time before haue been hurt by the sting of serpent or
 tooth of mad dog: such also carry about with them in their bodies so venomous a quality, that
 their only presence is enough to marre the eggs that a brood-hen sits vpon, and make them all
 adde, yea, and to drue ewes and other cattell to cast their yong before the time: such a virulent
 property remaineth still behind in their bodies who haue bin once stung and bitten, that not-
 withstanding they be cured thereof, yet venomous they are now and hurtfull to others, who be-
 foretime were poisoned themselves. But the only way to remedy this inconuenience, is to canse
 C them to wash their hands before they enter into the roome where the patients liue, and with the
 same water to besprinkle and wash them who are to be cured. Again, this is to be obserued,
 that whosoever at any time haue bin pricked with a scorpion, that neuer afterwards be stung by
 hornets, wasps, or bees. A strange thing this is no doubt, howbeit, no great wonder vnto them
 who know, that a garment or cloth which had bin vfed at funerals, will never be afterwards mor-
 eaten: and how that serpents hardly can be plucked out of their holes, vnlesse it be by the left
 hand.

CHAP. III.

¶ Of certaine Sorceries: and the properties of a mans spittle, Also
 against Magicians.

THE inuentions of *Pythagoras* as touching numbers, beare a great stroke in these matters,
 and lightly misse not: but principally in this, That the said Philosopher would giue judg-
 ment by the vowels contained in the proper name of any person, concerning their fortunes,
 for in case the vowels were in an vnser odde, he pronounced, that if the party euer proued lame
 of a lim, lost an eie, or met with any such like accidents, the same should happen vpon the right
 side of the body: but contrariwise, if the number of vowels were euen, then these infirmities
 should befall the left side. Furthermore, it is commonly said, that if one take a stone, dart, or in-
 strument of shot, wherewith a man hath killed these three liuing creatures, a man, a wilde Bore,
 E and a Bear, one after another, & that with one single stroke to euery one of them, and fling the
 same cleane out an house where there is a woman in hard trauell of child-birth, so as it light on
 the other side without touching any part thereof, the woman shall presently be deliued. More
 reason there is that a * light jauelin or Pertuisin should do this feat, which had bin drawn forth
 of a mans body, so as it neuer touched the ground after, for do but bring this murdering jauelin
 into the place where a woman is in labor, it will forthwith procure her deliuerance. *Orpheus* and
Archelaus do write much after the same maner of arrows pulled out of men bodies, namely, that
 if care be had that they touch not the earth, & then be laid vnder the bed where man or woman
 lieth, they will cause the parties to be enamored vpon them that bestowed the said arrows there:
 and these authors report moreover, that the venison of any wild beast killed with the same wea-
 pon which was the death of a man before, is singular to cure the falling sicknesse.

As some men there be whose bodies all throughout be medicinable, so there be others who
 haue certain parts only of the same vertue, according as I haue written already concerning the
 thumbe of *Pyrrhus*. In the citie *Elis* also the inhabitants were wont to shew as a wonder-
 full monument the rib of *Pelops*, which they vouched to be all of luyry. And euen at this day,
 many

* *Pyrrhus* he-
 #, which also
 was called *ce-
 libaria*

effect, so that the dead party & the Patient be both of one sex. As for the tooth-ach, it is a common speech, That if one bite off a peece of some tree that hath been blasted, or smitten with lightning, provided alwaies that he hold his hands behind him at his back in so doing, the said morfell or peece of wood will take away the tooth-ach if it be laid vnto the tooth. Some there be who giue direction to take the perfume of a mans tooth burning in the fire, for to ease the too hach of a man, and semblably of a womans tooth to help women in the same case. Others you shall haue, that prescribe to draw one of the eie-teeth, called in Latine Canini, out of the head of man or woman lying dead and not yet entered, and to wear the same against the tooth-ach. It is a common speech, That the earth found in or about a man or womans scull, is a singular depilatory, and fetcheth away the haire of the cleibrows. As for the grasse or weed that grows therein (if any such may be found) it causeth the teeth to fall out of the head with chewing on-ly. As also that no vicer wil spread farther but keep at a stay, if there be a circle drawn about it with the bone of a man or womans body. As touching the cure of a tertian ague, some there be who lade vpon water out of 3 pits, as much out of one as another, and mingle all together, which done, they put the said water into a new earthen pot that neuer was occupied before, & begin to the Patient out of it, giuing the rest vnto him or her for to drink, when the fit commeth. But for the quartan ague, they get me a broken fragment of a wooden pin which held the sides & crosse peece of a paire of gallows together, wrap it within a lock of wool, and so hang it about the Patient: or els they take a peece of the halter or rope from the gallows, and vnto it in like maner for the foresaid purpose: but wot ye what? when the patient is by this meanes rid of the feuer, the said parcel of wood or cord they vnto bury or bestow clofe in some hole within the ground, where the Sun may neuer shine on it, & then the accesse wil neuer return more. See the toies & vanities of these Magitians! and yet these be not all; for they run on stil and say, that if one take a whetstone which hath serued a long time to whet knives & other edge tooles on, and lay the same vnder the bolster or pillow where one lieth that is ready to faint and giue vpon the ghost vpon some indiret means, by sorcery, witchcraft, or poisoning (but this muft be done without the knowledge of the said party) you shall from the very mouth of the patient hear, what poison was giuen, in what place, & at what time; but who it was that gaue it, he or she shall not be able to name. Moreover, this is known for a truth, that if one be stricken spechelesse with lightning, and then the body be bent and turned toward the wounded place, the party shall recouer presently and speak again. Some there be, who to driue back and keep down the biles and bitches that rise in the share, take the thred or yarn out of the weauers loome which serue for the selvedge or list, making feuen or nine knots, and in the knitting of euery one of them name some widow or other, and then tie it fast about the grieved place. Also for to assuage the paine of any wound, they giue order, that the wounded party take a nail or some other thing that one hath troden vnder foot, and to weare the same tied about the neck, arme, or other part of the body. For to be rid of warts, some chuse a time to pluck them vpon by the roots, when the Moone is twenty daies old at least, and then lay themselves along vpon their backs in some ordinary high way, looking fully vpon the Moone, and stretching their armes backward as farre as they can beyond their heads, and looke what they can catch hold of with their hands, therewith they rub the place. If one cut and pare an agnell or corn in any part of the body, observing a time when a star seemeth to shoot or fall, they say, it wil quickly weare away and be healed for euer. They would beare vs in hand, That if a man poure vinegar vpon the hooks and hindges of doors, and make a liniment with the durt that commeth of the rust thereof, and therewith annoint the forehead, it will assuage the head-ach. They promise also to do as much with a wyth or halter that a man is hanged withall vpon a gibbet, in case it be done about the temples of the head in manner of a frontall. Moreover, if any fish-bone stick in the throat and will not remouee, it shall incontinently goe downe, if the party ready thus to be choked withall, put his feet into cold water: but if some peece of any other bones be ready to choke one, make no more adoe, but take some other little spils of the said bone and lay them vpon the head, you shall fee it passe away and do no harm. If a peece of bread haue gone wrong or lie in the way readie to stop the breath, take the crumbs of the same loafe and put them into both the eares, you shall see it will soon be gon and do no further harme. Furthermore, the Grecks (who were giuen much to make money of curieue thing, and namely of their publicke places of bodily exercise) made great account of certaine excrements that came from mens bodies, as singular remedies for many diseases: for the fifth

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A that was scraped & rubbed from the bodies of wrestlers, &c. serued to mollifie, to heal, resolu, and incarnate, a medicin consisting of sweat & oile tempered together with it they vied to cure the inflammations, contractions, distortions, and rifings of the matrice, by application outwardly: therewith they would draw down the monthly fleurs of women, lenifie the intemperat heat, and dissolve piles and swelling bigs in the seat or fundament: they vnto the same also to assuage the griefe of the sinews, to rectifie dislocations & set the bones in ioint, and to discusse the nodosities of the ioints. Howbeit, the scrapings that come of sweating in banes and hot-houes, be counted of greater validitie in all these infirmities, and therefore no maruell if they enter into the composition of maturative emplasters, and which bring an impoistume to suppuration: as for the foresaid medicines which stood vpon sweat, oile wherewith wrestlers were annointed, and some wine mingled among, they be good only to mollifie the nodosities of the ioints: for as they heat and resolu more effectually, so in the other respects nothing so forcible they are as those that be gathered out of stoues & baines. Vnto a man would not beleue to what shamelesse and impudent curiosity some authors are grown vnto (and euen those of all others who be most renowned) who baste not with open mouth to commend vnto vs that, for a singular remedy against the prick of scorpions, which I am not willing to name, euen the filthy sperme that passeth from a man by his priuities. Neither could they stay there, but to cause barren women for to reem and beare children, they haue found out a proper pessaire to be put vpon into their secret parts, made forth of the ordure that commeth away from infants so soone as they be out of their mothers wombs: and this medicine they haue a pretty name for, & call it Meconion. Moreover, the Grecks haue gone so neare, that they haue scraped the very filth from the walls of their publicke halls and places of wrestling, and such like exercises, and the same (say they) hath a speciall exaltatory vertue, whereby it discusseth and resolueth the biles and impoistumes called Panijs, and serueth as a foueraigne liniment to heale the vicers in the bodies of children and old folk, yea & to skin any place that is galled, raw, & blistred with burning. Low what remedies haue bin found in the body of man? And surely since I haue taken the pains to put them down, I may not omit those voluntary medicines which depend vpon his minde, & proceed from his will and vnderstanding. In the first place, you shall haue some that wil fast and forebear all kinds of meat; others drink not at all, one while they abstaine from wine onely, another while from all flesh meats, and you shall see diuers men neuer come vnto bathe or baine, euery one according D as their sicknes doth require. And this kind of abstinence or regiment of themselves, they hold to be the readiest and surest means to recouer their health. In the rank of these remedies, are reckoned bodily exercise, training of the voice, vnction, scratching, and rubbing, as need and occasion requireth; for hard and vehement friction doth constipate and bind the body: contrariwise, gentle and soft frictions do mollifie and open the pores; and, as much rubbing taketh down the body and causeth leanness, so that which is moderat setteth it vp and encreaseth fatnesse: but nothing is there more wholesome than walking and gestation; which is an exercise performed many waies. If the stomacke be weak, and the legs feeble, riding on horseback is an excellent exercise: for the phy sicke or consumption, nothing so good as to faile or be rowed vpon the *water: but in case there be a long disease hanging vpon a man, what better thing in the world E than to change the aire, and remoue from place to place? In like manner to procure sleep, by lying in some pretty bed that may be rocked too and fro, is oftentimes good for a mans health: as also to vomit now and then, but in no wise to vse it ordinarily. Lying in bed vpon the backe, is commended for the infirmities of the eies; but vpon the belly, for the cough. To lie vpon the sides shifting from one to the other, is held to be singular against rheums and catarrhs. Aristotle and Fabianus do say, That we be giuen to dreame at the Spring and Fall, more than in the other seasons of the yere; also, most when we lie with our face vponward, but neuer groueling. And Theophrastus affirmeth, That sleeping vpon the right side, helpeth forward the concoction of meat in the stomacke; whereas they that lie vpon their backe shall not haue so quicke digestion. The manner of bathing also and vsing the baine and hot house, (which is one of the chiefe and principal means of our health) is in a mans power to order as he list himself: like as he may chuse what kind of friction he will in the stoue or hot-house; either to be rubbed with linnen cloths, or well curried and scraped with kombes. Item, it is knowne to be vey good and wholesome, to wash ones head with hot-water, before hee enter into the baine or hot-house; and after that he is out of it, to doe the like with cold water: as also to take a draught of cold water

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* Specially vpon the sea.

set downe their reasons in nature as touching the vertue thereof, but also haue bin in very ceremonious and superstitious in handling that argument, yea, and they haue written distinctly of the seuerall kinds of vrine digested into certain principal heads. And among other things, I remember, that they set downe the vrine of * men that are vnable for generation, to be singular good by way of injection, to make women fruitfull. But to speak of such remedies as we may be bold to name with honesty: the vrine of yong children who be not yet vndergrowne nor 14 yeres of age, is good against the venomous humor of the Apides or Adders which the Greeks name * Ptyades, for that they spit their poison vpon the eies and faces of men and women. Also the same is held to be singular for the pearle, the cataraſt, the filmes, the pin and web in the eies: like as for the cie-lids also, and the accidents happening vnto them. Being incorporate with the floure of Erulle, it is good for sun-burnings: sodden also with bolled leeks to the consumption of the one halfe in a new earthen pot which was neuer occupied, it is excellent to mundifie the eares that run with matter, or that haue any worms or vermin within them: and verily a stoupe made with the vapour of this decoction, bringeth downe the desired sicknesse of women. Dame Salpe ordaineth to foment the eies with the said decoction, for to fortifie the sight, and to strengthen them that they fal not out of the head: she appointeth to make a liniment with it and the white of an egge, but principally if it be of an ostrich, and therewith to anoint the skin that hath bin ranned and burnt in the Sun, for the space of two houres together: with it a man may wash away any blots or blurs of ink. Mans vrine is much commended for the gout in the feet, as wee may see by Fullers, who neuer be goutie, because ordinarily their feet are in mens vrine. Stale chamber-lie or vrin long kept and incorporat together with the ashes of oyster shels, cureth the red-gomb in yong infants, and generally in all running vlcers: the same so prepared, serueth in a liniment for eating cankers, burns and scalds, the swelling piles, the chaps and rifts in the feat and feet, also for the sting of serpents. The most expert and skillfull midwives haue pronounced all with one resolution, that for to kill an itch in any part of the body, to heale a scald head, to scoure away dandriffe and scurfe in the head or beard, and to cure the corroding vlcers in any place, but in the priuy members especially, there is not a liquor more effectfull than vrine, with a little sal-nitre put thereto. But surely, euery mans own water (if I may for reuerence of manhood fo say) is simply best; and namely, if the Patient that is bitten with a dog, do straightways bath the place therewith, or in case there be any prick of vrehin, hedghog, or such like spill sticking in the flesh, to apply the same thereto in sponges or wooll, and so let it lie on. But say it was a mad dog that bit the Patient, or that he be stung with a serpent, it is good to temper it with ashes and lay it vnto the fore. For as touching the vertue thereof against Scolopendres, it is wonderfull what is reported, namely, That whoſoeuer be hurt by them, if they doe wet the crown of their heads but with one drop of their own vrine, it will presently cure the same, so as they shall feele no more pain nor harm thereby.ouer and besides, by the speculation of our vrine, we are able to giue iudgement and pronounce of health and sicknesse; for if the first water made in a morning be white and cleare, and the next after it higher coloured and inclining to a deep yellow, the former sheweth that concoction was then begun, and the second is a signe that digestion is now perfect. A red vrine is naught, but the black is worst of all: likewise if it be full of bubbles and froth aloft, and be withal of a grosse and thick substance, the same is but a bad water. If the Hypostasis or Sediment which setteth heavy to the bottom, be white, it signifieth that there is some pain and grievance like to insite about the joints or principall parts within the body. Dorth an vrine look greenish: it betokeneth some obstruction or disease already in the noble bowels and inwards: is it of a pale hew: it saith that choler aboundeth in that body: If it look red, the blood be sure is predominant and dispersed. The vrin is not to be liked but preſageth danger, wherein there appeare certain contents like brans & blackish clouds: also, a white thin, and waterish vrine is neuer good: but in case it be thick and of a stinking smell withall, it is a deadly signe, and there is no way but one with the Patient. As for children, if their water be thine and waterish, it is but ordinary and naturall.

The Magitians expressly forbid in making water, to lay bare the nakednesse of that part against Sun and Moon, or to pisse vpon the shadow of any person. And therefore *Hesiodus* giueth a precept, to make water against a wall, or something standing full before vs, for feare least our nakednesse being discovered, might offend some god or Angell. To conclude, *Hesiodus* doth vpon his warrant assure vs, That whoſoeuer droppeth some of his owne vrine euerie morning

A morning vpon his feet, he shall be secured against all charms, forceries, and deadly poisons whatsoever.

CHAP. VII.

¶ The remedies that womens bodies doe minister.

THE medicines which are said to proceed from the bodies of women be such, and the operations so miraculous, that they come nearer to the nature of monstrous wonders than true reports of natural works: to say nothing of much mischief and many wicked parts committed by the means of their vntimely births and infants still born, which haue bin dimembred and cut in pieces for some abominable praïses: to let passe the strange expletions wrought not only by midwives, but also by secret harlots that haue slipt their conceptions, and bin delivered in corners. But to speak of the foresaid remedies which are in vre, and commonly known. The perfume that the hairs of a womans head make whiles they burn, chafeth away Serpents. The smell thereof also raiseth and reuiueth women, who in a fit of the mother lie speechlesse and breathlesse. The ashes verily of the said hairs burnt in some earthen pan or fish-shell, being applied alone or with litharge of siluer, is a singular medicine for the asperity of the eies, & the itch. Item, It taketh warts away, and cureth the red gum and sores that infants be subiect vnto, if it be vied with hony. The same ashes mingled with Hony and Frankincense, healeth wounds in the head, and doth incarnate or fill vp with good flesh hollow vlcers whatſoeuer they be. And incorporate with swines lard, it is good for the broad biles called Panis, for the gout, and S. Antho-nies fire: it staeth also any bleeding presently, and stoppeth the running of ring-wormes and such like.

Touching womens milke, it is holden by a generall accord, of all other to be sweetest & most delicate: whereupon it is prescribed by Physicians vnto those that haue lien of a long & languishing feuer, as also to such as be troubled with a fluxe occasioned by a feeble stomack: but in these cases, that milke is reputed most wholsom which a nurse giueth that hath newly weaned her child: besides, when the appetite of women is giuen to an inordinate longing after strange things, in agues also, in gnawings and frettings of the stomack, it is found by experience to be most effectual. Likewise, being incorporat with Frankincense, it is singular good for the impostumes breeding in womens breasts. If the eies be bloudshotten vpon any stripe, if they be in pain or troubled with a violent rheum falling into them, let a nourse milke it in them, they shall find very much ease thereby: howbeit for the accidents abouenamed, it is held to be more soveraign, in case it be applied to the place together with hony & the Juice of the daffodil, or els with the powder of frankincense: where by the way this would be obserued, that for whatſoeuer milke is imploied, that is ordinarily of more force which a woman giueth that bare a man child but if she was brought to bed of two twins, both borne, then it is best and most effectual: provided alwaies, that the mother her selfe do forbear drinking of wine, & eat no meat or sauces that be sharp. Moreover, this is knowne for certaine, that if womans milke be incorporat with the liquid white of an egge, and so applied to the forehead with wooll wet in the said liquor, it staeth the flux of humors into the eies. Moreover, a soveraign remedy is milke against the venomous slime or spittle of roads, in case they pisse or spurt into our eies. Also if they haue bitten one, there is not a better thing either to be drunk or dropped vpon the sore, than breast milke. It is a common saying, That whoſoeuer can meet at one time together with the milke of mother and daughter or bathed therewith. Semblably, womens milke is singular for to cure the accidents befalling to the eares, if it be dropped in with a little * Opium put thereto: but if so be the eares are pained by reason of some stripe that they haue receiued, the said milke would haue some Goose greafe mixed with it, and so be intilled warme. And say that they haue a strong and stinking smell with them, as commonly it falleth out in all long diseases, there is nothing better than to put wooll into them, which is soaked in breast milke and hony together. If it happen that the eies look still yellow after the jaundise, it is good to drop milke into them with the Juice of the wild Cucumber. This peculiar vertue it hath ouer and besides those abouenamed, if it be taken in drink, to help those that haue bin poisoned with the sea-Hare, the worne Suprestis, and as *Arſtole* saith

* Medicine ad-milke opio.

faith, with the deadly Dweale called Dorycnion. In this manner also it cureth those whose brains be troubled and intoxicated with drinking Henbane. Physicians likewise have prescribed to make a liniment with milk and Hemlock for to be applied vpon the gout. And some there be who vse it in that case, together with Oclype (v) the sweat or fattiness of vvashted wooll, and Goosegrease: in which manner it serueth in a pessary to be put vp in the naturall parts of women, to assuage the pain of the matrice. To drinke breast milk is a good meane to stop a laske, as *Rabirius* writeth, & yet the same doth prouoke the monthly course of womens flours: what is to be said now of a womans milk who hath borne a maid child? surely it is better than the other in these cases only, to wit, in scouring the skin of the face, and taking away the pimples, spots and freckles, which be therein. But I must not forget, that any breast-milke whatsoeuer, cureth the maladies incident to the lights: and if there be tempered therewith the vrine of a yong lad not full fourteen years old, and Attick honey, so there be of each one spoonfull, I find it to be an excellent remedy for to rid away the ringing and thumping within the ears. And to conclude, it is a general speech, That if dogs do lap and taile the milke of a woman which hath borne a maid child, they will neuer run mad.

As touching the falling spittle of a woman, it is judged to be a proper medicine for blood-shotten eyes; also for the rheum that hath taken a course thither, if so be the corners of the eyes be euer and anon bathed and wet therewith when they be hot and inflamed, but more effectually will this remedy worke, in case the woman forbore all meat and wine the day before. I read moreover in some Authors, That if the head be pound vp with a womans haire-lace or fillet, it easeeth the pain thereof. And thus much in some good sort as touching the medicines proceeding from women. As for therest that are written and reported, they exceed all reason, and there is no end of them.

For first and foremost it is said, that if a woman whiles her monthly sickness is vpon her, be set into the wind abroad with her belly naked, she will scarse away haile storms, whirlewinds, and lightnings, yea, and all violence of the weather whatsoever. And at sea verily, any woman standing openly against the weather bare, although she haue not her flours, is enough to secure the sailers and passengers from all tempests. As for the very monthly flux it self of women, (a thing in other respects and at all times as I haue shewed before, of a monstrous nature) there be writers who tell and preface wonders thereof, such as be horrible, abominable, and indeed not to be spoken: and yet some of these things I hold it no shame to deliuer in writing, namely, If it fall out just in the eclipse of Sun or Moon, that a woman hath her sickness come down, the same is a pestilent quality, and apt to breed diseases incurable. Likewise, if haply the time of the change, when the Moon is in conjunction with the Sun, and those things concur together, the man who medleth with her during that time, shall not auoid his bane but it will bring vpon him some pestilent malady remediless. Moreover, the venome thereof is so strong at that time especially more than at any other, that the presence or breath only of a woman then, will infect and staine any purple cloth. And yet bad enough it is at all times: for whensoever they are in their flours, it skills not in what quarter of the Moone, if they goe about any field of corn with their nakednesse vncouered, yee shall see the canker worms, caterpillers, beetles, and all such worms and hurtfull vermine, to fall from the corn as they passe along. This inuention by the saying of *Scopius* and *Merodorus*, came from the Cappadocians, who being infected with a number of those green flies called *Cantharides*, deuised this meane to be rid of them; for they caused their women at the time of their monthly terms (sauius the reuerence of womanhood be it spoken) to go through the standing corn, with their cloths tuckt vp round about their waite, and all bare beneath. In other countries yet they are more mannerly, and in a better respect to the honor of women, put them only to go barefoot for this purpose, with their haire hanging loose about their cares, vngraced and vnbraided. Howbeit, great heed must be taken, that they walke not thus at the Sunne rising, for then surely all the crop vpon the ground will wither and dry away to nothing. Also if a woman during her natural courses doe but touch any vng vines, it is enough to marre them for euer. As for Rue and Iuie, Plants otherwise of themselves most medicinable, and indued with singular vertues against poison, they will presently die with their touch. Much I haue already said of this strong and pestiferous venome, and yet I haue not written all. For euer and besides, certaine it is that if a menstruous woman doe no more but touch a Bee-hiue, all the Bees will be gone and neuer come to it againe. Also if at such a time she handle

A die any skains or slips of linnen yearn and set them ouer the fire to seeth, they will in the boiling turn black. Let her but take a barbers rasor in her hand, the edge will turn and become blunt: nay if she do no more but touch any brasse vessel, it is wonderfull what a strong sauer it will cast, and how it will rust and canker therupon; and the rather, if this fall out to be in the decrease or wane of the moon. Doth a woman at such a time touch a mare that is in foale, it is enough to make her cast the same before due time. And not onely fo, but the very sight of women in that case, although they be a great way off, is able to do much harm; but principally the first time that they haue the said flours after the losse of their maidenhead, or otherwise during their virginity, when they first come down by course of nature of the owne accord. The malignitie of this venomous humor is so great, that the slime ingendred within the lake of Sodome in Iury, as viscous as it is otherwise, will forgoe all that tenacity, and diuide in sunder by nothing els but a thred infected with the said menstrual blood, according as I haue declared heretofore. So forcible it is besides that the very fire, which is of power to overcome all things and change their nature, is not able to conquer and alter this: for burne or calcine it to ashes, and strew neuer so little thereof vpon any cloths that are to be washed or scoured in the Fullers mill, it will change their color, though they were of purple, and cause any dye whatsoever to lose the fresh lustre. And more than that, so pernicious is the quality of this venome, that as naturall otherwise as it is to women, it is no better than a poison to those of their own sex: for in case one woman with child be appointed a midwife, she will immediately fall to labour, and slip an abortiue birth. As for the famous curtiaines, *Lais* and *Elephantis*, who haue written so contrary one to the other of this argument, and namely, as touching abortions, and of what efficacy the cole of Colewort, Myrtle, or Tamariske root is, after it hath bin quenched in the said blood, as also, how shee. Asles will not conceiue for so many yerres as they chance to eat Barly corns infected therewith; besides other strange deuises that they haue set abroad, I think them incredible, & I would not haue any credit at all giuen vnto their writings, considering the monstrousities & contrarieties which they haue put down, whiles the one prescribeth medicines for to make fruitful, & the other ordaineth the very same, to hinder conception and cause them to be barren. Moreover, *Sylbus* of Dyrrhachium saith, that for to make a mirror or looking glasse cleare againe, which was dusked and dimmed by the aspect of a menstruous woman, the next way is to cause her to cast her eyes backward and to look ouer her shoulders vpon it again; he saith moreover, that if women in that case haue about them the fish called a Barbill, they shall not by that means infect or do hurt at all, but the same menstruous blood shall lose all the foresaid strength.

Well, as hurtfull and mischieuous as it is otherwise, yet many there be who affirm it to be in many diseases medicinable, and namely, for the gout, if the place be annointed therewith: as also if women while their monthly sickness is vpon them, doe handle the wens named the Kings evil, the swelling kernels behind the ears, the broad tumors or biles called Pani, shingles, *S. Anthones* fire, felons, or violent flux of humors to the eyes or other parts, there will infuse much healthfull blood bestowed within a little locke of wooll that came from a blacke Ram, be worn for Tertian and Quartan agues. *Diostimus* of Thebes reporteth, That any little peece or rag of cloth, yea, though it were but a thred stained therein, and so set handsomely into a bracelet, is sufficient to do as much. *Satira* the renowned midwife affirmed, That there was not in the world so good a thing against the Tertian & Quartan, as to rub & anoint therewith the soles of the patients feet: but much more effectually would it do the deed, in case the woman her self had the doing of it with her own hand, so as the sick party know not thereof in any hand. And this (quoth she) is a foueraigne medicine to raise them out of a fit of the Epilepsie, who are surprisid and fallen therewith. *Iscidas* a worthy Physician among the Greeks, assureth vs vpon his word, That Quartane agues will make an end and go away by the act of generation, at what time onely as a woman beginneth to enter into her flours. But this is agreed vpon by all authors professed and seen in this team, that if one be bitten with a mad dog, and so far gone, that he is afraid of water, so as he dare not see it or drink at all, do but put a clout or shred of cloth dipped in the said menstrual blood vnder the cup whereout hee is to drinke, hee shall immediately be deliuered from that feare: And this commeth by that powerfull and predominant Sympathie, whereof the

the Greeks write much, between mad dogs and the said blood, considering, as I haue before said, that they begin first to run mad by tainting therof. This is known for certain, that the ashes of a burnt cloth infected therewith, or of the blood it self calcined, is a singular powder to heale the farcins or sores of horses and all such laboring beasts, so it be mixed with the foot of chimney or furnace, and al incorporat together with wax. Now say there be any garment or cloth polluted therewith, there is not any thing will take out the staine, but the vine onely of the same woman. The ashes before said tempered alone with oile of Roses into a liniment, and so applied in maner of a frontal to the forehead, allaith the headach of women specially. This also would be noted, That for the first yeare after a woman hath known a man, and so parted from her virginity, her fleures are most sharpe, mordant, and fretting. Furthermore, this also is rescolled clearly among all writers, That there is no charme or enchantment whatsoeuer, of any validity to doe harm to that house where the side posts or dore cheeks are striked lightly ouer with menstruous blood: an argument I assure you, that convinceth notably the folly of these Magitians, the vainest people vnder heauen, and ouerthroweth all their art: and a point that pleaseth me very wel, & which for mine own part I am right willing to beleue: and since I am light thus vpon them, I care not much, if to detect their vanities, I set downe one of the most modest receipts that they haue giuen their word for, and which may seem to carry some shew of truth or probability. For thus they prescribe with great warrantize, To take all the nail-parings of toes and fingers of man or woman lying sick of an intermitten feuer, and to mix or incorporate them with wax, so as the party in the doing herof do say these words, *I am about a remedy for the Tertian, Quotidian, or Quartan ague* (according as the patient is troubled with the one or other of these fevers) which done and said, to stick vp the said wax vpon the dore of another man or womans house that is not sick at all, and that before the Sun be risen, which no doubt (as they say) wil cure the sick person, and set the ague vpon another that was well before. Now would I gladly know what greater vanitie and folly there can be, if this medicine misse and do not the feat: or what more villany and mischief, than thus to transfer and remoue diseases from those that be sick already, vnto such as be found and think no harme? To conclude, some of these Magitians are so far gone, that after all the fore said nailes of fingers and toes be pared, they ordaine them to be thrown into Ant-holes, and to obserue that Emmet that first begins to draw one of them into her nest, to catch her vp quickly, and hang her about the necke of any one that is sick of an ague, and so the patient *pro certo*, shall shake off the disease and be quite rid of it.

CHAP. VIII.

¶ The medicines that are found in diuers strange and forraign beasts, as namely, the Elephant, Lion, Cammell, Hyena, Crocodile, Chameleon, Skinke, Water-horses, and Onices.

These be the remedies which the bodies of men and women do afford: as many I meane as I may with some honesty relate: and yet ywis many of them be such as are not to be read out and vttered, but with leaue and patience first craued, for the reuerence that we owe to chaste eares. I know ful wel there is a great deale more behind that I haue not touched, but such stuffe I assure you as is detestable and not fit to be spoken or committed to writing, which makes me rather to make hast and leaue the discourse of Man and Woman, and so to proceed to the singular vertues and operations of bruite beasts.

And to begin with the Elephant. The blood of that beast, especially the male, staith all fluxes of humors, which the Greeks call Rheumatismes. The shauings of ivory (which is the Elephants tooth) incorporat with Attick hony, scatter (as folk say) the dusky spots that appeare in the visage: like as the dust thereof, which the file or saw doth make, cureth the whitflawes or impostumations breeding at the naile roots. The trunk or muffle of an elephant if it be but touched onely, allaith the head-ach; and the more effectually it is, in case sneezing come withall. It is said moreover, if one take a peece of the right side of the same trunk, & carry it fast about him with the red ocre of Lemnos (called Terra Sigillata) it will incite him mightily to carnal lust. The blood of an elephant is singular good for those that are in a consumption & wast away: like as the liuer helpeth such as be giuen to the falling sicknesse.

The greafe or fat of a Lion tempered with oile of Roses into an vnguent, preferueth the skin of

A of the face from all ill fauored spots, and keeps it white and smooth. The same ointment healeth the skin that is scorched and pilled with cold, by travelling ouer mountains charged with snow; yea, and abatech the tumors & nodosities vpon the joints. Now, if we list to beleue the fooleries of Magitians, they would bear vs in hand, that who soeuer be anointed all ouer with the said greafe, shall be gracious with princes and kings, yea, and win much fauor among the people, and any state or nation where they shall conuerse, but principally it must be the fat in the forehead between the eie-brows (where indeed it is vnpossible to find any at all.) The like effects they do promise of the Lions teeth, and those especially of the right side; like as of the shag haire (forsooth) that should hang vnder their nether jaw. Indeed the gal of a Lion mixed with water, clarifieth the eiesight, in case the eies be bathed therewith: the same tempered with the owne greafe, B dispatcheth as they say the falling sicknes, in case the patient tast neuer so little of it, & so soon as he hath taken it, run a while for to digest the same. A Lions heart cureth a Quartane ague, if the sick person do eat thereof, and their fat is a foueraigne remedy for the feuer Quotidian, if it be viced with oile of rose. There is not a beast so fell and sauage, but it will run away from them that be anointed with Lions greafe: and it is thought to be a singular preseruatiue for to preuent any secret ambushes or practises intended against one.

As touching the Cammell, his braine (by report) is excellent good against the epilepsie or falling feif knesse; if it be dried and drunk with vineger; so doth the gall likewise taken in drinke with hony: which also is a good medicine for the Squinancy. It is said that a Cammels tail dried causth looseness of the belly: like as the dung reduced into ashes and incorporate with oile, C doth cure and frizle the haire of the head. The said ashes made into a liniment and so applied, yea, and taken in drinke as much as a man may comprehend with three fingers, cureth the dysentery: so doth it also the falling sicknesse. Cammels piss (they say) is passing good for Fullers to scour their cloth withall: and the same healeth any running sores which be bathed therein. It is well known that the barbarous nations keep this stale of theirs vntill it be 5 yeares old, and then a draught thereof to the quantity of one hemine, is a good laxatiue potion: likewise that the heire of their tails, twisted into a wreath or cord, and so worn about the left arme in manner of a bracelet, cureth the Quartanague.

As for the Hyena, there is not a wild beast of the field that the Magitians haue so much in admiration as it: for they hold that in the Hyena it selfe there is a certaine magicall vertue, attributing a wonderfull power thereto, in transporting the mind of man or woman, and rauishing their senses so as that it will allure them vnto her very strangely. Concerning the rare property of these beasts to chaunge the sex each other yeare (i. e. to be male this yeare, and female next; as also touching other monstrous qualities obserued in their nature; because I haue discoursed already of them, it remaineth now that I proceed to shew the medicinable vertues that are reported to be found in them: wherof this may be counted for one of the chiefe, that considering they be so terrible * to Panthers, that they dare not quetch nor make head against them: who * i. Luzerros, fouer hath about him but a peece of the Hyenas skin may be sure that a Panther will not set vpon him, nor once come neere. And that which is a wonderful thing to be spoken, in case the hides of them both be hung vp one against another, the haire of the Panther will fall off. When E the Hyenaes flie before the hunter and would not be taken, they wind with a cariere out of the way toward the right hand, and wheele about vntill the man be gotten before them; & this they do, because they would meet with his tracts and footings, which if they happen vpon, and get behind him, you shall see the hunter incontinently to be so intoxicat in his braine, that he is not able to beare his head nor sit his horse, but to fall from his back. But in case that they turn on the left hand, it is an euident signe that they be ready to faint, and then will they quickly be taken. The sooner also and with more ease be they caught (if we may beleue art Magick) if the hunter tie his girdle about his middle with 7 knots, and the cord of his whip likewise wherewith he ruleth and jerketh his horse, with as many. But see how subtil and cunning these Magitians be to cloke and colour their vanities and deceits, with superstitious circumstances! This chafe forsooth after the Hyene, must be list at the very point when the moon is passing through the sign Gemini: and then if they be taken, the huntman must be sure to saue euery haire of their skins, and misse not one, so medicinable they are. By their saying also the skin that grows to the head of the Hyene, if it be applied in manner of a frontal, is singular good for the headach: if the same bee soaked of the Hyene cureth bleared eies, if the forehead be anointed therewith: but if the same bee soaked

den with three cyaths of Attick hony and one ounce of Saffron, to a liniment, it is an excellent G
 preservative to keep one from euer being leare-cied, if so be the eies be annointed with it. The
 said composition likewise is singular for to rid away the cloudy films and cataracts that breed
 in the eie. But for to clear the sight & quicken it, the older this medicine is, the better they hold
 it to be. And kept it must be in a brazen or copper box, which eie-salue they say, serues also
 for the mailles or spots, for the asperities, excrescences, cicatrices, dents, & excauations remaining
 in the eies. The graue or dripping likewise of the Hyænes liuer, newly taken out of the body
 and roasted, being incorporat with clarified hony into an vnquent, rideth away the red film that
 ouercasteth the apple of the eie and darkneth the sight thereof. They will make vs beleuee, that
 the Hyænes teeth are good for the tooth-ach, if the pained teeth be but touched therewith, or if
 the said teeth be arranged in order, and so applied fast vnto the patients teeth, as they may fit
 euery tooth in his head. The shoulders also of the Hyænes are proper to ease the paines that lie
 in our shoulders and arms both, so they be set likewise orderly and hanged close to the grieved
 parts. The teeth of the said Hyæne plucked out of the left side of the chaw, and bound vp sure
 within a piece of a sheep or goats skin, is right foueraigne to be worn in manner of a scutchon
 or stomacher for to ease the intollerable paines of the stomacke. A dish of meat made of their
 lungs and eaten, is foueraigne for the flux proceeding from a feeble stomack. But if the same be
 burnt and reduced into ashes, and so brought into the form of a liniment with oile, and applied
 accordingly, it comforteth the stomack mightily. The pith or marrow taken out of the backe-
 bone along, and incorporat with old oile and * gall, is passing good for the nerves. The liuer of
 the Hyæne drieth away Quartan agues, in case the patient take three bits thereof one after
 another before the access. Take the aines of the Hyænes ridge bone, the tægne and right foot
 of a Seale, put thereto a Bulls gall, seeth them all together and make a cataplasme therof, spre-
 ading the same vpon a piece of a Hyænes skin, and apply it accordingly, you shall see how it will
 ease the pain of the gout. The very gal likewise of this beast mixed with the powder of the stone
 Asius, is commended by them for to cure the said malady. They that are subiect to trembling
 and to the cramp, such also as be giuen to leap out of their beds, or are troubled with the bea-
 ring and panting of the heart, ought to take and boile the heart of the Hyæne, and eat one part
 thereof, and with the other being burnt to ashes and with the brains of the said Hyæne together
 reduced into a liniment, to annoint the grieved part. This composition likewise serueth to take
 away the hairs of any place, if it be annointed either with it alone, or els with the gall, & in case
 one would not haue them euer to come vp againe, they ought to be plucked vp before, and then
 the place to be annointed. Thus they vse to rid away the haire of the eie-lids that be trouble-
 some. In like manner for the paines of the loins, the flesh about the Hyænes loines is prescribed
 to be eaten, and therewith oile together, and the place also is to be rubbed well and besmeared.
 They say moreover, that if a woman which is barren, eat the eie of a Hyæne with Liquorice and
 Dill, she shall proue fruitful: and so neare they go, as to promise the sheal conceiue within three
 daies after. And (by their report) whoseoeuer is haunted with sprites in the night season, and be
 affrighted with such bugbears, let them but take one of the master teeth of the Hyæne, & wear
 it about them tied by a linnen thred, they shall be freed from all such fantastical illusions: these
 Magitians also giue direction to those that be out of their wits and gon besides themselves, to
 haue a perfume made with the smoke of those teeth, and to wear one of them hanging before
 the breast, with the fat growing about the kidneys, or els with the liuer or the skin. If a woman be
 with child, and would gladly go out her full time, let her take a peece of the white flesh of this
 beast, and 7 haire, neither more nor lesse, together with a flags pizzle, bind them all fast within
 the skin of a Buck or Doe, and so wear them hanging about her necke just against her breast,
 she shall not slip an vntimely fruit. Furthermore they promise in the behalfe of this beast, that
 if a man or woman do eat the genital member of a Hyæne, according to their sex, they shall be
 prouoked to fleshly lust, how cold soeuer the man were before, and could not abide to embrace a
 woman.ouer and besides, if the said pizzle and shap of this beast be kept in any house, together
 with a joint of the ridge bone, skin & alas it groweth too, the whole family shal agree together
 well, and liue peaceably; now this ioint or knot about said they call Atlantion, and it is the very
 first spondyle of them all. The same also they make no small reckoning of, but hold it for a spe-
 ciall remedy for the falling sicknesse. Fry the greafe or fat of an Hyæne, the same therof (by re-
 port) wil chase away serpents: a piece of the chawbone beaten smal to powder & eaten together
 with

* Felle: some
 read mell:
 i Honey.

A with anise seed, doth mitigate the quivering & quaking in a cold ague fit. A suffumigation made
 therewith, draweth down womens sicknesse, if we may beleuee magitians, who are grown to this
 passe in their vanity, that they enouch for certain, that if an archer do bind vnto his arm a tooth
 of an Hyæne, growing on the right side of the vpper chaw, hee shall shoot point blanke and ne-
 uer misse his mark. Take the palat or rouse of the mouth of this beast dried and made hot toge-
 ther with Egyptian Alumne, put the same into the mouth and change it three times for new
 stit, they promise it shal correct a stinking breath, and heale any vlcers or cankers in the mouth.
 And as for those that weare vnder the soles of their feet within the shoo, a Hyæns tongue, there
 is not a dog will be so hardy as to bay or bark at them. The brain of the Hyæne lying in the left
 side of the head, causeth any deadly diseases of man or beast, if the nostrills be annointed there-
 with. The skin of the forehead serueth as a countercharm against all witch-craft and enchaun-
 tments. The flesh growing to the nape of the necke, being dry and made into powder, appeareth
 the pain in the loins of the backe, either eaten or drunk, it skils not whether. For the griefe of si-
 shoulders and back. And the hairs growing about the muzzle of this beast, haue an amorous
 vertue with them, to make a woman loue a man, in case her lips be but touched therewith. The
 liuer of the Hyæne giuen in drink, cureth the cholique and stone. As for the heart, be it taken in
 meat or drinke, it causeth all the paines of the body: the milte cureth the spleen: the kell with the fat
 about it, helpeth any inflammation of vlcers if it be applied with oile: the marrow within the
 bones, appeareth the griefe of the backbone and sinews, and finally, doth recouer and refresh the
 weariness of the reins and kidneys. The sinews of this beast drunk in wine with frankincense, re-
 store women to the fruitfulness of the wombe, especially when by indirec^t means of sorcery
 they are become barren and vnapt for conception. The matrice of the female Hyæne giuen in
 drinke with the rind of a sweet pomegranat, is a very comfortable medicin for that part in a wo-
 man. A suffumigation made with the fat taken from the hetchfill peece or loines, is singular for
 those women that be in hard trauell of childe, and procureth them speedily deliuerance: the ma-
 row or pith out of the ridge bone whoseoeuer carrieth about them, shal find help against vain il-
 lusions and fantasticall imaginations. The pizzle of the male Hyæne, if it be burnt, causeth a
 fumewhich is good for them that haue any sinews pluckt with the cramp. Sate the feet of this
 D beast, and the very touching of them is foueraigne for bleared eies, for ruptures, & inflammati-
 ons: but this regard must be had, that the left foot be applied to those grieues in the left side, and
 the right to the contrary. But wot ye what? if the right foot of the Hyæne chance to be carried
 ouer a woman whiles she is in labour of childbirth, she shall surely die of it; but contrariwise,
 let it be the right foot, she shall haue a quick dispatch and be deliuered with ease. The skin or
 purre that holdeth the gall, being either drunke in wine or taken with meat, helpeth those that
 for weakness of stomack be apt to faint and fall into cold sweats: and the bladder taken with
 vine, cureth those that cannot hold their water. Now look what vrine is found within the blad-
 der of this beast, you must thinke it is an excellent drinke if it be mixed with oile, Sefame seed,
 and hony, for any old griefe whatsoever. The first rib and the eighth wil make a perfume, which
 E is passing good for those who are bursten: the spondyles or ioints of the ridge-bone, are as con-
 uenient for women in trauell of child-birth: and the Hyæns blood taken inwardly with fried
 barley meale, doth mitigate the wrings and gripes of the belly. If the side posts or dore cheeks of
 any house be striked with the said blood, wherefoeuer Magitians are busie with their fears and
 jugling casts, they shall take no effect, whether they be charms, exorcismes, or inuocations: inso-
 much as they shall not be able to raise vp spirits, nor haue any conference with familiars by any
 means of conjuration, whether it be by torch-lights, by bason, by water, by globe, or otherwise.
 The flesh of this beast eaten, is very effectuall against the biting of a mad dog; and yet the liuer
 is of greater efficacy in this case. If there chance either flesh or bone of man or woman whom
 this beast hath killed and deuoured, to be found in the maw, surely the perfume thereof is a pre-
 sent remedy for the gout, as these Magitians would seeme to persuade vs. But how if there be
 F found the nails of man or woman there: then woe to all those that were at the hunting and ta-
 king of this beast, for it presageth that one of them is sure to die for it. Beside all this, they do
 affirme, That either the excrements or bones which the Hyæne discharge out of the belly at
 the time that she is killed, serue for countercharms or preseruatues against forceries and pra-
 tises of Magitians. As for the ordure or dung which is found within her guts, being dried and ta-
 ken

ken in drinke, is auailable against the dysentery : and the same reduced into a liniment with goose greafe and so applied, helpeth those that by some poison are infected all the body over. The greafe likewise of this beast vsed as an ointment, hath a singular property to cure the biting of a dog, so that the patient be couched vpon the skin of the said Hyæna, as far as our Magicians: who affirm moreover, that a decoction made with the ashes of the pattern bone of the left leg, boiled together with the blood of a weazil, causeth as many as be anointed all ouer therewith, to be odious in the eyes of all men. The same effect do they attribute to the decoction of the eie. But of all the fooleries that they haue broched as touching the Hyæna, this pasteth and may go for the chiefe, That the hindmost end of the gut in this beast is of vertue, that no captain, prince, or potentat, shall be able to wrong or oppress those who haue but the same about them: but contrariwise assureth them of good speed in all their petitions, and of happy issue in all suits of law and trials of iudgements. The concavity or wrinkle thereof, if a man do weare fast tied about his left arme, is so forcible to charme a woman, that if he do but let his eie vpon her, she will leaue all and follow him presently. The ashes of the haire growing therabout made into a liniment with oile, and applied accordingly, causeth those men who before were giuen to lewd wantonnesse and liued in bad name, not onely to become chaste and continent, but also to put on grauity and grow staid in their behaviour. Thus much of Hyæna.

For fabulous tales, the Crocodile may challenge the next place: a beast this is which naturally doth liue as well on land as in water: for two kinds there be of them; whereof the former (keeping thus in both elements) hath this especiall vertue, if we may beleue these Magitians, To prouoke vnto carnal lust, if the teeth which grew in the right side of the chaw, be hanged fast likewise to the right arme of man or woman. The eie-teeth of the said Crocodile, filled vp with frankincense (for hollow they be) and tied to any part of the body, put by those periodicall fevers which vie to return at set and certaine hours; but then the patient must not for five dayes together, see the party who fastened the same about him. And they report likewise, that the little grauel stones taken out of their belly, be of the same vertue to driue away the shaking fits of agues when they are coming; which is the cause that the Egyptians vse ordinarily to anoint their sick folke with the fat of this beast. The other Crocodile resembleth this in forme, but far lesse he is, and keepeth only vpon the land, liuing vpon most sweet and redolent flowers. In which regard, much seeking there is after his guts, for the pleasant sentours and odors wherewith they be stuffed full: this dung they call Crocodileia, a singular remedy for all the diseases of the eyes, and namely against cataracts, fistulous, and mistie films, if they be anointed with an eie-salue, made of it and the iuice of Porret mixed together. The same brought into a liniment with the oile Cyprinum, serueth to take away all pimples that rise in the face, and clemeth the skin from those spots that blemish the visage. But if it be incorporated with water, it scoureth whatsoeuer accidents be apt to run ouer the face, and reduceth the skin vnto the natie color; for it riddeeth freckles, moles, and generally any spots or fleckes that marre the beautie or fauour. The same is good to be drunke in oxymell to the weight of two oboli for the falling sicknesse: and applied in forme of a pessarie, it prouoketh womens flowers. Now if you would chuse the best Crocodile, take that which is white, brittle, or easie to crumble, least weighty in hand, and withall swelling in manner of a leuaine, if it be rubbed between the fingers. The manner is to wash it, as they do white lead called Cerusse. Sophisticated it is with amyll, or the scouring Fullers clay & Tuckers earth called Cimolia; but principally with the dong that sterlings meut, which are of purpose caught and fed only with rice. Now there is not a better thing in the world (say these Magitians) for the cataract, than to anoint the eyes with it and honey together. And if a man may beleue their words, there is a soveraigne perfume made of the guts and the whole body besides, for women who are sicke of the mother, or otherwise diseased in the matrice, if they sit ouer it whiles it smoketh. In like manner, it doth them good to be lapped round about with wooll that hath bin so perfumed. The ashes of the Crocodiles skin, as well the bigger as the lesse, brought into a liniment with vinegar, and applied vnto those parts of the body which had need to be cut away or dismembred, causeth the patient to haue no sense or feeling at all either of saw or lancet. The very smoke also of the said skin burning, doth the femblable. The blood of both Crocodiles mundifieth the eyes, and causeth them to see cleare which are anointed therewith, removing the filnes and dispatching the spots that impeach the same. The very body or flesh it selfe of the Crocodile, all saue head and feet, is good meat sodden, for those

A those who bee troubled with the Sciatica: the same cureth an old cough, especially the chin-cough in children; and assuageth the paine of the loins. The Crocodiles haue a certaine fat in them that is depilatorie; for no sooner is the hare rubbed therewith, but presently it sheddeth. The said fat or greafe preferueth those who be anointed therewith, from the danger of the Crocodiles, and is excellent good to bee melted and dropped into the wounds made by their bit. The Crocodiles heart wrapped within a lock of wooll which grew vpon a black sheep, & hath no other color medled therewith, so that the said sheep were the first lambe that the dam yeaned, is said to driue away quartane agues.

To this discourse of Crocodiles, wee shall not doe amisse if we annex other beasts in some sort resembling them, and which be likewise straungers as well as they. And to begin with the Chamæleon, *Democritus* verily made so great reckoning of this beast, that hee compiled one entire booke expressly of it, and hath anatomized every furrall member thereof: and certes, I cannot chuse but take great pleasure therein, knowing as I do by that means how to decipher and deliuer abroad the loud lies of vaine Greeces. This Chamæleon for shape & bignesse, is much answerable to the Crocodile last named, differing onely in the curbing or crookednesse of the ridge-bone, and largenesse of the taile. There is not a creature in the world thought more fearefull than it; which is the reason of that mutability whereby it turneth into such varietie of colours: howbeit of exceeding great power against all the sorts of hawkes or birds of prey; for by report, let them fly and soare neuer so high ouer the Chamæleon, there is an attractive vertue that will fetch them downe, so as they shall fall vpon the Chamæleon and yeeld themselves willingly as a prey to be torne, mangled, and deuoured, by other beasts. *Democritus* telleth vs a tale, That if one burn the head and throat of the Chamæleon in a fire made of oken wood, there will immediatly arise tempests of rainy stormes and thunder together; and the liuer will do as much (saith he) if it burne vpon the tiles of an house. As for all the other vertues which the said author ascribeth to the Chamæleon, because they smell of witch-craft, and I hold them meere lies, I will ouerpasse them all, vnlesse they be some few, for which hee serueth well to be laughed at, and would indeed be reproved by no other means better: namely, That the right eie of this beast if it be pulled out of the head whiles it is aliue, taketh away the pearl, pin and web in man or womans eyes, so it be applied thereto with goats milk. The tongue likewise plucked forth quicke, secureth a woman from the danger of childbirth, if shee haue it bound to her body whiles shee is in trauell. If there be found by chance a Chamæleon in the house where a woman is in labor, she shall soon be deliuered in safety: but if such an one bee brought thither of purpose, the woman is sure to die. Also, the Chamæleons tongue pulled out of the head whiles the Chamæleon is quicke, promisseth good successe in iudiciall trials. The heart bound within black wooll of the first shearing, is a most soveraigne remedy against quartan agues. The right forefoot hanged fast to the left arm within the skin of a Hyæna, is singular against the perills and dangers by theues and robbers; as also to skar away hobgoblins and night spirits. In like manner, whoeuer carry about them the right pap of this beast, may be assured against all fright and feare. But the left foot they vie to torriue in an ouen with the herb called also Chamæleon, and with some conuenient ointment or liquor to make in certaine E troches, wherof if a man do carry any in a box of wood about him, hee shall go inuincible, as sayth *Democritus*, if we were so wise as to beleue him: who affirmeth moreover, That whoeuer hath about him the right shoulder of the Chamæleon, shall be able to ouerthrow his aduersarie at the barre, and to vanquish his enimie in the field: but first, hee must be sure to cast away and make riddance of the strings and sinewes belonging thereto, and to tread them vnder-foot. As for the left shoulder, I am ashamed to relate, vnto what monstrous spirits hee doth consecrate it; and namely how by the vertue thereof, a man may cause what dreames and fantasticall illusions hee listeth, yea, and make those whom hee will himselfe, to imagine the same apparitions. As also, how the right foot of the said beast drieth away all such strange visions; euen as the lethargie will goe away by the meanes of the left side of this beast, which lethargie was occasioned by the right. Touching head-ache, hee sayth plainly, that the next way to cure it, is to besprinkle and wet the same with wine, wherein either of the two sides were soked. Take the ashes (quoth hee) of the left thigh or foot, chuse you whether, incorporate the same with the milke of a Sow, and therewith anoint the feet, it will be an occasion, speedily to bring the gout vpon them. But of the Chamæleons gall, for the most part, folk are in manner verily persuaded,

that it will rid the pin and web, the catarrh also of the eyes, with three daies anointing; chase away serpents if it be dropped into the fire, gather all wezils in a country together, only by throwing it into the water, and fetch out haire if the body be anointed therewith. It is a common saying also, That the liver of this beast is of the same effect, in case it be brought into a liniment with the lights of a hedge land, tode like as, that all amatorious drinks & loue-charms become void and of none effect by the said liver. As for those who be troubled in mind & giuen to melancholy, they find remedy, if out of this beasts skin they drink the iuice of the herb Chamæle. Furthermore, the guts, and the dung therein contained (and that is worthy to be noted, considering this beast lieth vpon no meat at all) being striked vpon the dore of an enemies house, fidering this beast lieth vpon no meat at all) being striked vpon the dore of an enemies house, together with the vrine of apes, cause him to be hated of all the world. The like wonders they report of the Chamæleons taile, namely, how it wil slay any violent streame of riuer; stop the beaue and inundations of waters, and withall, bring asleep and mortifie serpents. The same beaue aromatized or spiced with Cedar and myrrh, and tied fast to a branch of the Date tree growing double or forked, wil diuide the waters that be smitten therewith, so as a man may see what-fouer is in the bottome. And would God Democritus himselfe had met with one drop of his branch, to haue made him hold in so many lies as he hath told, considering hee hath reported this quality of it among other, namely, to repress intemperat speech and inordinat walking of the tongue. But euident it is, that the only reason why Democritus faulted that way (being otherwise a man of a singular wit and wholly addicted to the good of mankind) was an exceffiuue and extraordinary zeale that he had to profit and benefit the whole world.

Much like to this kind is the Skink (whom some haue named the land Crocodile) saue that the skin is whiter & more fine. But the principal difference is this, for that the bristles or scales are couched fo, as they tend from the taile vward to the head; whereas in a crocodile the same are set contrary. The biggest of this sort, be those of India: the next be they which are brought out of Arabia; & transported they be to vs salted. The muffle & the feet giuen to drink in white wine, do inflame the heat of lust; but especially when they be mixt with Satyrion and Rocket seed, of each one dram, mingled with two of pepper; and when they be wrought into troches weighing euery one a dram, one of them must be taken at once. But the very flesh of the Skinks sides, drunk to the quantity of a oboli, with myrrh and pepper in like proportion, are supposed to be more effectuall for this purpose. The same (as Apelles reporteth) taken both before & also after meat, is a singular preferuative against inuenedomed arrows. Besides, it is one of the ingredients which go to the noble compositions that be called Antidors. Howbeit, *Sesui* is of opinion and doth write, that if a man drink about one dram weight of it in a hemin of wine, it is enough to indanger his life. Moreover, the iuice or broth of the Skinks flesh boiled and taken with honey, is thought to keep downe the flsh and to coole lust.

As touching the riuer-horse called Hippopotamus, there is a great affinity or kindred rather between him and the crocodile, in regard that they both do haunt the same riuer, and participate both of land & water. This beast (as I haue shew'd heretofore) deuised first the practise of phlebotomy or blood-letting. Great store there be of them beyond the Seignory Saitica in Egypt. Take the ashes of this beasts hide, and reduce them with water into a liniment, it is singular to cure the broad bites or apostemations called Pani. The greafe, and likewise the dung, is good against the cold fites of agues, if the patient receiue the perfume thereof. The teeth which grow on the left side of the mouth, do ease the tooth-ach, if so be the gums be scarified therewith: the skin taken from the left side of the forehead, laid vnto the share and kept fast thereto, slaieth the prouocations to venery. The ashes of the same doth cause the hair to grow again thick in those places, where by disease it is shed. Take of the generoits of this water horse, the poise of one dram, and drink it in water, it is a good counterpoison against the venome of serpents. As touching their blood, it serueth painters in good stead.

The Onces be likewise taken for strange and forein, and of all soure-footed beasts they haue the quickest eie and see best, by the testimony of all writers, there is in the Island Carpathos a singular kind of ashes made of their houses, burnt together with their hide; and they hold, that if men drink thereof, they will become chaste, where they neuer follicitious and libidinous before; again, let women cast the same vpon their nature or priuie parts, it will coole their appetite of mans companie; yea and kill the itch in any part of the body, if it be rubbed therewith. And the vrine of this beast helpeth the Strangurie, to wit, the infirmities of the bladder when the water passeth

A passeth by drop-meale: which proprietie they being by a naturall instinct aware of, so soone as euer they haue pissed, do hide and couer the vrine with mould, which with their feet they raise just ouer it, as it is commonly reported. The same vrine is preferred for a good remedy in the now I will to those in this part of our world; and first declare the vertues and properties medicinal which are found common in all liuing creatures, yet making choise of those that be singular above the rest.

CHAP. IX.

The common and ordinary medicines drawne as well from wildbeasts as those which be come of the same kind. The use of milk in Physicke, with the obseruations belonging thereto. Also of Cheese, Butyr, the greafe also and tallow of beasts.

And to begin with Milk: these points following are to be obserued: *Imprimis*, Each liuing creature liketh best and findeth most good by the own mothers milk. *Item*, For nourices to conceiue with child whilst they giue suck, is a most hurtful thing to their babes: for after such a time, their milk will thicken and cruddle in manner of a cheese (a dangerous matter for sucking infants) who thereupon be called Colostrati. Now the beestings, called in Latine Colostris, is that thick and pungenous milk which is drawne first from the teat after the birth of the young, be it in woman or beast. Also, there is no milk so nutritiuie as that of a woman, whatsoeuer it be: next into which, goats milk is thought to nourish most; whereupon haply arose the fable that Poets fained, who deuised, that *Iupiter* was suckled therewith. Howbeit, letting womans milke aside, the sweetest of all other is that which the Camels giue: but asses milk is supposed to haue most vertue and efficacie in it. Moreover, this is to be noted, that the bigger bodied beasts be more glad milch, and their milk sooner passeth away through the belly, and is easier digested than that of the smaller kind. Goats milke agreeth best with the stomack; the reason is this, because they broue rather than graze: but cow milke is held to be more aromaticall and medicinable; howbeit ewes milke is the pleasantest, & yeldeth more nourishment; notwithstanding it be not so wholesome, for that it is more fatty and grosse than any other. And generally, the milke which any beast giueth in the Spring, is more watrish & fuller of whey than in summer time: like as the milke of any young thing is thinner than other. But simply the best milke is that held to be, which sticketh to ones naile and will not run off. Milk is least offensive and hurtfull when it is foddren, especially with little grauell stones among. Cow milke of all other is thought meetest for to make the body soluble. But what milke soeuer it be, lesse venousities it ingendreth boiled than raw. In sum, this property hath milke in general, To heal all inward vicerations, but chiefly of the kidneys, bladder, guts, throat, & lungs: applied outwardly, after a spare diet or abstinence from meat, it cureth the itch of the skin; & any wheals & breakings forth occasioned by phlegmatick humors. As for the diet drink made of cow milke (which they vse in Arcadia for the phthisick or consumption of the lungs, for those that be giuen to colligations and to weare away, as also in case of milking when the habit of the body receiveth no benefit by food) I haue written already in my treatise of herbs. We shall find vpon record in the Chronicles, diuers who by drinking asses milke, haue bin deliuered from the gout & wel of hands as feet. The Greek Physitians, besides the generall kinds of milke, haue made mention of one more, which is artificiall, and they name it *Schiton*: the manner of making it is thus: Take what quantity you will of any milke, but let it be of a goat especially, if you can come by it, feeth the same in a new earthen pan neuer occupied before, with certain branches of fig-tree, such as be fresh and new gathered; but you must put to euery hemine of milke, one cyath of mead or honied wine: while it doth feeth, keepe it from running ouer the vessel, by plunging into it a siluer gobbet or boll full of cold water, and take heed that none thereof doe run out: after it is thoroughly foddren take it from the fire; for when it is cooled, you shall see how the parts therof wil diuide, and the whey depart from the milky substance. Some there be, who take the very whey againe, being now very strong of the mead or Must about layd, and boile the same vntill a third part thereof be consumed, and then let it cooling abroad in the open ayre: The vse hereof is very effectuall and commodious, if for fise daies space together, the Pa-

brimstone it cureth the raggednesse of the nails: it slaieth likewise the haire of the head which is given to shed: also if it be mixed with a fourth part of gall-nuts, it healeth the vlcers in a womans head: but if it be well smoked, it helpeth to preferue the haire of the eie-lids. An ounce weight thereof boyled in one hemine of old wine, vntill there be three ounces and no more of the whole remaining, is giuen (an ounce at once) to those who are in apthysick. Some appoint a little honey to be put thereto. The same together with Quick-lime reduced into a liniment, is singular for the biles and impostumes called Pains, as also for felons and the hard tumors of womens paps: it serueth besides to cure inward ruptures and convulsions, spasmes, crampes, and dislocations. Being applie d with white Ellebore, it healeth corns, agnells, fistules, chaps and callosities. But incorporate with the powder of a salters pot-shard, it heales the swelling impostumes behind the ears, as also the wens called the Kings euil, being ordered in like manner. If the body be well rubbed and annointed therewith in the baine or hot house, it taketh away all itch, red pimples & wheals rising in the skin. Moreover, prepared after another sort, to wit, with old oile together with the stone called by the Greekes Sarcophagus, beaten to powder, adde thereto the herb Cinquefoile stamped in wine either with Quicklime or with ashes, and so reduced into a liniment, it is very good for those that be troubled with the gout. Thereof also is made a singular plaster against inflammations, in this wise, Take of the said greafe the weight of four score and nine pound, of white lisharge of silver one hundred pound weight, mix them both together. As for Bores greafe, if there be a liniment made of it and rosin, it is thought to be excellent good for to annoint therewith vlcers that be corrosive and giuen to spread farther. [In old time men vsed it most about the axletrees of their carts and wagons, annointing them therewith, that the wheels might turn about more easily: wherupon it took the name Axungia.] And being employed in this manner, it serueth for a medicino to cure the vlcers of the feat & priuy members serving to generation, by reason that it is mixed and coloured with the rust of the yron incorporate into it. The ancient Physicians made most account alwaies of the fad hogs greafe, by it selfe, which was plucked from the kidneys, for after it was clenfed from the strings, veins, and skins, they washed it often and rubbed it well in rain water, which done, they sod it in new earthen pots, shifting it out of one into another many times; and being thus tried and clarified, they kept it for their vse. Howbeit, all are agreed, that when it hath taken salt, it is a greater emollitiue, it heateth also, diseueth and resoluech more; yea, & being washed in wine, it is much better than otherwise.

As touching the fat or greafe of a Wolfe, *Maffurim* writeth, that in old time it was esteemed before any other, & had the price above all. And he saith, that new wedded wiues were wont upon their marriage day to annoint the side posts of their husbands houses therewith at their first entrance, to the end that no charms, witchcrafts and forceries might haue power to enter in: thus much of greafe. Look what vertue greafe hath, the same, be sure, is the fuet and tallow endued with which commeth from those beasts that chew cud: and although it may be handled & dressed otherwise, yet in force it is nothing inferior. But what talow soeuer it be, the best way of preparing it, is after the skins or veins be rid away, to wash it first either in sea water or salt brine, and then within a while to stamp it in a mortar, effoons sprinkling it with sea-water: after which it ought to be sodden in many waters, vntill it haue lost all the fauor & rank tast that it had: and then at last by setting it in the Sun continually, it will be reduced to a perfect whitenesse: moreover, this is to be noted, that the best fuet is that which groweth about the kidneys. But say that old tallow is called for, and to be vsed in any cure, it ought first to be melted, and then anon to be well and often washed in fresh cold waters; which done, it must be liquified a second time, casting and pouring thereupon effoons the best odoriferous wine that may be gotten: after which manner they vse to seeth it again and again, and neuer give ouer, vntill the rank smell and sent thereof be clean gone: and verily many are of opinion, that particularly the fat of Bulls, Lions, Panthers, and Cammels ought thus to be ordered and prepared. As for the vses & properties of these Pomonades, I will treat thereof in conuenient place.

Concerning marrow, it is a thing common to all creatures, like as the fat above said. All the kinds thereof are emollitiue and incarnatiue: they dry also & heat the body. The best marrow simply is that of Deere, as well red as fallow: next to it in goodnesse is calues marrow: and then in a third rank follow kids and goats marrow. Prepared they ought to be and dressed, before Autumn, when they be new and fresh washed, and dried in the shadow. But afterwards they be

* Poliey come from beasts of hot nature: or otherwise they be temperat.

A be melted again and run through a finer secer or pressed through linnen strainers, which done, they should be put in earthen pots, and set in a cold place.

But of all those things which are generally to be found in euery living creature, the gall is that which is of greatest efficacy in operation: for power it hath naturally to heat, bite, cut, draw, diseuise and resolu. The gall of smaller beasts is taken to be more subtil and penetratiue than that of the greater, and therefore supposed to be the better for to go into eie-falues. Bulls gall is thought to haue a speciall faculty above all others, principally in setting a golden colour vpon skins, & brasse. What gall soeuer it be, in the preparation thereof for any vse, regard must be had, that it be taken fresh and new, and then the orifice of the burse or bag wherein it is contained, ought to be tied fast with a good round pack thread; thus being bound vp close, it must be cast into boiling water, and there remain halfe an hour, within a while after, so soon as it is dried (out of the Sun) it ought to be preferred and kept in honey. The gal of horses only is utterly condemned, & reputed as a very poison: which is the cause that the arch-Flamin or principall sacrificer is forbidden by law exprefly to touch an horse, notwithstanding that in Rome it is an ordinary thing to sacrifice euen horses publicly: and not their gall alone but also their blood, is corrosiue by nature, and putrida diu. The blood of Mares milke likewise, vnlesse they be fuch as were neuer couered nor bare soles, doth corrode: in which respect it is good to eat away scurfe about the brims of sores and vlcers: and verily * Bulls blood fresh running out of the body, is resiste of the goddesse * *Ops*, at what time as she is to prophesie and foretel things to come, vntill by drinking bulls blood to prepare her self before she goeth down into the vault or shrouds out of which the deliuereth her prophesies: so forcible is that sympathy, wherof we speak so much, or els by the nature of some place. *Drusus* somtimes a Tribune of the commons in Rome, drank (as it is reported) Goats blood, to make himselfe look pale & * wan in the face, at what time as he meant to charge *Q. Capio* his enemy with giuing him poison. And verily, the blood of a buck goat is so strong, that there is not any thing in the world will either sharpen the edge of any yron tools sooner, or harden the same when it is keen, than it. And as for the ruggednes of any blade, it will take it away more effectually and polish it better than the very file. Considering then this diuersity which is seen in the blood of beasts, I cannot write thereof in such generall termes as of a thing indifferently common to euery one of them, but I must be forced to speak particularly of their severall effects. In which regard I will treat respectiue of beasts, according as they do yeeld remedies against this or that malady: and first as touching those which are aduerser vnto Serpents.

To begin then with Stags and Hinds: no man there is so ignorant but he knoweth, that they plague serpents to the very death, for they pluck them forth of their holes, and eat them when they haue don. And not only whiles they be alive do they war against serpents with the breath of their nostrills, but also when they be dead, euery member and piece of their body is contrary vnto them. Burne a piece of an Harts horne, you shall see how the smoke and smell thereof will chase away serpents, as I haue obserued heretofore: & yet they say that the perfume of the bones which are about the throat of a Stag, hath a contrary property, to gather them together. Let a man lay vnder him Stags skins in stead of a mattrace, he shall sleep securely, without any feare that serpents will approach to do him harm. The rennet in their maw, or the rede it selfe, if it be drunk with vineger, is a soueraigne antidot against their venomous sting and look what day one do but handle it, he shall be sure and safe from any danger by them. The generois of a Stagge kept vntill they be dry, like as the pizzelle also made into powder and taken in wine, is a singular counterpoison, resisting the venom of Serpents. Euen as the rim of the paunch, which is called in Latine Centipellio. Whosoever haue about them so much as the tooth of an Hart, or be annointed with the marrow or fuet of a Stag, Buck, or Hind-calf, need not to feare any serpents, for they will flee from them. But above all remedies, there is none like to the rennet of a Fawne or Hind-calf, such a one especially as was ripped out of the dams belly, as I haue shewed heretofore. If together with Deeres blood there be burned the herbe Dragon, balfard Mariaram, or Orchanet, in a fire made with Lentisk wood, Serpents (by report) will gather round together into an heap: take away the same blood and put into the fire the root of * *Pyrethrum*, they will scatter asunder againe.

* *Theriacalis* ther with poisoned himselfe, & killed as he Terra the earth.

Invidius, for Lions.

* Politary of Spaine.

I read in Greek writers of a certain beast lesse than a Stag, but like in haire, called Ophion, G which folk say is wont to be found only in the Isle Sardinia: but I suppose that the race of them is vterly extinct and gone. Wherefore I will forbear to write of the medicinable properties reported by that beast.

CHAP. X.

¶ *The medicines (against Serpents) found in the wild Bore, in Goats, and wild horses. Also of other remedies which diuers beasts do yield against all diseases.*

THe brains of a wild Bore is highly commended against the sting and venome of serpents. H So is the blood likewise. Semblably, is the liuer kept and preserved long with Rue, if the same be drunk in wine. Inlike maner the fat of the wild bore incorporat with hony & rosin. Also the liuer of a tame bore being clesed from the filaments and strings therein, taken to the weight of foure oboli, or the very brains drunke in wine.

If a man burn the horn or haire of goats, the fume thereof driueth away serpents, as it is commonly said: and the ashes that come thereof either drunke inwardly or applied in a liniment without, are of great force against their stings. Moreover, a draught of Goats milke taken with the grape of the vine Taminia, or of their vrine drunk with squillitike vineger. Furthermore, it is said, that cheefe made of Goats milke together with Origan vied in a cataplasme, or their talow incorporat with wax, worketh the like effect. A thousand medicines besides are reported to low incorporat from this beast, as shall hereafter appeare: whereat for mine own part I much maruel, considering, it is commonly said that he is neuer out of a fever. The wilde of this kinde do afford medicines more effectuell than the tame, and those as I haue said multiple exceedingly. I As for the Bucks or male Goats, they haue medicinable properties apart by themselves. And Democritus saith, That the Buck which the dam bare alone, is of greater efficacy than any other: who affirmeth moreover, that it is very good to anoint the place stung with serpents, with Goats dung sodden in vineger: also with the ashes of the said dung fresh made, and tempered with wine into a liniment. In sum, as many as hardly are cured of serpents stings, recover thereof passing wel, if they ordinarily haunt Goat-pens and stals where they be kept. But such as would haue a more speedy & assured cure, take the panch cut out of a Goat newly killed, together with K the dung found therein, & presently bind the same fast to the place affected, so soone as they be stung. Others perfume the flesh newly hurt, with kids hair burnt: & with the same smoke chase away serpents: they vse also to apply their skin newly flayed, to the wound: like as the flesh and dung of a horse that lieth out and feedeth abroad in the field: the rennet likewise of an Hare in vineger against the prick of a scorpion and the venomous tooth of an hardi threw. Moreover, it is said, that as many as rub and anoint their bodies with hares rennet, need not feare their stinging. If any be hurt by a scorpion, Goats dung helpeth them; but the better, if it be boyled in vineger: and in case one be poisoned with swallowing down those venomous flies called Buprestes, he shall find great help by eating lard and drinking the broth or decoction thereof. Furthermore, if a man round an asse in the eare, and say closely, That he is wounded by a scorpion, L the pain and grievance thereof will immediately passe away: yea and any venomous thing whatsoever, will flee from the fume of his lungs as it burneth: also it is good for those who are stung by scorpions, to be perfumed with the smoke of calues dung. If a man be wounded by the biting of a mad dog, some there be who cut round about the place to the very quick, laying there to the raw flesh of a calfe, and then giue the patient to drink the broth of the said flesh boyled, or els hogs greafe stamped with quick-lime. Others highly praise the liuer of a buck Goat, affirming that if it be once applied, he shall not fall into that symptome of hydrophobie or fearing water, incident to those that be bitten with a mad dog. They commend also a liniment made of goats dung and wine or hony tempered together: like as the decoction of a grey or badger. of a cuckow and a swallow, taken in drink. For the biting of other beasts, it is an ordinary practise M to lay vnto the sore, dry cheefe made of goats milke, together with origan, but they giue direction to drink the same in some conuenient liquor: in case one be bitten by a mans tooth, they prescribe bouffe sodden and applied, howbeit the flesh of a calf is more effectuell, with this charge, that this cataplasme be not removed before the fift day. It is a common saying, that the muffle or snout

A snout of a Wolfe kept long dried, is a countercharm against all witchcraft and sorcery; which is the reason that they vually set it vpon gates of country farms. The same force the very skin is thought to haue which is flayed whole of it self, without any flesh, from the nape of the neck. Aud in truth,ouer and aboue the properties which I haue reported already of this beast, of such power and vertue it is, that if horses chance to tread in the tracks of a Wolfe, their feet will be immediately benumbed and stoned. Also their lard is a remedy for those who are empoisoned by drinking quick-silver. Asses milke if it be drunke, doth dull and mortifie the force of any poison, but more particularly, if any haue taken Henbane, the vitiuous gum of the herb Chamæleon, Hemlock, the sea-Hare, the iuice of Carpathum, the poison Pharicum, or Dorycnium: also in case that cruddled milke haue done harm to any, for surely it is no better than poison, especially the first beestings, if it quaille and cruddle in the stomacke. To conclude, Asses milke hath many other medicinable properties which we will speake of hereafter. But remember alwaies to vse this milke whiles it is fresh and new drawne out of the vdder, or els not long after, & then it must be warmed: for there is not any milke that sooner loseth the vertue. Moreover, the bones of an Asse well broken, bruised, and sodden, are giuen for a counterpoison against the venome of the sea-Hare. And for all these purposes before said, the milke and bones of the wild Asses be thought more effectuell.

As touching wild horses, the Greeks haue written nothing, because throughout all Greece there are none of them to be scene. Howbeit, whatsoeuer medicinable vertues be attributed to horses, the same we must think more forcible in the wild than in others. Neither had the Greeks C any experience of those Neat or Buffles called Vri and Bisontes: & yet the forest of India be full of wild buls & kine. Now by good reason and proportion, we are to think, that whatsoeuer cometh from them, is more auailable in Physicke, than from the tame of that kind. And verily, Cow milke is said to be a generall counterpoison, able to kill any of those venoms abouenamed. Ouer and besides, if the dangerous Lilly called Ephemerum Colchicum, be taken inwardly and setled in the stomack, or if the Greene flies Cantharides haue bin giuen in drink, the said milke will send up all againe by vomit. And as for the Cantharides, the broth of Goats flesh will doe the like. Against those corrosiue poisons which kill by exulceration, the talow of a calfe or any Butyr made of Cows milke, is a singular remedy, if it be taken with vineger, heat with a gad of Steele. The same alone without any other thing is a good counterpoison, for if oile be wanting, butter may serue the turn as well. Being ioined with hony, it healeth the sores occasioned by the biting of the Porcelers called Multipedæ. The broth made of their tripes, if it be drunke, is thought to kill any poison abouenamed: and besides, the Aconite and Hemlock: so doth the suet of a Calfe. Greene cheefe made of Goats milke, is good for them that haue drunk the venomous viscositie issuing out of the herb Chamæleon, called Ixias: but their milke is a remedy against the flies Cantharides and the venomous hearbe Ephemerum, if it bee drunke with the grape Taminia. Goats blood sodden together with the marrow, is taken against the poisons called Toxica: and kids blood against the rest. The rennet found in the maw of a kid, hath a peculiar vertue to mortifie the venom of the foresaid viscus gum Ixia, as also of the herb it self, Chamæleon the white, yea, and Buls blood: for which the rennet of an Hare with vineger, is a singular defense. Against the venomous Raie or Puffen called Pastinaca Marina: the prick or sting also of any sea-fish, the said rendles of an Hare, Kid, or Lamb, is a singular antidot, taken to the weight of one dram in wine. As for the rennet of an Hare, it is one of the ordinary ingredients that go to the composition of all preseruatiues and counterpoisons.

There is a kind of Butterflie that vseth to fly about candles as they are burning, which is reckoned among poisons. The aduerfatiue remedy against it, is a Goats liuer: like as their gal is soueraigne against any venomous drinckes made of the rusticke weazill.

CHAP. XI.

¶ *Receipts and remedies for many kinds of maladies taken from sundry beasts.*

But now will I returne to the remedies appropriate to diseases respectiue to the particular members of the body: and first to begin at the head: Bears greafe mixed with Ladanum, and that kind of Maidenhaire which is called Adiantum, retaineth the haire of the head which

is giuen to fall off also the places that be already bare, it replenisheth again with new haire: the same being incorporat with the singous excrecence growing about the candle-snuffe, as also with the foot found sticking to the sockets of lamps and candlestickes, causeth the haire of the cie-lids to come thick. Mixed with wine, it is good against the skurle and dandruffe among the hairs: for which purpose serueth the ashes of Harts-horn burnt and applied with wine: the same also preferueth the haire from breeding lice and mits. Likewise, Goats gall mixed with Fullers *earth and vinegar, if the head be washed withall, so as the hairs may dry againe by little & little. Semblably, the gall of *Buck-goats tempered with Buls fat, killeth lice: now if the sayd gall be old, adde thereto brimstone, and it scoureth besides the dandruffe. It is thought, that the ashes of an asse pizzle will make the haire to grow thick, and preserue them from being grey, if the place be first shauen and well rubbed therewith, or anointed with the liniment made of it: the place be first shauen and well rubbed therewith. Likewise, the vrin of a yong Asse sole is supposed and oile, punned together in a leaden mortar. Likewise, the vrin of this washing lie, to redifie to thicken the haire: but there would be mixed some Spiknard with this washing lie, to redifie the strong sent of the said vrin. Buls gall mixed with *Egyptian Allum, serueth for a liniment to make the haire come againe, if the bald place be anointed therewith warm. As for the running skals of the head, there is not a better thing to cure them than Buls vrine: so doth stale chamber lie, if there be put to it Sowbread and brimstone: howbeit, Calues gall is of greater efficacy in this case, which if it be mingled with vinegar, and the head rubbed therewith hot, reddeth nits also. Calues suet stamped with salt and reduced into a liniment, is singular good for the sores in the head. In these cases great account is made of Fox greafe, but especially of their gall and dung, tempered with an equall portion of Seny and y brought into an ointment. Take the powder or ashes of Goats horn, but principally of the Bucke, put thereto sal-nitre and the seed of Tamarisk: incorporate all with butter and oile into an vnguent. It is wonderfull effectually in keeping haire from shedding, so that the head be first shauen. Semblably, the ashes of a dogge burnt & made into a liniment with oile, causeth the haire of the cie-brows to look black: goats milk by report taketh away nits. An ointment made with their dung & hony together, causeth the hair to grow thick, in places depoulted thereof by occasion of some dificates. Likewise if the ashes of their house incorporat with pitch, keep the haire on which is about to shed.

As touching the pain of the head, the ashes of an Hare burnt, mixed with oile of Myrtles, alway the same: so doth the blown water which is left in the trough after that a boeuf or Asse hath done drinking, if the patient take a draught of it: and if we may beleeue it, the genital member of a he-Fox, worn about the head in manner of a wreath, cureth the head-ache. The ashes of a Harts horn brought into a liniment with vinegar, oile of rose or oile of Ircos, hath the like effect. For watering eyes there is a singular ointment made of boeuf tallow boiled together with oile. And the ashes of Harts horn serueth by way of iniunction to cure their asperity and roughness: for which purpose the very tip and points of the knags are thought more effectually. The excrements or dung of a Wolfe are good to anoint the eyes for the catara. The same reduced to ashes and made into a liniment with the best Atick honey, is singular for those whose sight is dim and troubled, so that the eyes be anointed therewith in which case, Beares gall is excellent. The greafe of a wild Boe incorporat with oile of rose, is singular good for the bloody fals or chilblanes called Epinytides.

The ashes of an Affes house mixed with Affes milke, taketh away the cicatrices of the eyes, together with the films and pearls that trouble the sight, if they be anointed therewith. The marrow of a Beece taken forth of the right leg before punned with foot, and so incorporat together in manner of a liniment, redifieth the disordered hairs, and other accidents of the eye-lids and corners of the eyes: but for to haue an excellent foot, proper to make a salve for to beautifie the eyes, it ought to be gathered from a wicke or snuffe made of Papyr reed, and burning with Sesame oile, in such sort as the same may be wiped away with a wing into a new earthen pot that neuer was used: verily, this is a souveraine foot to hinder the growth again of haire after they be once plucked vp from the cie-browes. Of an Oxe gall tempered with the white of an egge, are made eye-lalues reduced into rolles, which being dissolved in water, serue to anoint the eyes for foure daies together. Calues suet with Goose greafe and the iuce of Basil, is singular for all the accidents whereto the eye-lids be subiect. The marrow of a Calfe, incorporate with equall weight of wax and common oile or oile of Rose, together with an egge, maketh a souveraine liniment for the Scian or any other hard swellings in the eye-lids. The violent rheums that

A that fall into the eyes, are repuffed and alliaied with a cataplasm of tender cheefe made of goats milke soked in hot water, and so laid too: and if there be any tumor or swelling risen by occasion of such a flux, it would be applied with hony: and both of them, as well with swelling as with-out, ought to be fomented with warme whey. But say the eyes be inflamed and bleered onely, without any * extraordinary moisture appearing in them, the little muscles lying within the joins of a swine, roasted and afterwards punned to a cataplasm, and so applied, do quite rid away the same bleeredness. It is commonly said, that goats be neuer troubled with bleered eyes, nor yet roe-bucks or does, by reason of certain herbs which they feed vpon: and for that their sight is as good by night as day, therefore certain pills be ordained for the infirmities of the eyes, made of their dung, wrapped within wax, for to be swallowed at the change of the Moone. Many B there be who are of opinion, that such be dim-sighted and see little or nothing toward night (whom the Greeks call * Nyctalopes) are cured with goats blood, especially the male: also with the liuer of a goat foddren in some austere or hard wine. Some giue direction, to anoint the eyes all ouer with the graue or dripping of the said liuer roasted, or else with the gall of a goat, and to feed of the said flesh, with this regard, That whilst the same is a seething, the eyes may receiue the vapor and steem thereof. And of this opinion they be, that the said medicine will do the better, if the goat be of a bright ruddy colour. Moreover, they would haue the eyes of the patient to be fomented with the vapor and fume that riseth from the decoction of the liuer whilst it boileth: but others there be, that prescribe to take the smoke thereof as it riseth or drieth. As for goats gall, there be that vse it many waies prepared; some with hony, against the fumosities that trouble and dim the eye-sight: others, with a third part of white Ellebore, for the pin and web: others againe with wine, against cicatrices, pearles, obscurity of sight, filmes and spots. But for the cie-lids, after the haire which pricked and offended the cie is pulled out, they apply it with the iuce of Beets, suffering the said liniment to dry vpon the cie-lids. If any tunicles of the cie be broken, they take womans milke to apply vnto it. In sum, for all infirmities of the eyes whatsoever, they hold a goats gall which is old and hath bin long kept, to be more souveraine and effectually in operation than any other. Neither doe they reiect the dung of this beast, but repute a liniment made of it and honey, to be as good for waterie eyes, as the marrow for the paine thereof: likewise the lungs of an hare. And verily the gall of an hare (as it is commonly reported) incorporat with eite or honey, and so applied, helpeth those that be dim-sighted. Furthermore they ordaine, to rub and anoint the eyes against their inflammation and bleeredness, either with woollens greace, or else with swines marrow. And no manuell, for they say, That whosoever vse to carry about them in a bracelet a foxes tongue, shall neuer be troubled with foreeyes.

For the pain & infirmities incident to the ears, there is not a better nor more excellent thing than the vrin of a wild boe (sued and kept in a glasse) the gall likewise of a wild boe or sow, as also of a boeuf, mixt with Cicinie oile and oile of Rose, in equall quantity, is a singular remedy: but especially buls gall, dropped into the ears warm with the iuce of Porrete, or else with hony, in case they be impositumated within and run with water. The same alone by it self warmed in the rind of a pomegranate, is excellent to take away the ranke and strong sauour of the eares: and if any part within be broken, the said gall intilled with womans milke, healeth it effectually. Some there be, who ordaine the eares to be well washed with it so prepared, for to remedy the difficulty and hardness of hearing: others vse to put into the eares wooll, washed before in hot water, and inclose therewith a peece of a serpens slough, with vinegar: but if the deafenesse be the greater, they infuse the said gall into the eares, tempered with Myrrhe and Rue, and so made hot all together in the pillow of a Pomegranate. Fat lard also is good for this purpose: and the greene dung of an Asse intilled with oile of Rose, provided alwaies, that all these medicines be warme when they be dropped into the eares. But the some that a horse doth froth, is better than all these: or the ashes of horse dung fresh made and burned, mixed with oile of Roses. In this case likewise are commended boeuf suet, goose greafe, and fresh butter. The vrin of a Goat F or bull, yea and stale chamber-lie which fullers vse, made hot, and the vapour thereof receiued into the eare, at the narrow mouth or necke of a bottle, cureth the deafenesse thereof. Some put thereto a third part of vinegar, and a quantitie of the pisse of a calf which is yet a suckling and neuer tasted grasse: yea and others there be, which put thereto the dung mixed with the gall of the said calf. The skin or slough also which Inakes cast off, is very good to be applied vnto the

* Nyctalopes, are they also called, who see better in the night than by day: according as the word importeth.

* Creta Similia
* Harts urine
* Smeuride
* Cy-fumy
* Swines gall

ears, but they ought to be well chaufed and set into an heat before. Now are these medicines to be inclosed within wool, and so applied. Moreouer, calues tallow, with Goose greafe and the juice of Basil, is good for the hearing; also calues marrow incorporat together with the powder of cumin, and so powdered into the ears. The slimy sperme of a bore which passeth from the shap of a sow after she is brimmed, if it may be gotten before it touch the ground, is singular for the paine of the ears. If the ears be crackt and hang flagging down, there is nothing better than glue made of calues pizles, if the same be dissolved in water. For other impediments of the ears, the fat of foxes is very good. In like manner, Goats gall, with oil of Roes warme, or the juice of leeks: or if there be any rupture within the ears, the said gall must be applied with breft-milke. For those who be hard of hearing, or haue their eares running and suppurate within, it is not amisse to drop into them a beasts gall, with the vrine of a free-goat or of the male, it makes no matter. But these medicines howsoever they are to be used, are thought to be more effectuall by far, in case they were put into a goats milke, and so hung in the smoke for the space of 20. dayes together. Also there is great commendation of the rennet of an hare, if there be one third part of a Roman denarius thereof, and halfe a denare weight of gum Sagapene, conporat in Aminean wine. As for the swelling impostumes behind the ears, bears greafe represseth and keepeth them down, if there be a cerot made thereof, together with the equall weight of wax and bulls tallow: some there be who put Hypocistis thereto: and butter alone is good to anoint them with, so that they were fomented before with the decoction of Fenigreeke. Howbeit, of much better operation it would be, in case Nightshade were added thereto. The stones of a fox, bulls blood also dried and reduced to powder, be commended in this case. Moreover, the vrin of a she goat made warm, and so dropped into the ears: the dung likewise brought into a liniment with hogs greafe is very good.

To come now to the infirmities of the teeth: if they be loose and shake in their sockets, the ashes of harts horn will settle them firme and fast again: if they ake, the same ashes are verie good to ease the paine, whether the teeth be rubbed or washed therewith. But some are of opinion, that the powder of the said harts horn burnt at all, is far better than the ashes in these cases: howbeit, there be dentifrices made both of the powder and also of the ashes. Moreouer, the ashes of a wolues head is thought to be a souveraine remedy for the pains incident to the teeth. Now it is well knowne, that among the excrements of a wolfe, there be many times bones found, which if they be hanged about the necke, arme, or other parts of the body, haue the same effect. Likewise the crudled rendles of an hare infused into the eare, are singular for the tooth-ache: the ashes also which come of the head burnt, is a pretty dentifrice for to rub the teeth withall: but if you put Nard thereto, it doth correct and palliat a stinking breath. But some there be, who chuse rather to mingle therewith, the ashes of mice and rats heads. There is found in the side of a hares head a certaine * sharpe bone like vnto a needle, herewith, Physitians giue counsell to scarrifie the teeth and let the gums bleed, for the tooth-ache. Take the bone of a beast, set it on fire, and when it is red hot, hold it close to the teeth that be loose and ake withall, it will set them fast againe: the same being reduced into ashes, and tempered with myrrhe, is a proper dentifrice to blanch the teeth. The bonie substance likewise of hogs cleyes burnt and calcined, is of the same force and operation: also the hollow hertchill or whirlebones of their hips, about which their hucklebones turne, worke the like effect if they be brought into ashes. Well knowne it is, that if the same be conueighed downe by a horse into the throat of horses and such like beasts, they will cure the wringing torments of the botts that fret and gnaw them in the bellies: and being burnt, they are singular good to confirme and fasten the teeth that be loose and doe shake. Also if the teeth be payned by occasion of some blow giuen vnto them, Asses milke helpeth them: so do the teeth of the said beast, if they be calcined and reduced into ashes: this infirmity is helped also with the rough wert or corne of an horse if it be infused into the eares with oile: this bunch is called by the Greekes Lichen: and it is not that which is named Hippomanes, whereof I haue no purpose to speake (considering it is a hurtful and venomous thing) but a certaine excrecence growing about Horses knees, and about their houses. Moreouer, in the heart of an Horse there is found a bone, like for all the world to the eye-teeth of a dogge: this they hold to be a very souveraine thing for to scarrifie the teeth when they ake. Also if one take a tooth out of one of the chawles of a dead horse, it will ease his owne that ake. so it be correspondent in place and number to that which is in paine. The sperme that passeth from

A from the mature of a mare after she hath beene couered by a Stallion, if the wicke of a candle or lamp be therewith belemared and set a burning, doth represent a most strange and monstrous sight of horse heads, as *Anaxilans* hath reported: euen so will that of the free Ass, make a shew and apparition of Asses-heads. As for Hippomanes beforenamed, it is so strong and forcible a venome, especially to incite and stirre vnto lust, that being vpon a time poured into the brassen metall that was cast into the forme and similitude of a mare at Olympia, the stone-horses which came neare vnto the said image, were set into such a heat and so farre enraged, that they could not by any means be held back but they would needs couer the said brassen mare. Moreouer, the glew that Carpenters and Ioyners vse, cureth the tooth-ache, if the same be boyled in water, and the teeth annointed therewith: but the same within a little while after must be removed, and the mouth presently washed with wine, wherein were sodden the pill of sweet pomegranats. Furthermore, if the teeth be ill affected, a collution made with goats milke, or bulls gal, is thought to be a remedy of great efficacy. Finally, the ashes of the ankle bones of a female Goat whiles they be fresh and new, are counted an excellent dentifrice to whiten the teeth: so are the said bones of all other four-footed beasts, reared or nourished about a ferme house, if they be in like manner calcined: which I note but once for all, because I would not repeat one thing so often.

CHAP. XII.

¶ Remedies obserued out of the bodies of beasts, for the accidents that befall the visage, necke, and breast.

It is thought generally, that the skin of the face may be made smooth and without wrinkles, tender and delicate, yea and be kept faire and white, with asses milke: for well knowne it is, that some dainty dames (forsooth) there be, that keepe and maintain daily in ordinary to the number iust of 500. the Asses for this purpose: according to the first example of the Emperesse *Poppaea*, wife to Nero the Emperor, for she vsed commonly to bath in Asses milke, and deuised whole baines to swim therewith: and euer as she rode in progresse, or remoued from place to place, she had her curie of the Asses in her traine attending vpon her for no other intent, but only to wash and bath her body in their milke. As for the pimples and wheales that breake out in the face, if they be annointed with butter, they will weare away and be gone; and the sooner, if Cerusse or Spanish white be tempered therewith: but pure butter alone without any thing else mingled with it, killeth any fretting humors in the face that be corrosiue, if so be that presently after the inunction, barly meale be cast vpon the place. The gleane of a Cow hauing newly calued, taken whiles it is moist and so applied, is good for any vicers of the visage. There is another receipt made for this purpose, which may seeme but a fantastical and foolish thing, howbeit, for to satisfie and please in some sort, our fine dames that are desirous of such deuises, I am content to set downe: They say (forsooth) that the pasterne bones of a young white bulkin or steere, sodden for the space of 40. daies and nights together, vntill such time as they be resoluued into the liquor, if the face be wet with a fine linnen cloth dipped in the said decoction, it causeth the skin to looke cleare and white, and without any riuels or wrinkles; but the said liniment must be kept all night to the face in manner of a maske. Moreouer, they say, that bulls sherne is an excellent complexion forsooth, to set a flesh roset or vermillion colour in the ball of the cheek: and the liniment Crocodile, made of Crocodiles ordure, doth it no better: but then they giue order, that the face be washed with cold water both before and after this dressing. The dung of a calfe tempered and wrought in ones hand with oile & gum, is singular good to take away sun-burning, or any thing whatsoever whereby the colour is decayed and lost. As touching the vicers and chaps appearing in the lips or face, the suet of a Calfe, or beasts tallow, incorporat with Goose greafe and the juice of Basil, maketh a singular pomado to amend and rectifie those defects and imperfections. There is another composition also for this purpose, to wit, calues suet and deeres marrow mixed together, with the leaues of the white Saint Mary thistle, punned all together and reduced into a liniment. The same operation hath any marrow, though it be of a cow, and the broth of cow boue. The tetrars and wild-fires breaking forth about the mouth and nose, there is not the like medicine againe to be found, to kill and extir-

extinguish, than a glw made of a calues genetoirs, dissolved in vinegar with quicke brimstone, G
and mingled together with a fig-tree branch, with this charge, that when it is fresh made, the
place affected be anointed twice a day therewith. This glw boiled in hony and vinegar, is sin-
gular for the leprosie which disease, the liuer also of a calfe applied hot, doth cure: like as goats
gall healeth the foule white leproy called Elephantiasis, but an oxe gall and sal-nitre mixed ther-
gal healeth the foule white leproy appearing in the skin. The vrine of an asse taken about the rising of the Dog-star, clemeth the face from all spots: so doth the gall as well
of an asse as a bull, vied alone by it selfe, after it hath bin well broken and tempered in water, and
of the old skin of the face taken off; but then the patient must forbear to goe abroad either into
the Sun or wind. The like effect hath buls tallow or calues gall, incorporate with the seed of Sa-
uorie and the ashes of an Harts horne, if the same be burnt at the beginning of the Dog-daies. H
Asses greafe is a soueraigne thing to reduce vnto a fresh and natue colour, any skars or places
of the skin blemished with the stooles remaining of ringworme, tettar, and leprosie. The gal of
a bucke goat incorporate with cheele, sulphur vit, and the ashes of a sponge, and brought to the
consistence and thickenesse of honey, taketh away moles and pimples. Some make choise rather
of the old galls which hath been long kept to vse in this case, mingling therewith hor brans to the
weight of one obolus, and four times as much of hony, but first the said spots and specks ought
to be pliged well with chausing and rubbing. The suet of the same Goat, tempered with Gith
or Nigella seed, Brimstone, and Floure-de-lys root, is verie effectuall for this purpose. Sem-
blably it is good for the chaps in the lips, if it be incorporate with Goose greafe, Deeres mar-
row, rosin, and vnenqueth lime. I finde it recorded in some Authors, that they who are giuen to
haue red pimples appearing in their face, are disabled for exercising any sacrifices belonging to
Are Magicks.

If the tonsils, throat, and windpipe, be either inflamed or exulcerat, they finde much ease by
cow milke, or goats milke, so the patient gargarize therewith warme as it cometh new from
the beaſt, or other wise made warme againe afterwards: but goats milke is the better of the twain,
if mallows be foddren therein, and a little salt. For blisters in the tongue and throat, the broth
made of tripes is very good to be gargarized: and more particularly, for the inflammations and
fores incident to the tonsils or almonds of the throat, the kidnies of a fox dried are singular, if
they be beaten into powder and reduced into a liniment with honey. The gall of a bull or goat
mixed with hony, serueth right well for the squinancy. The liuer of a grey or badger tempered
with water and made in manner of a colliution, redifieth a strong and stinking breath: the can-
kers also and sores in the mouth, are healed with butyr. If a thorne, fish-bone, or any other such
thing stick in the throat, take the dung of a cat, rub & anoint the place wel without-forth, the
fame (by report) will thereupon come vp againe, or passe downward. As for the swelling wens
called the kings euill, either the gall of a bore doth scatter and dispatch; or else of a boeufe, if
the place affected be anointed therewith warme: for hares rendles tempered with wine and put
into a linnen cloth, is good to be applied vnto the same onely when they be fore and run. The
ashes also of the house both of horse and asse, incorporate with oil, water, and hot vrine, into a
liniment, & so applied, doth resolute them before they be broken. Of the same effect is the ashes
of an Oxe or Cowes clec, applied vnto the place with water: as also their dung laid too very hot
with vinegar. In like manner Goats sewet with quicke-lime, or their dung foddren in vinegar
and the genetoirs of a fox. For this purpose, there is much good done with fope: an inunction
deuised by the French for to colour the haire of the head yellow: made it is of tallow and ashes:
the best of all other is that which they make of Beech-wood ashes and Goats suet; and the
same after two manner of waies; either thicke and hard, or else liquid and soft: but the one as
well as the other is verie much vsed in Germanie, and a great deale more indeed by men than
women.

The crickes and pains in the neck, are much assuaged by rubbing the nape of the necke with
butter or beares greafe: if the same be stark and stiffe, there is nothing in the world better said. The
beasts tallow, the which, together with oil, is very good for the kings euill before said. The
painfull *cramp that draweth a man back, so as he cannot bow his head forward (which conuul-
sion the Greeks name Opisthoronos) is much eased by insinuing into the eares the vrine of a
goat, or with a liniment made with their dung and bulbe roots.

If the nailes be bruised, it is passing good to tie about them the gal of any beaſt whatsoeuer.

A As for the risings and fore excreſcences about their roots, buls gall dissolved in hot water, and
so applied, easeth that grievance: some there be who put thereto brimstone and alumne, of each
a like weight.

Moreouer, it is said, that a wolues liuer taken in a draught of wine warme, cureth the cough:
also a bears gall mingled with hony: or the ashes made of the vppermost tips of a beaſts horne:
likewise the froth or slauer of an horse mouth: and some say, that be the cough neuer so bad, it
will make an end thereof in three daies drinking. Semblably, the lights of a stag, together with
the throat dried in the smoke, and afterwards puluerized and brought into a loch or liquid ele-
ctuary, is good for the cough, to be taken ordinarily every day: and for this purpose, the lungs
of the spitter in this kind of red deere, is thought to be more effectual. In case a man spit blood,

B the ashes of Harts is much commended: and the rendles of an hares maw taken in drinke to the
weight of a third part of a denier, with Terra Samia and Myrtle wine, cureth it perfectly. The
ashes likewise of Hares dung drunk in wine late in an euening, staeth the cough which is busie
in the night season: also a perfume made with the hair of an hare, dischargeth the lungs of those
tough and viscous humors which stick vnto them, and are not otherwise easily remoued. The
purulent vleys in breast and lungs, remaining after a pleurisie or peripneumony: the strong and
stinking breath also proceeding from the lights, are cured most effectually with an electuarie
made of butter, boiled with a like quantity of Attick hony, vntill it look reddish: if the patient
take thereof every morning the measure of one ligula or spoonfull: some in stead of hony, chuse
rather to put thereto the * rosin of the Larch tree. If one do reach or cast vp blood, it is said, that
cows blood, taken moderately and with vinegar, is of great force and efficacy to stay the same:
but to think that this is meant of buls blood, were great folly and rashnesse. Howbeit the strong
glw that is made of a buls skin, taken to the weight of three oboli in warm water, is soueraigne
for an old infirmity of reaching and fetching blood vpward.

* Which is
ou. Turpe-
tine.

CHAP. XIII.

¶ Receipts for the paine of stomacke and loines: also for the infir-
mities of the reins.

D IF there be an vlcer growne in the stomacke, drinke the milke of an Asse or Cow, and it will
heale it. Stew a peece of boeufe in wine and vinegar among, the broth thereof is singular for
the gnawing and fretting in the stomacke: the ashes of an Harts horne is verie good to drie
vrhumes and catarrhes, that haue taken a course thither. As for those that cast vp blood, the
fresh blood of a Kid taken to the quantity of three cyaths, with the like proportion of sharpe
vinegar, and so drunke as hot as may be: the rendles also of the said Kid drunke with vinegar, so
as there be two third parts of the vinegar to one of the rendles, is a singular remedy for the said
infirmities.

For the griefe of the liuer, caused by obstructions, the liuer of a wolfe dried and taken in hony-
ed wine, is a proper receipt. So is the liuer of an Asse being dried and brought into powder with
two parts of stone parley, and so incorporate with three nut kernels and hony, which composi-
tion, the patient must vse to eat. In which case, goats blood is highly commended, if it be prepa-
red so as it may be taken with meat.

Moreouer, it is said, that for them who be short winded, there is nothing so good as to drinke
the blood of wild horses. In the next place to it, great account is made of Asses milke warme: or
foddren together with bulbe roots, so that the patient drinke the whey that cometh therof,
putting to three hemines of the blood one cyath of white garden cresses, infused first in water,
and then tempered with hony. The liuer also or lungs of a lox, taken in some grosse wine like
Alegant: or a bears gall in water, doth open the wind-pipes stuffed with fleame, and giueth free
liberty for the wind to go and come.

Furthermore, Beares greafe is exceeding good for the paines in the reins of the backe, yea and
for any place els that hath need of emolliuities, in case it be wel rubbed therewith. Also in these
cases, it is thought meet, to take the ashes either of a bores or fowes dung which hath bin long
made, and therewith to spice a cup of wine.

But before I proceed any farther, it is to be noted, that Magicians also haue medled with this
part of Physicke, and haue deuised strange medicines, drawne from the parts and members of

applied vnto the place with wooll. As touching the galls, which by ouermuch riding on horseback be incident to the twist and the inner parts of the thigh, as euery man knoweth full well, which do burne and chaufe the skin in those parts; the fomie slime which a horse yeeldeth, as well from his mouth as his cullions, is foueraigne therefore, if the place be annointed therewith. It falleth on many times that there arise swellings in the very thare and groine, by occasion of some fores or vicers in other parts of the body; for the repelling of which, there is a present remedy, namely, to take three horse hairs, and to tie them in as many knots, and so conuey them into the said vicer which is the cause of such tumors.

CHAP. XVI.

¶ Proper remedies for the gout: for such as be taken or stricken with a Plaine or dead palse: for the Landaise, and fractures of bones.

A Cerot made of Beares greafe, Bulls tallow, and wax, of each an equall quantity, is singular good for the gout in the feet. And yet some there be who adde vnto them Hypoquissits and gall nuts. Others preferre a male Goats tallow, together with the dung of a female goat, Saffron, or Mustard seed, and the branches of Yvie stamped with Parietary oil of the wall, or els the floures of the wilde Cucumber, reduced all into the forme of a cataplasme and so applied. In like manner, others vse a pulstesse made of beatts dung & the mother of vineger tempered together. Some magnifie & highly commend in this case the dung of a calfe, which hath not as yet tasted of grasse, or Bulls blood alone without any other thing; likewise a wolfe foddin quicke till all the flesh be gon and nothing but bones remaining; or els a lue Wolfe foddin in oil til the said oile be gellied to the height or consistence of a cerot. Semblably, there is good account made of the tallow of a bee goat, with as much Parietary of the wall, and a third part of Senyvas also of the ashes of Goats dung incorporat with hogs greafe: moreouer, it is said, that the best thing that the patient can do for to haue ease of the Sciatica, is to endure the said dung as hot as possibly he can, vnder his great toes, till it be ready to burne them. For all other joint-gouts as well in feet as hands or elsewhere, the gall of a Beare is a foueraigne medicine: as also a Hares foot bound fast to the place affected. And some are of this opinion, that the gout of the feet will be assuaged, in case a man cut off the foot of a quick hare, & carrie it about him continually. As touching kibes, beares greafe cureth them: so it healeth also the chaps in the feet: but more effectual it is, in case there be allum put thereto: for which purpose Goats suet is commended: the powder also of horse teeth: the gall of a bore or sow: the lights likewise of a swine, together with the fat laid to the place. Now if the feet be furbatted, galled, and bruised in the sole by treading or stumbling against that which offendeth them, the same medicines be very good: but say they are benumbed and frozen with cold, the ashes of Hares haire bringeth them into order again. The lungs also of an Hare slit and skiced & so laid too, is good for any bruise or contusion in the feet; or the ashes of the said lungs applied thereto. Contrariwise, if they be scorched and burnt with the heat of the sun, they find a most foueraigne cure by the greafe of an ass: likewise by beaue tallow & oile of roses mixed together. The corns, agnells, chaps, & callosities of the feet, the fresh dung of a bore or sow doth heal, if it be applied thereto in form of a cataplasme, and not removed before the third day. Of like efficacy are the ashes of a swines ankle bones, the lungs of a bore or sow, or of a flag. If one haue galled his feet by the frotting & rubbomnes of hard shoes, the vrin of an ass together with the mire that is made of the same vrin vpon the ground, doth heal if it be applied to the place: the corns or agnells find much ease by beaue suet & the powder of frankincense reduced into a liniment. But kibed heels are best healed with the ashes of leather burnt, especially if it were an old shoe. Again, if the feet haue bin wronged by strait shoes, take the ashes of a goats skin tempered with oile. As for the painful swelled veins, named in Latin Varices, there is a foueraign cataplasme to assuage their griefe, made with the ashes of calues dung boiled with lilly roots, & a little hony put thereto: the same is singular for al impossuemat inflammations that tend to suppuration. This medicine is good also for the gout in the feet, & for all diseases of the joints, if so be the said dung came from an ox calf. The joints if they haue gotten a sprein by any rash, find remedy by the dung of bore or sow, if it be laid to hot in a linnen cloth. The dung also of a calf that yet sucks & neuer did eat grasse, hath the same effect: & euen as goats dung boild with hony in vineger: the raggednes of nails haue a proper remedy of

A of calues dung, of goats treading likewise, if there be red Arnick or Orpinent mixed therewith. As touching werts, there is not a better thing to take them away than the ashes of Calues dung tempered with vineger, or the durt that is made by the vrin of an Ass.

For thole that be subiect to the falling euill, it is singular good to eat the genetours of a bear, or to drinke the stones of a Bore either out of Mares milk or plain water: also the vrin of a bore mingled with oxymell. But more effectual in operation is that vrin which hath bin suffered to dry as it lieth in the own bladder. The stones likewise of a sow which are taken from her when she is spayed, if they be kept vntill they be dried, and so brought into powder, are excellent in this case taken in the milk of a sow, with this charge, that the patient abstain from wine for certain daies together, both before and after the receiuing of this medicine. For this infirmity also they vse to giue the lungs of a hare powdered or kept in salt, with a third part of frankincense in white wine for 30 daies together. Also the rennet or cruds found in the maw. The braines of an Ass first dried in the smoke * within certain leaues, drunk to the weight of halfe an ounce euery day in honied water; or the ashes of the said beatts house, taken to the quantity of 2 spoonfulls daily for a months space, are appropriat medicines for this malady. In like manner, their stones preferred dry and reduced into powder, serue to spice their drink, whether it be the milk of Asses (which is the best) or there water: the pellicle wherein the yong sole was lapped in the dams womb, specially if it were a male that was soled, is of great force to withstand this disease, if the patient do but smell thereto when the fit is coming. Some giue counsell to eat the heart of a black he ass, together with bread: but in any wife it must be done abroad in the open aire, and when the moon is but one or two days old at the most. Others prescribe to eat the flesh, & there be againe who aduise to drinke their blood dilaid with water for 40 daies together. Some take horse stale, mingling it with smiths water fresh out of the forge for the said purpose: & with the said drink cure those that be lunaticke & mad at certain seasons. Mares milk is ordinarily giuen with good successe to those that be troubled with the falling euill: so are the rugged * werts growing vpon horse legs to be drunk in oxymell. And to this effect the Magitians would haue a dish of meat made with goats flesh roasted against a funeral fire, where some dead corps is burnt: who ordain besides their tallow and bulls gall, of each an equall weight, to be foddin, and then to be put vp again into the bladder or burle of the said gall, that it touch not the ground in any case; and being thus prepared, the patient forsooth must drinke it in water standing vpon the dore fill, and vnder the very lintell thereof. Now, if you would know whether a man be subiect to this sickness or no, do but burn before him either a Goats or Stagges horne, the very smoke or fume thereof will bring the fit vpon him, if he be tainted therewith.

Concerning those that be suddenly taken with a dead palse of the one side of their body, it is said that the vrin of an Ass: sole incorporat with Spikenard into the form of a liniment, is very good for them, if the inunation therewith be vsed.

For the jaundise, Harts horn burnt and reduced into ashes, is a very proper medicine: so is the blood of an ass: sole drunk in wine. Likewise the * dung of an asses sole which came first from it after it was foled, giuen to the quantity of a bean in a draught of wine, cureth the jaundise within three daies. The same operation and effect there is in the first ordure that a colt maketh after it is come into the world.

If any bone be broken or bruised, there is not a more present remedy than the ashes of a cheek either of a wild bore or tame swine. In like maner, their lard foddin & tied round about the broken bone, doth consolida and fonder it again wondrous soon. And verily if there be any ribs in the side broken, the foueraigne and only remedy commended, is goats dung tempered with old wine, for it openeth, draweth, and healeth the fracture thoroughly.

As touching feuers, the feeding vpon the venison of red Deere drieth them all away, as I haue before shewed: but more particularly, if it be any of these Typicke and Periodicall agues, which be intermitent and return by fits, there is not a better thing, if we may beleue Magitians, than to take the right eie of a wolfe, salt it, and so tie it about the necke or hang it fast to any part of the patient. Of these feuers, there is one called a quotidian, which the Greeks name Amphemerinos; & from it (by their saying) a man that be thoroughly rid, in case he let an ass: blood in the eare vein, and drinke three drops thereof iust in 3 hemines of water. But against the Quartan ague, the Magitians giue order to wear about the neck or hanging to the arme cats dung, together with the claw or toe of a * scriche Owle, but so as they may not fall off nor become

* In some
some say, in
the baines or
floures.

* Euen some
take them, for
the Malandres

* Called before
the ass.

* Euen some
moued

more effectually, chuse these excrements of the male ass, mix the same with vinegar, and apply it with wool; for it will stay any flux of blood which occurs: likewise if it be of the haire which is curried from the horsehead or buttock when he is dressed: or els the ashes of calves dung tempered with vinegar, and so applied vnto the place. In like manner the ashes of the goats horn or dung, with vinegar: and yet the blood that issueth out of a buck-goats liuer when it is sliced and cut in sunder, is more effectually: but the ashes of them both, as well the male, as female; be liuer and the blood drunke in wine, or applied vnto the nostrills with vinegar, is of vertue to staunch blood. Moreover, the ashes only of a leather wine bottle made of a male goats skin, mixed with an equal quantity of rosin, doth not only stop an issue of blood, but also conglutinate and heale a wound. Furthermore, the rennet of young kids, with vinegar; the ashes also of their haunches burnt, is thought to haue like operation in stanching of blood. If there be any vlcers vpon the thins or any part of leg & thigh; bears greafe & red oker incorporate together into a salve, doth heale the same: but in case the said sores be corrosiue and eat farther, the gal of a bore with rosin and ceruse, cureth the same: so doth the ashes of a bores or fows cheek: likewise swines dung dried and applied to the grieued places also goats treddles warmed well ouer the fire with vinegar, and laid too accordingly, but for to mundifie and incarnate all other sores, they vse butter; the ashes of a flags horn, or the marrow of red deere; buls gall likewise with the oil of the plant Cypros; or els the dung of a goat, male or feneal it skils not whether. If there be a wound made by sword or edged weapon, there is good means to heale it with the fresh dung of swine, or els the powder thereof being long kept and dried, if the place be dressed therewith. In case there be an vlcere that eateth deep to the very bone, or an hollow fistula, it is good to inieit into it with a syringe, buls gall, with the iuice of leeks or breast milk: or els to dress the same with the powder of his blood dried, incorporate with the herb called Vmbilicus Veneris. Is the same cancerous; the rennet of a leueter with the herb Capers, taken of each a like quantity, & sprinkled with wine doth cure it. If it grow to mortification & proue a gangrene, it is good to anoint the place with bears gall, with a feather. As for corroding vlcers which spread still farther, no better thing to represseth them, than to strew vpon them the ashes of an asses hoofs. The blood of an horse is corrosiue, by vertue whereof it doth eat away and consume the excessence of proud flesh; so doth the cinders of old horse dung burnt as for those kind of fretting cankers which the Greeks call Phagedæne, the ashes of a house hide mingled with hony, doth cure and heale perfectly. The application of raw veale vnto a green wound, keepeth it from swelling, and a cataplasme of beasts dung and hony together, doth the like. But say the vlcers be malignant and filthy morralls, such as the Greeks call Cacoethe, the ashes of a leg of veale incorporate with womans milk, do heale wv cleane. Fresh wounds occasioned by sword or edged weapon, buls glue dissolved or melted, & applied, doth cure very well, so it be not removed vntill the third day. If a sore need to be cleansed, dry cheefe made of goats milk, tempered with vinegar & hony, is a singular mundificatiue. An vlcere giuen to go farther, and to eat as it goeth, is repressed by applying tallow thereto and wax incorporate together: put to it pitch and sulphur, it will heale and skin the same thoroughly. In like manner, for the inward morralls before said, which they call Cacoethe, it is very good to lay a pultus made with the ashes of a kids leg and breast-milke. As for carbuncles, take the brains of a tame sow, roast the same and apply it vnto the sores, is a foueraigne remedy. Touching the scabs that men be subiect vnto, there is not the like medicine for killing the same, to the marrow of an ass: & a liniment made with the vrin of the said beast together with the earth vpon which he hath staled. But yet likewise is very good in that case, as also for the farcins, fullanders, and mallanders in horses, if it be applied thereto with rosin made hot: so is strong buls glue dissolved in vinegar, with quick lime put thereto: also goats gall tempered with the ashes of a lume calcined. For the red blisters and meazils likewise, there is not a better medicine than the dung of a cow or ox, and thereupon they tooke the name of Boxe. The mange in dogs, is healed with beasts blood, so they be bathed therewith while it is fresh and warm; and after the same is dried vpon the body, to follow it a second time the same day: & the morrow after to wash them thoroughly with lie made of strong ashes.

If rhorns, spills, bones, and such like things haue gotten into the flesh and there sticke, cars durg is very good to draw the same forth: likewise the treddles of a goat with wine. Any rendles also, but especially that which is found in an hares maw, serue in that case, reduced into a salve, with the powder of frankincense and oile; or else with the like quantity of birdlime, or the co-

TEOUS

A reous matter in the Bee-hiue called Propolis.

Furthermore, the greafe of an ass is singular to reduce any sweet sploches and black skars to a fresh and natie colour; which, if they ouergrow the skin about them, are brought downe and made more euen and subtil, by an inunction of calves gall: but the Physicians prepare the sayd gall with an addition of mayrh, hony, and saffron, and then put it up in a brazen box for their vse: yet some there be, who mingle with the rest verdegri or the rust of brasse.

CHAP. XIX.

Receipts appropriat to the maladies of women, and the diseases of sucking babes: also remedies for them that are unable to performe the act of generation.

TO begin with the naturall course of womens purgation: the gall of a bul or oxe, applied to their face: et parts in vnwashed greasie wool, is very effectually to bring the same down. The skillfull midwife of Thebes, *Olympias*, yfed to put thereto * hyssope and sal-nitre. For this purpose, harts horne burnt to ashes is very good to be taken in drinke. But if the matrice be out of order and vnsted, it is not amisse to apply the same ashes vnto the naturall parts: yea and buls gall together with * Opium to the weigh of two oboli; or else perfume their secret parts with a suffumigation of deers hair. Moreover, it is said, that the hinds when they perceiue themselves to be in calf, swallow down a little stone, which is singular good for women with child to carry about them, that they may go out their full time; and therefore much seeking there is after this stone, which is commonly found among their excrements at such a time; or else in their wombs, if haply they be killed with calfe, for then it is to be had there also. Moreover, there are found certain little bones in the heart and matrice of an hinde, and those be passing good for great bellied women, and such as be in travail of child-birth. As for that stony substance resembling a pumith, which in like manner is found in the wombe of kine, I haue spoken already in my discourse of Kine, and their nature. If the matrice of a woman be growne hard, and haue a scirrhe in it, the fat of a wolfe will mollifie it: if it be grieved with paine, the liuer of a wolfe assuageth the same. When women be neare their time, and ready to cry out, it is good for them to eat wolues flesh: or if when they fall first to trauell, there be but one by them who hath eaten therof: this is such an effectual thing, that if they were forespoken, or indirectly dealt withall by forcery & witchcraft, this is thought to ease them of paine, and procure them speedy deliuerance. But in case such a one as hath eaten wolues flesh, chance to come into the chamber when a woman is in the mids of their trauell, she shall surely haue a hard bargaine, and die of it. Moreover, great vse there is of the hare in all womens infirmities, for the lungs of an hare dried, made into powder, and taken in drinke, is comfortable to the matrice, and helpeth it in many accidents thereof: the liuer drunke with Samian earth in water, staith the excessive flux of their flours: the rennet of their maw fetcheth away the after-birth when it staith behind; but then in any wise the woman must not bathe or sweat in bain the day before the same rennet applied as a cataplasme vpon a quilt of wool, with Saffron & the iuice of porret, forceth the dead infant in the mothers wombe to come forth. Many are of opinion, that if a woman eat with her meat the matrice of an hare, she shall thereupon conceiue a man child if she company with her husband. And some say, that the genetoirs of the male hare, yea & the rendles, are good for that purpose. And it is thought, that if a woman who hath giuen ouer bearing children, doe eat the young leueter taken forth of the dams belly when he is newly bagd, the wil find the way again to conceiue & breed freshly as before: but the magicians do prescribe the husband also to drinke the blood of an hare, for so (say they) he shall sooner get his wife with child. And they affinne moreover, that if a maiden be desirous her breasts or paps should not grow any more, but stand alwaies at one stay, knit vp round and small, she is to drinke 9 treddles or grains of hares dung: and for the same intent, they aduise a virgin to rub her bosom with a hares rennet & hony together: & to anoint the place with hares blood, where the haire is plucked off, if they be desirous that it should not grow again. As touching the ventrosities and inflation of the matrice, it is good to vse thereto a liniment made of bores or swines dung, incorporate with oile: but in this disease, it were better for to repress the said windines & flatulosity, to spice a cup with the powder of the same dung dried, & giue it to the woman to drinke; for whether she be vexed with wrings whiles

Gg *

the

* Hyssopum, some read Olym-
pias, which the Apothe-
caries call Hyssopu
pum hirsute: &c.
is nothing, els
but the greasy
filth & sweat
mild out of
the wool grow-
wing in thepe
harks.
* Opus, some
read Opus
is Pistachy.

within silver & so caried about one, is of great power in this case, as *Oshanes* mine author saith. **C**
 But *Salpe* (a famous courtizan) giueth direction to plunge the genitall member of this beast
 seuen times together in hot oile, and with the said oile to anoint the share and parts therabout.
Bialcon aduiseeth to drinke the ashes of the said member, or the stale of a bull presently after hee
 hath done his kind to a cow, and with the earth that is moistened and made mire with the said
 stale, to anoint the priuy parts. Contrariwise, there is not a thing that cooleth the lust of a man
 more, than to anoint the said parts with the dung of myce and rats. To conclude, for to avoid
 drunkenness, take the lungs of an hog, be it bore or sow it matters not; in like manner of a kid,
 and roast it, whoe soeuer eateth thereof fasting, shall not be drunke that day, how liberally soeuer
 he take his drinke.

CHAP. XX.

¶ *Strange and wonderfull things observed in beasts.*

There be other admirable properties and vertues reported of the same beast, ouer & besides
 those before rehearsed, for it is said, that whoe soeuer do find and take vp an horse shoe
 taken from the house (an ordinary thing that happeneth vpon the way when a horse casteth
 his shoe) and lay the same vp, they shall find a remedy for the yox, if they do but call to mind
 and thinke vpon the place where they bestowd the same. Also, that the liuer of an Hare is in
 and thinke vpon the place where they bestowd the same. Also, that the liuer of an Hare is in
 this regard for curing of the hicket, like to an horse shoe. Moreover, if an horse doe follow in
 chase after a wolfe, and chance to tread vpon the tracts where the wolfe hath run, he will be bro-
 ken winded and burst, euen vnder the man vpon his backe. It is thought moreover, that the an-
 kles bones of twine, haue a property to make debate and quarrels. Also, when any sheep-pens or
 oxe-stals be on a fire, if some of the dung be cast forth, the sheepe and oxen that be within will
 sooner be gotten and drawne forth, and neuer come thither again. Furthermore, that goats flesh
 will haue no ranke smell or taste, if to be the same day that they were killed, they did eat barley
 bread, or drinke water wherein *Lafer* was infused. Besides, that no flesh which is powdered well
 with salt in the wane of the moone, shall euer corrupt and be subiect to worme or maggot. But
 see how diligent and curious our ancestors haue bin in searching out the secrets of euery thing;
 inso much as we find obserued by them, That a deafe Hare will sooner feed and grow fat, than
 another that heareth.

And to come vnto leechcraft belonging to beasts: it is said, that if an horse void blood ex-
 cessiuely, it is good to poure or iniekt into the body, hogs dung with wine. As for the maladies
 of kine and oxen, tallow, sulphur, vif, crow garlick, a lodden [hens] egge, are singular good medi-
 cines to be giuen euery one of them beaten together in wine: theat also of a fox is good in that
 case. If wine be diseased, the broth made of horse-flesh foddren, is very good to be giuen them
 in their way to drinke. And in what disease soeuer it be of all four-footed beasts, there is not a
 better remedy than to seeth a goat all whole, in the very skin, and a land roach together. Also it is
 said, that a fox will not touch any cockes, hens, or such like pulles, that haue eaten (before) the
 said, that a fox will not touch any cockes, hens, or such like pulles, that haue eaten (before) the
 skin, hath troden. The like effects are reported of a weazils gall: as also that kine and oxen both
 in the Isle Cyprus, when they are troubled with the belly ache, cure themselves with eating the
 excrements of a man: that the cleyes of kine and oxens feet will not wear to the quick nor be
 furbared, if their horns before were anointed with tar: That wolues will not come into any lord-
 ship or territory, if one of them be taken, and when the legs are broken, be let blood with a knife
 by little and little, so as the same may be shed about the limits or bounds of the said field, as he
 is drawne along, and then the body be buried in the very place where they began first to dragge
 him. Others take the plough-share from the plough wherewith the first furrow was made that
 year in the field, and put it in the fire burning vpon the common hearth of the house, and there
 let it lie vntill it be quite consumed: and look how long this is in doing, so long shall the wolfe
 do no harm to any liuing creature within that territorie or lordship. Thus much by way of di-
 gression: now it is time to return to the discourse of those liuing creatures which be raunged in
 their severall kinds, and such as are neither tame nor savage.

THE

THE TWENTY NINTH BOOK OF THE HISTORIE OF NATVRE,

WRITTEN BY C. PLINIVS

SECVNDVS.

CHAP. I.

¶ *The Originall of Physicke. When Physitians began to visit the sicke in their houses. When came vp first
 The manner of * curing diseases by outward application of Ointments and by frictions. Of Chrystip-
 pus and Erasistratus. Of the * Empirick practise of Physicke. Of Herophilus and other famous Phy-
 sicians. How many times the order of Physick hath bin changed. Who was the first professor of Physitian
 in Rome, and when he began to practise. What opinion or conceit the antient Romanes had of Physitians.
 Finally, the imperfections and defaults in this art of Physicke.*



The admirable nature of a number of medicines, as well those which I have already
 shewed, as those which remain as yet to be handled, forceth me to write yet
 more of Physicke, and to found to the very depth and bottome: albeit I know
 full well, that there is not a Latine writer who hath travelled hitherto in this
 argument, and am not ignorant how ticklish and dangerous a point it is at first
 to set abroach any new matters, especially such, whereby a man is sure to reape
 but small thanks, and in deliuerie whereof, is to make account of a world of difficulties. But for-
 asmuch as it is very like that those who are well acquainted with this study, will mufe how it is
 come about, that the remedies drawn from simples, so easie to be found and so accommodat to
 maladies, are cast behind and grown out of vse in the practise of physick; it cannot be, but with-
 all they must maruell much, and think it a great indignity, that no science and profession in the
 world hath had lesse solidity in it and bin more vncertain, yea, and how it daily changeth still,
 notwithstanding there is not any other more profitable and gainfull than it.

But to enter into the discourse thereof, First and foremost, the inuention of this Art hath been
 fathered vpon the * gods, such I mean as are canonized gods in heauen: yea, and euen at this day
 we haue recourse still vnto diuine Oracles for many medicines. Moreover, the fabulous tales de-
 uised by Poets haue giuen a greater name and reputation thereto, in regard of the offence com-
 mitted by *Æsculapius* in raising prince * *Hippolytus* again to life: for which bold part of his, *Jupiter*
 being highly displeased, smote him dead with lightning. And yet for all this, Antiquity hath
 not staid there, but maderelation of others, who were reuiued by the means of the said *Æscula-
 pius* or his art: which during the * Trojan war, whereof the fame and bruit is more certain, grew
 into much request and estimation: and yet in those daies there was no other part of Physicke
 professed and practised, but Chirurgery, and that in the cure of wounds only. But in the age in-
 suing, and for many a year after, wonderful it is, in what obscurity this noble science lay dead,
 and as it were buried in darknesse and obliuion, euen vntill the famous Peloponnesack war: for
 then arose *Hippocrates*, who reuiued and set on foot againe the antient practise of *Æsculapius*, so
 long forelet: and being borne in Coos, a renowned and wealthie Island altogether diuorced and
 consecrated to *Æsculapius*, he made an extract of all the receits, which were found written in the
 temple of the said god (for the manner was in that Island, that whoe soeuer were cured and deliuered
 of any disease, registered there vpon record, the experiments of medicines whereby they had
 remedy;

* To wit, *Apollo*
 & *Æsculapius*.
 * *Typhon* is the
 sonne of *Uranus*,
 & a man
 not vnto
 of *Æscu-
 lus* son
 of *Uranus*
 who was
Hippolytus
 * At what time
 and where, his
 2 sons, *Pe-
 rus* and *De-
 pho*: & *Æscu-
 lus* son
 of *Uranus*.

Chamber-Physicke. So called, because they visited their patients lying sick in bed. The manner of maintaining of health and curing of diseases by diet, and outward application of oiles & ointments. Who wrought by reason and rules, & thereupon were called Rationall, and Dignissimi

* *Quia salubri fomenta non proderat, signis curas con- sum, quibus Antonia Musa, Sueton, in vita d. Iul. Augusti.*

* *Scelerum precant, as Nudum vca- deith.*

* He reduced Physicke into a Methodus from him descended the sc called Methodici.

remedie, to the end, that afterward they might haue help again by the same in like cases) & therupon (as our countryman *Varro* is perswaded) after that the said temple was burned, hee professed that course of Physick which is called * Clinice. Whereby Physicians found such sweetnes, that afterwards there was no measure nor end of fees: in so much, as *Prodicus*, a discipule of *Hippocrates*, and borne in Silymbria, crediting that kind of practise in Physicke, which is called * Iatraliptice, opened by that means the way to enrich euen those, who vnder Physicians were employ- ed in rubbing and anointing mens bodies, yea, and brought gaine to other base and feruile mi- nistres attending vpon their cures. After them came *Chryssippus* in place: who through his much babbles and prating, wherewith he was well furnished, altered the Theoricke and speculative Physicke of * *Hippocrates* and *Prodicus*, with all their principles: whom succeeded *Erasistratus*, *Aristotles* sisters son, and he chaunged also many of *Chryssippus* his rules and receits, notwithstanding he was a scholler of his and brought vp vnder him. This *Erasistratus* for curing king *Andronicus*, receiued of his sonne *Ptolemaus* (king after him) one hundred talents: which to beginne withall, I note by the way, that you may see how (euen in those daies) Physicians were well rewarded for their pains and skill. But in proceesse of time one *Acro*, a citizen of Agrigentum in Sicilie, much commended by the authority of *Empedocles* the famous naturall Philosopher, began in that Island to institute another faction and sect of Physicians, who grounding altogether their worke and operation vpon experience, called themselves Empiriques. Thus there being diuers schooles of Physick, the professors in euery one of them entred into contention and variance, some siding this way and others taking the contrary, vntill at length *Hierophilus* entred the stage, who reproofed and condemned as well the one as the other: and reduced the pulles or beating of the arteries vnto the times and measures in Musicke, according to the degrees of euery age. Long after it was not, but this Philosophicall subtilty of his sect was giuen ouer and abandoned, because the profession thereof required of necessitie so much learning and literature: and albeit that *Aclepiades* when he began to professe Physick, brought with him an alteration of all that was before, yet (as I haue already related) his Physick continued no longer than others: for *Themison* (a scholler and auditor of his) so soon as cur his master was departed this life, altered quite all that hee wrote and noted at first from his mouth, and betooke himselfe to a new practise, according to his owne head and fantasie. But what became of it? Surely within a while after, *Antonius Musa*, Physician to *Augustus* the Emperour, put downe that which *Themison* had set vp: and that by the authority and warrant of the said Emperour his patient, whom he deliuered from a dangerous disease, * vnto directly a contrary cure to that which had bin practised beforetime. Many other Physicians there were of great name, whom I ouerpasse: but the principall and moit renowned of them all, were the *Cassij*, *Calpitanij*, *Aruntij*, *Albuij*, and *Rubrij*, who in their time might dispend in fees allowed them out of the Princes and Emperours Exchequer, vnder whom they liued, 250000 Sesterces apeece, by the yeare. And as for *Q. Sertorius* the Physician, he complained of the Emperours whom hee serued, and challenged them for that hee had no greater reuenues than 50000 Sesterces by the yeare from them: whereas he was able to make account, that by his practise in the city hee gained yearly 600000 Sesterces, being retained Physician to certain houses, which hee could readily name at his fingers ends. A brother of his receiued no lesse in fees from *C. Iulius Caesar* the emperor. And albeit these brethren spent a great part of their wealth & substance in ouiding sumptuously at Naples, wherby they adorned and beautified that citie, yet they left behind them in goods vnto their heires after them, to the worth of * thirty millions; which was such an estate, that vlesse it were *Aruntius* only, there was neuer any known before those daies to haue died so wealthy. After these men, there arose one *Vettius Valens*, who ouer & besides his profession of Physicke and Rhetorick, which hee earnestly followed, grew into a greater name, by reason of the familiar acquaintance hee had with *Messalina* the Emperresse, wife to *Claudius Caesar*. This minion of hers taking his time, and seeing how mighty he was, followed his fortunes and erected a new sect and practise of Physicke. But within the compasse of that age, and namely in the daies of the Emperour *Nero*, in cometh * *Thessalus*, who woon the name from all the Physicians of former times, and ouerthrow the pre- cepts and doctrine of his predecessors, raging and faring as if he were mad, in open inuectiues against all the professors of Physicke that euer were: and with what spirit, policie, wit, and dexterity he performed this, it may be gathered sufficiently by this one argument (if there were no more) that vpon his sepulchre or tomb, which remaineth at this day to be seen in the high way

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* The matter and consequence of all Physicians.

* *Contes 21.*

* Such as bath in cold waters, be called by *Seneca*, *Theriacalium*.

A or caufey Appia, he triumphed ouer them all, and intituled himself by the name of * Iatronices. And in very truth, neuer marched there player to the stage, or coachdriuer to the publick cirque, for to run a race, better attended and with a greater traine of followers, than hee when hee passed along the streets: and yet *Crimas* of Marfius put him down and outwent him far in credit and audience: and that by the means of a twofold skill and knowledge wherein he was seen: For besides his ordinary profession of Physicke, he shewed himselfe more warie and ceremonious in all his practise than any other before him, by reason of the deepe insight that he had in the Mathematicks; obseruing the course of the stars, chusing good daies and houres, and going cuer by his Almanakes and Ephemerides, whensoever hee ministred vnto his patients, in so much, as in their very diet he was so precise, that hee would not allow them to eat or drink but with great regard of times and seasons. Whereby he grew to such wealth, that of late he bequeathed by his last will & testament * ten millions of Sesterces vnto his natie citie Marfius toward the fortifications thereof, besides the walls that he caused to be built and emmaneted about other towns, which cost him little vnder the foresaid summe. Whiles this *Crimas*, with such others as himselfe, seemed with their atologie to command the course of the destinies, and to haue mens liues at their own disposition, all on a suddain one *M. Charmis*, a Marfilian likewise, put himself forward and entred the citie of Rome, who not onely condemned the former proceedings of the ancient Physicians, but also put downe the baines and hot houses: hee brought in the bathing in cold water, and perswaded folke to vse the same euen in the middle of Winter; hee feared not to giue direction vnto his sicke patients for to sit in tubs of cold water. And I assure you, my selfe haue seen ancient Senatours, such as had been Consuls of Rome, all chilling and quaking, yea and shew againe for cold, in these kind of baths: and yet they would seeme to endure the same, to shew how hardy they were. And verily, there is a Treatise extant of *Annas* * *Seneca*, wherein he approves highly of this course. Neither is it to be doubted, but such Physicians as these, who hauing won credit and estimation once by such nouelties and strange deuises, shoue at no other make but to make merchandise and enrich themselves euen with the hazard of our liues. And hereupon come these lamentable and wofull consultations of theirs about their patients, wherein you shall see them ordinarily to argue and disagree in opinion, whiles one cannot abide that another mans judgment should take place, and seeme to carry away the credit of the cure. From hence also arose that Epitaph of his (whosoever he was) that caused these words to be engrauen vpon his vnhappy tombe, *Turbamur coram perij.* The variance of a sort of Physicians about me, were the cause of my death. Thus you see how often this art from time to time hath been altered, and daily still it is turned like a garment new dressed and translated: in so much, as wee are carried away with the vain humor of the Greeks, & make fail as it were with the pusses of their proud spirit: For euer as any of these new commers can venditar and vaunt his owne cunning, with braue words, straitwaies we put our selues into his hands, and giue him power to dispose of our life and death at his pleasure; and without further regard, are as obedient to him as a souldiour to his captaine and Generall of the field. A strang matter that we should so do, considering how many thousands of nations there be that liue in health wel ynough without these Physicians, and yet I cannot say altogether without Physicke. Like as the people of Rome also (notwithstanding the Romanes were euer knowne to be forward ynough to entertaine all good arts and disciplines) continued for the space of fix hundred yeares and above, after the foundation of their citie, and knew not what a Physician meant, but afterwards they did cast a great fancie to Physicke also: howbeit vpon some little experience thereof, they were as ready to loath and condemne it, as they were desirous before to haue a taste and triall of it. And here I thinke it not amisse in this corrupt age of ours wherein we liue, to discouer and relate certain principall examples of our ancestors, worthy to be noted in this behalfe.

And to begin withall, *Cassius Hemina*, an ancient Historiographer, doth report, That the first Physician that euer came to Rome, was one *Archagathus*, the sonne of *Lysania*, from out of Peloponnesus, which was when *L. Emilius* and *M. Livius* were Consuls, and in the yeare after the foundation of the citie of Rome 535. And this mine Author saith, that hee was enfranchised free denizen of Rome, and had a shop provided for him, standing in the carefoure of *Acilius*, bought at the charges of the citie for to entertaine his patients, and therein to exercise his cunning. Called hee was (by report) The vulnerarie Physician or Chirurgion: wonderfull much seeking & running there was after him, and none more wealthie than he at his first comming. But

foone

foen after, when hee was knowne once to carry a cruell hand ouer his poore patients, in cutting, lancing, dismembriug, and cauterizing their bodies, they quickly began to alter his name, and to terme him the bloody Butcher or Slaughterman: whereupon not onely all Physitians, but Physick also grew into a bad name and became odious: as may appeare evidently by the monuments and books of *M. Cato*, a worthy personage, and in regard of whose vertues and commendable parts, his triumph and Censorship, as famous & honorable as they were, deserue the least part of his authority and reputation; so much was there in himselfe, about the gifts and graces of Fortune. I will therefore insert in this place, word for word, an Epistle of his vnto his sonne *Marcus*, touching this matter, wherein he thus writeth: *Concerning these Greeces (some Marcus) I will write in place and time convenient, what I have found out and knowne by them in Athens: and namely, that it were good to looke into their books and reade them (as it were) by the way, but in no wise to study upon them much and learn them thoroughly. I have already given the attempt, and intend to convince and put downe the wickedest race and most perverse and obstinate kind of them. And learne this of mee, as from the mouth of a true Prophet, That whensoever this Greeke Nation shall bring into Rome their Philosophie, they will corrupt and marre all: but let them send once their Physitians hither, you shall see a greater wrecke and confusion thereby. For I assure thee, they have plotted and sworn one to another for to murder all * Barbarians by means of their Physicke. And even to effect and bring this about, they will be fed also and take money, to the end, that both we should trust them the rather, and they also have the better meanes to worke the feat and dispatche of folk with more facility. As for vs, it pleaseth them usually to name vs Barbarians, yea, and they give vnto vs more filthy termes than any others, and mis-calle vs * Opiques. Well, remember thou once for all, that I have given thee warning of their Physitians, and forbidden thee to be acquainted with them. Now *Cato*, who wrote this letter, died in the fix hundred and fiftieth yere after the foundation of our city, when himselfe was fourscore yeres old and fure: whereby a man may see that he wanted not grounded knowledge when hee deliuered this speech vnto his sonne, for hee had both the practise of former times in publicke affaires, and age sufficient of his owne to furnish him with experience of priuat examples. What say we then to this resolution of his? Are wee to judge and beleuee that hee hath condemned thereby a thing so necessary and profitable as Physicke is? to God forbid: for himselfe setteth downe a little after, what Physick, and what medicines both he and his wife were acquainted with, and by meanes whereof they came to be so aged as they were: and those were no other (verily) but the use of simples, whereof wee now are in hand to treat. He saith moreover and professeth, that he hath made one Treatise expressly, containing certaine receits for the cure of his son and seruants, and for the preservation of their health: the which I have not omitted, but dispersed here and there, according to the occurrences of accidents and diseases of sundry sorts, whereof I have had some occasion to speake of, and still shall haue more whereby it is plain, that our antient forefathers blamed not the thing it self, I meane, Physicke, and medicines, but the Art and cunning of Physitians, who had the handling thereof. And most of all, they held off and were afraid to entertaine those amongst them, who fought such exceeding gaines for their handie worke, especially where they endangered their liues withall. And that they made some account of Physicke, may appeare by this, that when they receiued *Esculapim* as a canonized god into their Kalender, they built one temple for him without the city of Rome: yea, and the second which in his honour they erected, was located within the Island apart from other buildings. Also at what time as by vertue of an edict all other Greeces were banished Italy, Physitians were excepted; and that was many a yere after *Cato* his time. And here by the way, one word will I speake to the honour of our Romanes for their singular wisdom and providence; namely, That howsoever they are growne to good proofe and be accomplished in all other Arts and Professions of the Greeces, yet their gravity hitherto hath bin such, as they would not giue themselves to the practise of this only Science. And notwithstanding the exceeding wealth that accruech by Physicke, yet very few or none of our natural Roman citizens haue medled therewith. And those also that haue betaken themselves vnto it, presently haue forsaken their native language, and gone to the Greeke tongue. For this opinion verily there is of this Art, that if the Professors thereof handle it in their vulgar and mother tongue, or otherwise in any other than Greeke, all the authoritie, grace, and credit thereof is lost, even with those that be altogether vnelearned and know not so much as the Greeke Alphabet. See the nature and foolish propertie of our Countrymen, to haue lesse confidence and trust in those things which concerne their life and health, if they be intelligible and deliue-*

* Thasie to say
all nations but
themselves.

* Opique, were a
certain people
of Italy; infamous
for their
vicious life
and filthy language: quere
quere: quere
quere: quere

* Why the
people of *Esculapim*
stood
without the
city of Rome?
See *Plutarch* 94
Esculapim
Remanum.

deliuered to their capacity; than in others, which they vnderstand neuer a while! And hereupon verily it is come to passe, that the art of Physicke hath this peculiar gift and priuiledge alone, That whoeuer professeth himselfe a Physitian, is straightwaies beleueed, say what hee will; and yet to speake a truth, there are no lies dearer fold or more dangerous than those which proceed out of a Physitians mouth. Howbeit, we neuer once regard and looke to that, so blind we are in our deep perswasion of them, and feed our selues each one in a sweet hope and plausible conceit of our health by them. Moreover, this mischief there is besides, That there is no law or statute to punish the ignorance of blinde Physitians, though a man lost his life by them: neither was there euer any man known, who had reuenge or recompence for the euill intreating or misusage vnder their hands. They learne their skill by indangering our liues: and to make proofe & experiments of their medicines, they care not to kill vs. In a word, the Physitian only is dispensed withal, if he murder a man: to clear hee goth away without impunity, that none so hardy as once to twit or challenge him for it: but say that one be so bold as to charge them with any vntoward dealing; out they cry presently vpon the poore patients, at them they rail with open mouth, they are found fault with their vnrule, diffemperature, wilfulness, and I know not what; and thus the sillie soules that be dead and gone, are then & bear away the blame. The decuries or bands at Rome of those knights which are deputed and called Iudges, are not chosen but by an ordinary triall and examination of their estate, quality, and person, and the same by the principal of that order and degree, both taken and approved: A freight inquisition there is made of their demeanor from house to house: of their parentage also, yea and true information giuen to the electors before they can be chosen. Mint-masters, such as are to giue their iudgement of mony, and the touch of coine, be not taken hand ouer head: but if any be more skillfull than others therein, they are sent for (rather than to faile) as far as from Calis and the straits of *Gilbretar*. And for to pronounce sentence as touching the banishment of a Roman citizen, the five deputed or elected delegats (named *Quinquiviri*) had no warrant or decree passed before 40 daies were expired. But for these Physitians, who are the judges themselves to determine of our liues, and who many times are not long about it, but giue vs a quick dispatch & send vs to heauen or hel, what regard is there had, what inquiry and examination is made of their quality and worthines? But surely, wel enough are we served, and we may thank none but our selues, if we come by a shrewd turn, so long as there is not one of vs hath any care or desire to know that which is good for his life and health. We loue to * walk (forsooth) with other mens feet. * We read, we looke by the eyes of others: we trust the remembrance of another, when we salute any man and to conclude, in the very main point of all we commit our bodies and liues to the care and industry of others: No reckoning is there now made of the riches and treasure of Nature: but the most precious things indeed which serue for the maintenance and preservation of health and life, are vterly rejected and cast away: no account makewe of any thing and think our owne, but to lye in pleasures and dainty delights. I will not leaue my hold of *M. Cato*, whom I haue opposed as a shield and buckler against the enuie and spight of this ambitious and vain-glorious Art: neither will I giue over the protection of that honorable Senat which hath judged no lesse; and that without catching advantage of the sinfull pranks & lewd parts which are committed and practised vnder the pretence of this art, as some man haply would look that I should let them abroad: for to say a truth, is there any trade or occupation goeth beyond it for poisoning? what is the cause of more gaping and laying wait after wils and testaments, than this? What adulteries haue bene committed vnder the colour hereof, euen in Princes and Emperors palaces? as for example, *Eudemus* with *Livia* the Princeesse, & wife to *Drusus Caesar*: *Valens* likewise with the Queen or Emperesse aboue named, *Messalina*. But say that these crimes and odious offences are not to be imputed vnto the Art it selfe, but rather to be charged vpon the persons, I meane the corrupt and lewd professors thereof: yet surely I am of this beleefe, that in regard of these enormities, *Cato* was as much afraid of the entrance of Physicke, as of some Queene into the citie of Rome. For mine own part, I mean not to say ought of their extreme avaricie, of the merchandise, spoile, and hauocke that they make when they see their patients in danger of death, and drawing to their end; nor how high they hold (as it were in open market) the easement and release of the sicke mans pains, whiles he is vnder their hands; ne yet what pawns and pledges they take as earnest of the bargaine, to dispatch the poore Patient out of the way at once; and lastly, of their hidden secrets and paradoxes, which forsooth they will not divulge abroad, but for some round

* In this place
he casteth in
the Romanes
teeth, their
Lecherie, Avarice,
and Covetousness.
* A. sollicitus
iniquitatis.

summe

summe of money. As for example, that a carack or pearle in the eie is to be couched rather and driuen down by the needle, than quite to be plucked forth: wherby it is come to passe, that it is a very good turne & the best for vs (as the case standeth) that we haue to great a number of such murderers and theues in the commonwealth: for I assure you it is not long of any shame and honesty (whereof there is none in them) but their malicious emulation, being so many as they are, that the market is well fallen, and the prices come down of their workmanship. Notorious it is, that *Charmis* the abouenamed Physitian that came from Marfiles, bargained with one patient that he had, to haue 200000 Sefferes for his cure, and yet hee was but a stranger and a prouinciall inhabitant. Also as well knowne it is, that *Claudius Caesar* vpon a condemnation and judgement, tooke at one time by way of confiscation, one hundred thousand sefferes from one *Alconius*, who was no better than a Chirurgion or Wound-healer: who being confined into France, and afterwards restored, gathered vp his crums again & got as much within few yeares. I am content also, that these faults should be laid not vpon the art, but the men that profess it: Neither verily do I mean to shew and reprove the base, abject, and ignorant sort of that crew: nor how little order and regiment they obserue in the cure of diseases, or in the vse of baines and hot waters: how imperiously they prescribe otherwhiles to their patients most strait diet: and again, when they are ready many times to faint & die vnder their hands for want of sustenance, how they are forced to cram them as it were, and giue them meat vpon meat, oftentimes in one day, before they haue digested the former viands. Moreover, how they do and vndo, altering the manner and course of their proceedings a thousand waies, milking and bethinking themselves after they haue done a thing: making a mish mash and mingle mangle in the kitchen of those viuals which they ordain for their poore patients: besides a deal of mixtures and sophisticated compositions of drugs and ointments. For there is no superfluity tending vnto vaine pleasures and wanton delights that hath ouerpassed their hands. And since I light vpon the mention of these drugs and spices, for mine owne part I am verily perswaded, that our ancestors and forefathers were nothing well pleased with the bringing in of such forraign wares, which beare so high prices and are extream deare: and that *Cato* neuer thought of these drugs and mixtures, nor foresaw these corruptions by them occasioned, when he blamed so much and condemned this art of Physick. Yet see what account there is made of a composition called * Theriacle, deuised onely for exesse and superfluity: composed it is of diuers ingredients far fetcht and deare bought: whereas Nature hath bestowed vpon vs and presented to our eyes so many wholesome simples, and euery one of them by it selfe medicinable and sufficient. Moreover, another antidore and confectiō there is, consisting of no fewer than 54 sundrie sorts of drugs and ingredients, all of diuers weights, and some of them are prescribed to carrie the poysē precisely of the sixtieth part of one denarius or dram. Now would I gladly know what god he was (for surely it passeth the wit of man thus to dispense the ingredients, and calculat their vertues, to a single scruple) that taught first this subtil and intricate composition: By which it appeares manifestly, that this geere breaeth only a vaine ostentation, and all to giue a glorious and wonderful lustre to the art, for to make it better accepted and more vendible. And yet the very Artists themselves are not ywis so skillfull, as to know that whereof they make profession. For I my selfe haue scene these that goe for Physitians, put commonly into their medicines and receipts *quid pro quo*, and I namely, in stead of the Lidian * Cinnabaris, * Minium; which is no better than a very poysōn, as I will proue and shew hereafter in my Treatise of Painters colours: which error proceedeth only from this, that they are not well seen in Grammar, nor in the proper signification of words. But these and such like errors touch and concerne the health of euery one in particular. As for those abuses in the art of Physick, which *Cato* feared, foresaw, and would haue prevented, they be such as are nothing to hurtfull and dangerous as the rest, and indeed small matters in the opinion of man: and such as the principall Professors and Masters of this Art do auow and confesse among themselves. Howbeit, euē those deuises, as harmlesse as they seeme to be, haue been the ouerthrow of all vertue and good manners in our Romane State, I mean those things which we doe and suffer in our health: our exercise of wrestling, our greasing and anointing with oile for that purpose, brought in forsooth and ordayned by these Physitians for to preserve our health. And what should I speak of their drie froues, hot houses, and ardent bayns, which they would beare men in hand to be so good for digestion of meat in their stomackes? Yet could I neuer see any, when he came forth of them vpon his own feet, but he was more heauy, & found himselfe

A himselfe feebleer than before he went in: and as for those who haue bin more obseruant of their rules than the rest, and wholly gouerned by them, I haue known many such caried out for dead, or else extream sicke. To say nothing moreouer of the potions and drinks ordained by them, to be taken in a morning fasting, for to vomit and scoure the stomack therby, and all to makeway for to quaffe and carouse again vpon it more lustily. I forbore also to write of their rofins and pitch-plaisters deuised by them for to pluck away and fetch off the haire where Nature hath ordained it to grow, wherby they would seem to effeminate our men. I bath also to speak how euē our women haue prostituted their nakednes and priuities vnto them, by occasion of these their wanton deuises. In sum, conclude we may, that considering these enormities and corruptions which haue crept into our life, by nothing more than by the meanes of Physick, *Cato* was a true prophet indeed, and his oracle is verified & fulfilled euery day, when he said, That it was sufficient to look curiously into the writings and witty deuises of the Greeks, without farther studying therupon and learning them thoroughly. Thus much I thought good to speak in iustificatiō of that Senat and people of Rome, who not without great reason continued 600 yeeres without the entertainment of Physicians; and against that Art which of all others is most dangerous and fullest of deceit: in regard wherof, it hath bleered the eyes of good men, and they be those who haue giuen credit & authority thereto. And withall, thus much may suffice to meet with the fond opinion and foolish perswasion of those, who are raiused and caried away with a conceit, esteeming nothing good for the health of man, but that which is costly and pretious. For certes I doubt not, but some there be who will loath these receipts taken from diuers beasts, wherof I shall haue occasion to speak hereafter. But I comfort my selfe again herein, That *Virgil* disdained not to name the very pismires and the weeuils; * blind beetles also delighting in darkness, and their nests wherein they keep, of which he wrote, notwithstanding he was not vrged thereto vpon necessitie. Neither did *Homer* think it improper, to mingle the description of a shrewd and vnhappy flie, euē with the heroicke battailes of the gods: ne yet dame Nature, who hath brought forth and made man, thought it any disparagement to her maiestie for to engender also these sillie and small creatures. And therefore let euery man consider their vertues, properties, and effects, and not regard so much themselves. To come then to those things that are most common and known, begin I will at sheeps wooll, and birds eggs, to the end that by that means due honour may be yeilded to the chiefe and principall of all others, as it doth appertain. Howbeit, I must of necessitie speak of some other things by the way as occasion shall be offered, notwithstanding the place be not so proper & fit for them. Neither wanted I meanes sufficient to furnish this worke of mine with many gallant matters and pleasant discourses, if my delight and mind had been to looke after any thing else but a plaine and true narration, according to my first dessein and intention: For well I wot, that I might haue inserted here and there, the rare receipts which are reported to be of the ashes of the bird Phoenix, and her nest; but that I know all to be meere fabulous, how foueuer they durie a pretence of truth. Besides, I count it a very mockerie and no better, to deliuer vnto the world those medicins which are not to be but once in the reuolucion of a thousand yeeres.

CHAP. II. ¶ The vertues and properties of Wooll.

THE ancient Romans attributed vnto Wooll great authoritie, & had therein a certain religious and reuerent opinion of holines: so much as new wedded wiues by an old custome and ordinance at Rome, were wont with great ceremonie to adorn and bedeck with wooll the side-posts of the dore or entrie into their husbands house, on the marriage day. Now besides the vse of wooll for decent apparel, & defence against cold weather, that which is vnusual and full of the sheeps fleece serueth in Physick, and is a souverain remedy for sundry accidents, being applied with oile, wine, or vinegre, according as need requireth, either in mitigation of pain, or mordication and coriōsion, and according as our purpose is, to bind, or to enlarge and open any part: and namely, it is imploied in dislocations of members, and grieue of sinues, if it be laid to the affected place, well sprinkled & wetted with the said liquors, that it might be alwaies moist. But more particularly, for disjointed members, some put thereto a little salt: others take rue, & when they haue stamped it, incorporate the same with some conuenient grease, & so apply it in manner of a cataplasme vpon sweatie wooll: after which manner, it is good for contusions or bruises & swellings. Also it is said, that if the teeth & gumbs be well rubbed with such wooll and

* Lucifera
congelata cubi-
lie blasit.
* Liliades.

H h honey

* Scizum Dra-
conis Sang-
dragin La-
cubryne species
* kind of gum
* medicinalis
mineral Ver-
million.

hony mingled together, it will cause the breath to be the sweeter: a suffumigation or perfume therof is singular for the frensie: applied with the oile of roses, it stanches bleeding at the nose: or otherwise if the ears be well stopped therewith, and a little garlick conueied withal therinto. Moreouer, it is laid to inueterat fores with good successe, so that hony be put thereto. Soake wooll in wine, vinegre, or cold water and oile, and then wring and presse the same forth, it heales any wound. The wooll of a ram well washed in cold water, & afterwards steeped in oile, is singular for womens infirmities, and particularly allaieth the inflammation of the matrice: but in case it be faln downward and readie to slip out of the bodie, a perfume therof receiued beneath, (saith the same) and keeps it vp. The fattie wooll of a sheep being either applied, or put vp in manner of a pessarie, drawes down the dead infant out of the mothers belly: and yet the same otherwife represseth the immoderat flux of womens fleurs. If it be couched hard & close within the wound occasioned by the biting of a mad dog, it serueth to great purpose, but with this charge That it be kept bound thereto & not removed vntill the seventh day be past: applied vnto whit-flaws and impostimations about the naile-roots, with cold water, it cureth them: the same, if it be dipped & foked in a medly made of salnitre, brimstone, oile, vinegre, and tar, all dissolved together and ready to boile, and so laid as a cataplasm to the loins as hot as the patient can abide it, changing it twice a day, appeaseth the paine of those parts. Take the greafie wooll of a ram, bind therewith very hard the joints of the extreame parts, as namely the fingers and toes, you shall see how it will stanch bleeding. [Howbeit, note this, that the wooll growing vpon the sheeps neck is euer best and most medicabable: and if we regard the country from whence it comes, that of Galatia, Tarentum, Attica, and Miletum, is alwaies reputed better than any other.] Furthermore, the greafie or sweatie wooll of a sheepe, is proper to be applied to any raw places where the skin is fretted off, to contusions, bruises looking black and blew, strokes, cruises, rushes, rubs, and galls; also from them who are tumbled down from some high place, for the head-ach and other pains; and lastly, for the inflammation or heat of the stomack, being decently applied with vinegre and oile rosat. Reduced into ashes and vsed as a liniment, it is singular for them that be cruised or squeeased, wounded, burnt, and scalded. This ashes entrench also into colyries and cie-falues: it serueth for hollow vicers & fistuloes: like as for the ears when they run filthie matter. For these purposes aboue specified, some feare it from the sheeps back: others chuse rather to plucke it and when they haue clipped off the vpmost parts, or forced it lay the same forth to dry: they toze & card it also, and then bestow it in an earthen pot not fully baked, which they besiege all ouer with hony, and so burn & calcine it to ashes: others put vnder, smal chips or slices of torchwood, and lay certain beds or courses thereof between the locks of wooll; and after they haue besprinkled the same with oile, lett all one fire which done, the ashes that come therof they put into little pans or vessels, & poure water thereon: and after they haue well stirred the said ashes with their hands, they suffer it to settle downe to the bottom: which they do oftentimes, alwaies changing the water till such time as a man may perceiue the ashes at the tongues end to be somewhat astringent, but not biting; and they lay vp their ashes for their vse.

A grege * Counter and cleanser this is, and therefore most effectuale to mundifie the eye-lids.

Moreover, the very filthy excrements of sheep, & the fecat sticking to the wool of their flanks, between their legs & the concavities thereabout (which they call Oefypum) is thought to have infinite number of medicinable properties: but the best Oefypum simply is that which comes from the sheep bred about Athens. This fecat or filthy excrement, cal it what you will, is prepared and ordered many waies; but the principall is that which is gathered from the wool newly taken from between the legs & shoulders of the sheep, and presently tozed ready for to be carded: others are content to take the sweate filth of any wool, so it be fresh plucked or clipped from the sheep: and whether it be the one or the other, they let it dissolve under a soft fire in a pan of brass: which done, they let it a cooling, and take off the fat that swims aloft, & gather it into an earthen vessell. As for the rest which remained behind of the first stuffe, they let it in the fire again, that the fumes may boile forth of it: after this the fat that floated above, as well the former as the later, they wash in cold water, & let it drie in a linnen cloth, expose it to the heat of the Sun, that it may frie therein until it be blackish white and look pure and cleare: then is it put vp in tin boxes or pteuer pots, and referred for vse. The true mark to know which is good Oefypum, after it is thus strit & purified, is thus: if it have a rank smel fill of the first filthines which it had from the sheep: also, if when you rub it with your hand in water, it melt not, but in

A the working look whitth like vnto cruie or white lead: a foueraigne thing it is for the inflammation of the eies: for the hard callosities also that grow vpon the eye-lids. Some there be who terrifie the foresaid greasie wooll into an earthen pot or pan, so long vntill it haue forgone and is for any erosion, fretting or hardness of the eyelids: or to cure the scabs and sores, yea, and the goose greafe, cureth not only the vlcers of the eies, but of the mouth also and members of generation: the same tempered with Melilot and Butyr, maketh an excellent liniment for all inflammations: it hath, which I will digest into their seuerall places, and speake of them accordingly.

B As touching the filthy excrements hanging to sheeps tails, and baltered together into round pills or balls, if they be dried and so beaten to powder, are singular for the teeth, yea, though they shooke in the head, if they be rubbed therewith, also for the gums, though there were gotten into them a cankerous sore. Now concerning fleece wooll that is pure and washed, either by it selfe cause is not euident and known: which also being reduced into ashes, is foueraign for the accidents which happen vnto the priuie parts. In sum, of such vertue is wooll, that there is no carauer it. The same also hath a singular vertue aboute all things, to recover the appetite of meat in the very sheep that beate it, in case they haue lost their stomachs and feed nor: for pluck the wooll that growth to their tails, and therewith tie the same as hard as is possible, you shall see them presently fall to their meat: But it is said withall, that the rest of the taile which is vnderneath the said knot where it was bound, will quickly become mortified, and die.

СНАР. XIII.

¶ The nature and properties medicinale of Eggs.

Great societie and affinitie there is between wooll & eggs; in this regard, That if they be applied both together in a frontall to the forehead, they represse all violent fluxes & rheums falling into the eies: but you need not take for this purpose any wooll that hath bin dressed or clenfed with the *Fullers scouring weed: neither is it required, that in this case there should be vfed any more but the white of an egg, and the same ought to be infused or spread vpon the forehead wooll, with the powder of Frankincense: & in very truth, the white of an egg alone, if it be infused or dropped into the eies, is sufficient to restrain the flux of humors thither, yea and to coole any hot rheume or inflammation incident to them. Howbeit, some think it better to put saffron thereto, and vse this gleere or white of the egg beaten, in stead of water, for all collicies or medecins appropriat to the eies. The white of an egg incorporat whit fresh butyr, is so souveraign for the red and bloodshotten eies which put little children to pain, as none in this world better; nay there is not in a manner any other vfed in that case. The same beaten and tempered with oile, assuageth the heat of *S. Antonies* fire, if there be leaues of beets laid vpon the place and kept bound thereto. The white of an egg incorporat with salthorniacke finely pulverized, doth extend and turn backward, the haire of the eyelids which grow inward into the eies: the same with pine nut-kernels, & a little hony mingled withall, and so reduced into a liniment, takes away the pimples that arise in the face: annoynt the visage therewith, it will keep it from being sun-burnt. If one be scalded with hot water, lay quickly an egg to the place, yelke, white, and altogether, it will take out the fire and preserve it from blistering: some put thereto barley meale and a little salt: but say the place be blistered & exulcerat with any burne or scald, parched barley with the white of an egg and swines greafe, is an excellent medicine to heale the sore: and the same cataplasme is much vfed in the cure of the hemorrhoids, piles, and chaps of the fundament; and especially in children, for to reduce the twiill into the right place, if it bang forth, for the rifts and chaps which appeare in the feet, take the white of an egg foddren or roasted, the weight of two deniers of ceruse, as much of lerbarge of siluer, and myrrhe, with a little quantitie of wine; incorporate all together into a cataplasme, there is not a better medicine for them: and for the inflammation called *S. Antonies* fire, the white of an egg beaten together with Amydum or marsh-mallow, is right souveraign. It is said moreover, that the white of an egg is very good to conglutinate or fowder any wound, yea and two expell the stone and grauell out of the body,

* *Visejus sme-
tica* est, out of
Dios. not *sep-
tica*, as is com-
monly read :
for how can it
be corrosive if
it bite not at
all.

* *Siccatur*, or rather *Saccatur*. i. streine it through a linen bag.

*Doloribus car-
cin.

* *Radicula*,
called before
Struthium.

The yelke of an egg sodden untill it be hard, and tempered with a little saffron, with hony also G and brent-milke, and so reduced into a liniment, allaieth the pain of the eies, if they be anointed or fomented therewith: or if the same be incorporat with oile rosat & honied wine, and so spread vpon a quilt of wooll and applied, it workes the same effect. Others there be who take the yelke or an hard egg, mix therewith the powder of perley feed, adding thereto fried barley meale dried, and honied wine, with which composition they annoint the fore eies. Also the yelk of a soft egg alone, supped off and swallowed down cleare that it touch not the teeth by the way, is singular a good for those that be troubled with the cough, with the rheume or catarrhe that hath taken way to the brest or pectorall parts; yea and the roughnesse of the throat & pipes which causeth hoarsenesse: but principally if one be bitten with a worme or serpent called * Hæmorrhoids, let him both sup off the yelke of an egg raw or soft, and apply it also to the wounded place. It hel- H peth the influrmitiyes of the reins; it healeth the fretting, excoriation, and vlcers of the bladder; yea and cureth those that reach & cast vp blood. Fiue yelks of eggs supped off raw in one hemin yea and cureth those that reach & cast vp blood. Fiue yelks of eggs supped off raw in one hemin of wine, are singular good for the dysenteric or bloody flux, and namely, with the powder of the shels from whence they came, the juice of Poppie, and a little wine withall. For the flux of the belly proceeding from a feeble stomack, they vse to giue the said yelks of eggs raw, with as much in weight of good and full raisins, and the rind of a pomegranat, with direction to the patient, for to take this medicine three daies together by euen portions, and no more one day than another: for which purpose also, there is another way to vse them, namely, to take three yelks of an egg, to incorporate the same in as many ounces of honey and old lard, putting thereto three cyath- I also of good old wine, and stamped all together into one composition untill such time as it be reduced to the consistence or thicknesse of hony, of which the patient must drinke as he need requires, with water, the quantity of an hazle nut at a time. Also it is good to lay three eggs in vinegre for three daies together, and vpon the fourth day to eat them, for the foresaid flux of the stomack: after which manner it auaileth much to take them against the opiliations & hardnesse of the spleene: but to such as are subiect to casting and reaching blood vpward, Physicians prescribe to take them in three cyaths of new wine. Some vse the yelks of eggs that haue bin old kept, for to reduce the skin that is blacke and blew to the fresh and liuely colour again; but they incorporate the same in hony with bulbe roots: the same sodden and drunk in wine, doe repress the immoderat flux of womens months: but applied raw with oile and wine, they discusse & re- K solve the ventosities within the matrice. Incorporat with oile rosat and goose greafe, they are good to be applied to the nape of the neck for the cricke and pain thereof: being roasted against the fire hard, and so presently applied hot to the seat, they are good for the griefs and accidents of the fundament: but more particularly for the swelling piles and bigs rising in those parts, they would be laid too with oile of roses. Being sodden in water untill they be hard, they serue very well for any burne or scald, with this charge, That presently the ashes of the same egg-shels calcined vpon burning coales, be applied to the place, and then to annoint the same with the foresaid yelks and oile rosat mixed together. Now it falleth out sometime, that eggs be all yelke within, & haue no white at all; namely, when the hen hath coued & sitten out them three daies together, and then be taken away from vnder her; and such kind of eggs the Greeks call Schista, L

Dele: hampius would haue the same eggs to be dried and reduced into powder, &c.

Take the eggs from vnder the hen when they be full of chicken, a little before they spring and the chicke be hatched, together with halfe as much of gal nuts, and giue the same for to streng- the chicke and weak stomack, with this caution, That the patient haue eate nothing in two hours before. And so me doe aduise for the dysentery or bloody flux, to giue the said chickens sodden egg and all together, putting thereto one hemine of austere or sharpe wine, and an equall quantitie of oile and parched barley groats drie. The fine pellicle or skin that is within the egg-shell, being taken from it (whether the egg be raw or sodden it skillett not) healeth the chaps that are in the lips, if it be applied thereto. The ashes of an egg-shell drunke in wine, stoppeth the issue of blood gushing out at any part: but the same ought to be burnt, or calcined without the pellicle or skin afore said; and so it makes an excellent dentifrice also to cleanse and scoure the teeth white: a liniment made with the said ashes and myrrhe together, saies the strange pro- flux of womens terms. And here I cannot chuse but note vnto you by the way, the superfluous M and pettie and wonderfull nature that egg-shels haue: for so hard compact and strong they be, that if you hold or set an egg endlong, no force nor weight whatsoever is able to break and crush it, so long as it standeth straight and plumbe vpright, untill such time as the head incline to a side and

A and bend one way more than another. Eggs entire and all whole as they be [i. white, yelke, shell and skin] taken in wine with rue, dill, and cumin, helpe women in hard trauell to speedie and easie deliuerance. Eggs incorporat with oile & rosin of the cedar mixed together, are singular good for to heale scabs and to kill the itch: put thereto the root of Cyclamin, [i. Sow-bread] it healeth the running skalls of the head: for those that reach vp purulent matter out of the chert, or spit blood, it is good to sup off a raw egg together with the juice of vnser leeks, and an equall quantitie of Greeke wine, but first all must be warmed, before that it be giuen to the patient. Against a cough, they ordaine eggs sodden and stamped together with hony, and so to eat them; or else to sup them off raw, with wine cuit & oile, of each a like quantitie. If a man haue any sore or vlcere in his secret parts seruing for generation, it were very good to inject one egg tempered B with three cyaths of wine cuit, and halfe an ounce of Amylum or starch-floure, presently vpon his coming forth of the baine or hothouse. An excellent linement there is made of sodden eggs stamped together with cresses, for the stinging or biting of serpents. How many means there be whereby eggs doe good as meat, there is not one but knoweth: for euen in their going downe, parts by the way. There is not any kind of viand in the world besides it, that nourisheth a sicke man, without any offence or burden at all to the stomack; and it may go well enough for meat and drinke both. As touching eggs sodden in vinegre, and how they may be made soft and tender therby, I haue already shewed: such eggs if they be wrought and knead with meale into a dough or past, do make a kind of bread which is soueraigne for all fluxes of the stomack. Some C there be who think it better to take these eggs thus mollified & resolved in vinegre, and to torrefie the same betweene two platters of earth, supposing that being thus prepared, they serued not only to stop a lark, but also to repress the immoderat flux of womens monthly tears: but in case the said fluxions be excessive and beyond all measure vehement, they are to be supped off raw, with water and meale in manner of a grewell or porrage: or els the yelks may be boiled by themselves in vinegre, untill they be hard, and then a second time be fried & torried afterwards with grosse pepper, and in this sort they will die any loosenesse of the bellie. And yet there is another singular remedie for the bloody flux, namely, to put the meat of a raw egg in a little earthen pot that neuer was occupied, and to add thereto as much hony as may amount to the quantitie of the egg, to the end that all be of equall proportion; then, within a while after to temper therewith D the like measure of vinegre & oile both, and to beat them all together oftentimes, that they may be well concorporat and vnited in one. In which composition, this is to be obserued, That the operation and speedier remedie wil ensue therupon. Others there are, who in stead of oile and vinegre, put in red rosin and wine, according to the former rate and proportion: howbeit they temper the said medicine after another sort; for they put in of oile, only as much as the egg comes part of Sumach, which I called Rus, and fve oboli weight of hony, with this charge, That they be all boiled together, and that the patient eat no other meat whatsoever for the space of foure hours after. Many there be, who to cure and ease the wringing gripes and torments of the belly, E take two eggs and foure cloues of Garlick, which they pun and stamp together; then they heat them ouer the fire in one hemine of wine, and giue this mash vnto the patient to drinke. To conclude, because I would not willingly omit any thing that may commend eggs and giue grace vnto them, know thus much moreouer, That the gleere or liquid white of an egg with quickelime, maketh an excellent sement to foulder or vnite any broken pieces of a glasse together: besides, of such strength and efficacie they are, that neither a piece of wood nor so much as any parcell of cloath wet or dipped in the white of an egg wil burn, but check the violence of the fire. Howbeit, note that all which I haue spoken of eggs, is to be meant those that hens only do lay: for as touching other birds eggs, I wil write in their due places; for as much as they are not destitute of many peculiar vertues and singular properties of their own.ouer & besides, I will not ouer- passe one kind of eggs besides which is in great name and request in France, and whereof the Greeke authors haue not written a word: and this is the serpents egg, which the Latins call Anguinum. For in Summer time yerely, you shall see an infinit number of snakes, gather round together into an hpape, entangled and enwrapped one within another so artificially, as I am not able to expresse the manner thereof: by the means therefore, of the froth or salutation which they

* About two grains.

yeeld from their mouths, and the humour that commeth from their bodies, there is engendered G
the egg aforesaid. The priests of France called *Druidæ*, are of opinion, and so they deliuer it,
That these serpents when they haue thus engendered this egg doe cast it vp on high into the aire,
by the force of their hissing, which being obserued, there must be one ready to lanch and receiue
it in the fall again (before it touch the ground) within the lappet of a coat of arms or soldiours
cassocks. They ascribe also that the party who carrieth this egg away, had need to be wel moun-
ted vpon a good horse and to ride away vpon the spur, for that the foresaid serpents will pursue
him still, and neuer giue ouer vntil they meet with some great riuier between him and them, that
may cut off and intercept their chase. They ad moreouer and say, that the onely marke to know
this egg whether it be right or no, is this, That it will swim aloft about the water euen against
the stream, yea though it were bound and enchaufed with a plate of gold.ouer and besides, these H
Druidæ (as all the sort of these magicians be passing cautious and cunning to hide and couer
their deceitfull fallacies) do ascribe, That there must be a certaine speciall time of the Moones
age elpied, when this businesse is to be gone about, as if (forsooth) it were in the power and dis-
position of man to cause the moon and the serpents to accord together in this operation of en-
gending the egg aforesaid by their froth and saluatiou, I my selfe verily haue seen one of these
eggs, and to my remembrance, as big it was as an ordinary round apple: the shell thereof was of
a certaine gristly and cartilagineous substance, and the same clasped all about (as it were) with
many acetables or concavities representing those of the fish called a *Pourcuttle*, which these
many acetables or concavities representing those of the fish called a *Pourcuttle*, which these
hath about her legs. And it is the ensigne or badge that the *Druidæ* doe carry for their armes.
And they hold it a foueraigne thing, for to procure readie exceffe vnto any princes, and to win
their grace and fauour, as also to obtaine the vpper hand ouer an aduersarie in any lute and pro-
cess of law, if one do carrie it about him. But fee how this vanitie and foolish persuasion hath
possessed the minds of men! for I am able vpon mine owne knowledge to auouch, that the Empe-
ror *Cladius Cæsar* commanded a man of arms and gentleman of Rome, descended from the *Vo-*
cantians, to be killed for no other reason in the whole world, but because he carried one of these
eggs in his bosome, at what time as he pleaded his cause before him in the court. This winding
and mutuall unfolding of these serpents one within another, putting me in mind of one thing
and worth the obseruation, That it was not for nought that forein nations haue ordained, that their
Embassadors who had commission to treat of peace, should carrie with them a certaine rod or
mace wherein were pourtraied serpents winding and clasping round about it; to signifie and K
shew, that these creatures, as sauage, fell, and venomous as they be otherwise, and as it were made
altogether of poison, yet otherwise they accord and agree well enough together: where it is
furthermore to be noted, that the manner was not to represent in these maces and ensignes of
peace, any furious serpents with crests vpon their heads.

As touching geese and their eggs, how good and profitable they are, before I enter into any
discourse (for my purpose is to treat of them also in this very booke) I cannot chuse but for the
honour duevnto the *Comagenes*, in regard of an excellent composition by them made, write
first of it, being of them called *Comagenum*: for that also the principall and best of that kind
it was most vsed and in greatest request in *Comagene*: which is a region belonging vnto Syria. It
consisteth of goose greace, cinamon, casia or canelle, white pepper, and an herbe called likewise
Comagene. Now for the better mixture and fermentation of these ingredients and the whole
composition, the vessell which containeth the same ought to be buried in snow: a pleasant smel
it hath, and is held to be a foueraigne ointment for any through cold and quivering fit; for con-
vulsions, for sodain pains whereof no euident cause is known; and in one word, for all lassitudes
and what infirmities sooner be cured by the medicines called in Greeke * *Acopæ* in such sort,
that it serueth not only for an outward ointment, but also for an inward medicine. This *Coma-*
genum is made in Syria after another manner, namely of the fat or grease of birds which is clem-
ed, tried, and purified, according as I haue before said, with an addition of *Erythreum*, *Xylo-*
ballamum, the bark or young shoots of the Date tree, and sweet Calamus, of each as much as
amounteth to the weight of the greace aforesaid; and all these together must be put into wine M
and set ouer the fire for suer and to take two or three waumes. Now this is to be noted, that
the conuenient time of making it is in winter, because it will neuer jellie and grow to any thick
consistence in Summer, vnlesse there be * wax put into it.

Many other good medicines and ointments there be made of Geese, whereat I marueile at
much

* *Acopæ*, so cal-
led, because
they be good
against in-
flamme or weari-
nesse.

* And that do-
leth much
the odorifer-
ous smell.

A much as at * *Goats*: for it is said, that all Summer long euen vnto the fall of the lease, Geese
and Raubens be continually sicke. Finally, as touching the honour which Geese deserued and
woon by discouering the skallade that the Frenchmen made into the Capitoll hill of Rome, I
haue written heretofore.

* For *Goats*
are said neuer
to be sicke
of the ague.

CHAP. IIII.

¶ Medicinable receits taken from dogs, and other beasts which are not tame, but wild:
also from foules. Remedies against the pricke or sting of the veno-
mous spiders *Phalangia*.

B Vpon the foresaid occasion, for the dogs which had the custome of the Capitoll, barked
not when the Gauls skaled the Capitoll, there is a custome yearly obserued at Rome to
truffe certain * dogs to forks, and thus as it were crucified, to hang them alieue vpon an El-
der tree for exemplarie iustice: which execution was performed between the temple of *Iouenius*
and *Summanus*. But seeing I am thus light vpon the mention of dogs, I must needs discouer
them more at large, and the rather, for that our ancestors in old time obserued many ceremo-
nies about this beast. First and foremost, the ancient Romanes thought the flesh of sucking
whelps to be so pure and fine a meat, that they vsed to sacrifice and offer them as an expiatory
oblation to their gods for to appease their indignation. And verily at this day they make no
scruple to sacrifice a yong whelp before it be full a day old, and especially such an one as the
C bitch puppieth the same morning: yea, and at the solemne festiuall suppers ordained for the ho-
nour of the gods, they forget not this day to serue vp at the table certain dishes of yong whelps
flesh that sucke their dams. Moreouer, that yong dogs flesh was an ordinarie seruice at those
sumptuous feasts called * *Aditalia*, it appeareth plainly by the testimonie of *Plinius* in his
* *Comædies*. Certes, it is generally thought, that for the venome called *Toxicum*, there is not
a better counterpoyson than dogs blood. It seemeth also that this domestical creature taught
men first the manner of discharging and purging the stomacke by vomit. In summe, there are a
number of other medicinable vertues in a dog highly commended, whereof I will write as oc-
casion shall be offered in conuenient place. But for this present I will proceed orderly ac-
cording to my first intention and purpose.

D To returne againe vnto the stinging of serpents, these remedies following are taken to be ef-
fectuall, to wit, sheeps treddles and Goats dung fresh gathered and boiled in wine to the consi-
stence of a liniment, and so applied vnto the place: also mice and rats splitted and so laid hot
vnto the wound. And verily, how basely fouer men thinke of this kind of cattell and hold them
no better than vermine, yet they are not without certaine naturall properties, and those not to
be despised: but principally in regard of the sympathy betweene them and the planets in their
ascent, as I haue noted heretofore: and namely, considering how the lobes and filaments of their
liuers and bowels do encrease or decreae in number, according to the daies of the Moons age.
And these magicians do report, that if one do giue vnto hogs the liuer of a mouse or rat with-
in a fig, they will follow the partie that gaue them that morcell. They say moreover, that the
E same is able to do as much in a man: but in case a cyath of oile be drunke vpon it, it looseth all
the vertue.

As touching Weasels, there be two kinds of them: for there bewild sort different from the
rest in bignes, for they be smaller: and those the Greeks call * *Lidides*: their gall is said to be ve-
ry effectuall against the sting of the *Apis*, whereas otherwise it is a very poyson it selfe. As for
that kind which keepeth about our houses, wandering here and there in euery corner, and vseth
to carie her killings in her mouth and to froeury day from place to place and neuer resteth (as
mine author *Cicero* doth write) there is an enemy to serpents and naturally persecuteth them.
Their flesh being salted, is giuen to the weight of one denier in three cyaths of wine, with great
successe, vnto those that be stung by serpents: also their maw farced with coriander seed, and
kept in salt or brine, is good for the same purpose if it be drunke in wine. But the yong kiting
F of the Weasell is best and most effectuall.

Other liue creatures there are besides, which for their baseness I bath to name and relate in
this place, howbeit, because so many authors with one consent haue so constantly commended
their medicinable properties, I make it a matter of conscience to passe them ouer in silence:
confide-

* *dividens*,
saith *Cat. Rob.*
dis. cap. 20. lib.
17. as such an
will not barke
and giue warn-
ing of stran-
gers comming

* or *Aspidater*,
saith *quod*
tells the place
in the *Comæ-*
die called *Sa-*
turia which is
not ex-
tant.

* Which be,
our *Ferrets*,
Some take
these for our
Cats.

counter charme againſt all forceries and witchcrafts : and more particularly, if a Bat be borne thrice round about a ſheepe-coat, and then hanged vnto the lintell of the dore, with the heeles vpward, it will ſerue for a ſingular preſeruatue to defend the ſheepe from all ſuch harmes. As for the blood of a Bat, they commend it highly for healing the ſting of ſerpents : if together with the leaues or ſeeds of a thistle it be applied to the place.

Touching the venomous ſpider called *Phalangia, they know not in Italy what it is, for all there be many kinds thereof: ſome are like vnto Piſmires, but that they be far bigger; their heads be reddiſh, the reſt of their body black, howbeit here and there marked with white ſpots. The ſting of this ſpider is more keene and ſharpe than that of the weſpe. It lieth ordinarily about ousens and mils. The beſt remedie againſt the prick of their ſting, is to preſent before the eyes of the patient, another ſpider of the ſame kind: for which purpoſe ſolke vie to keepe them in ſtore, when they find any of them dead. Their caſes or ſkins brought into powder and taken in drink, haue the like effect to young weazils or kitlings, as I haue declared before. A ſecond ſort there is of theſe venomous ſpiders Phalangia, which the Greeks diſtinguiſh from others by the name of Lupus. Thoſe that be of a third kind, and yet named Phalangia, are the ſpiders which be couered all ouer with a certain downe, and of all the reſt haue the biggeſt heads. Cut one of them and rip the bellie, you ſhall find within two little wormes or grubs, which (if it be true) that *Cecilius* hath left in writing) hinder women for conception in caſe they be knit within a peece of leather of a red deere ſkin, and tied to their armes or other parts of their bodie before the ſunne riſing: but this vertue continueth not about one year. Thus haue I ſhewed one receipt only, of all thoſe that * keep women from conceiuing; which I may be allowed to do in regard of ſome wiues, who being too fruitfull and ouercharged with child bearing, haue ſome reaſon to play them a while and reſt from teeming: and therefore may be pardoned, if they vie ſome ſuch meanes thereto.

There is another kind of ſpiders, which the Greeks call Rhagion, for that it reſembles a black grape kernell: theſe haue a very little mouth vnder their belly, and as ſhort legs, as if they were vnperfect and not fully made. Look where they bite, the pain that enſueth is much like to that which is occaſioned by the ſting of a ſcorpion: and their vrine who are hurt by them, ſeemes to the eye, cobwebs ſtoring aloft. I would ſay, that this ſpider were the ſame that Aſteriflow to the eye, cobwebs ſtoring aloft. Their ſting or prick cauſeth looſeneſſe and feebleneſſe of the knees. As for the blew ſpider, which carrieth a blacke downe or cotton, it is worſe than both the former, cauſeth trouble and dimneſſe of the eyes by their pricking, yea, and vomiting of matter reſembling cobwebs. And yet there is another Phalangium worſe than it, which cometh neare in ſhape to the Horner, but that it hath no wings at all, and look whomſoeuer it biteth, they are ſure to become leane and pine away. The venomous ſpider, called by the Greeks Myrmecion, is headed like vnto an Emmet: the bellie is blacke, howbeit marked with certain white ſpots: their ſting is as painefull as that of Weſpes. But as touching that kind of Phalangium which is called *Tetragnatum, there be two ſorts thereof: The one, which is the worſt of the twaine, hath the head diuided directly in the middeſt with a white line; whereas in the other, the ſaid line or ſeame runneth croſſe ouer the middeſt. Theſe make the mouths to ſwell whom they haue bitten. But thoſe that be of a dead aſh thwart. Theſe make the mouths to ſwell whom they prick as the reſt: Of which colour colour, and yet whitiſh behind, are not ſo quicke with their prick as the reſt: Of which colour there is another ſort that be altogether harmleſſe, and theſe be our common ſpiders or ſpinners, which againſt wals vie to ſtretch out their large webs as nets to catch poore flies. Now concerning the remedies appropriat to any prick or biting of the ſoreſaid Phalangia, there is not a better thing than to drink in oxycrat, water and vinegre mingled together, the braines of a Cock or Hen with a little pepper. Alſo to take in drink ſue Piſmires, is thought to be a ſingular medicine: and withall to make a liniment of ſheeps mucke aſhes, tempered in vinegre, and therewith to annoint the grieved place. Moreouer, the ſaid ſpiders themſelues (of any kind whatſoeuer) reſolved and putrified in oile, ſerue for the ſaid purpoſe.

As for the miſchieuous mouſe called the Hardiſhew, the runner found in a lambes maw taken in wine, healeth the hurt that cometh by her biting; alſo the application of a ſalue made with the aſhes of a Rams clay incorporat with hony, worketh the ſame effect: ſo doth a young weazill or kitling, prepared and vſed in manner aforeſaid in the Treatiſe of ſerpents. If one of theſe ſhrewes haue bitten a horſe or other beaſt, it is good to lay vnto the place a mouſe or rat new

A new killed, with ſome ſalt, or elfe the gall of a Bat with vinegre. The ſhrew it ſelfe being burſt, and ſo laid freſh and warm to the ſore, cureth the ſame: for this is obſerued, That if one of them be with yong when the doth bite, preſently the cleaueth in ſunder. And in truth, the beſt & ſureſt means to cure the hurt, is to apply vnto the wound the very ſhrew it ſelfe that did the deed, if poſſibly ſhee may be had; and yet the reſt are very good: for which purpoſe they vie to be kept in oile, or els to be dawbed ouer with clay, to ſerue in time of need: alſo the earth taken from a cart-rut where a wheele hath gon, is thought to be a proper remedie for the ſaid biting of a ſhrew, if it be applied thereto: for it is ſaid, that this creature is by nature ſo benumbed or dull of mouing, that it will neuer go ouer a cart-track.

As touching Scorpions, the lizard named Stello (by way of a reciprocall counterchange) is the greateſt enemy they haue, in ſomuch as at the very ſight only of the ſaid lizard, they will be affrighted and aſtonied and fall into cold ſweats: and therefore people vie to putrifie & reſolve Stelliona in oile, and therewith annoint the wounds that Scorpions haue made. Some there be who make a kind of plaſtire of the ſaid oile and litherge of ſiluer boiled both together, where-with they rub and annoint the grieved place. This lizard, which we name Stello, the Greeks call Colotes, Alcalabotes, and Galeotes: * it breeds not in Italy: but call it what you will, & whereſoeuer it is to be found, full it is of little red ſpots like lentils; a ſhrill noiſe it maketh, that pierceth the eares and goeth through ones head; it doth eat and graze like other beaſts, which be marks all contrary to our Stellions or ſtarre-lizards here in Italy. But to come againe vnto the prick of ſcorpions: it is thought good to rub the ſame with the aſhes of hens dung, mixt with the liuer of a dragon: or to take a lizard that is burſten, and the ſame to apply vnto the affected place; or a mouſe likewiſe which is clouen in ſunder, alſo to lay to the ſore the very ſame ſcorpion that did the harm; or to eat him roſted: and laſt of all, to drinke it in two cyaths of pure wine of the grape. Moreouer, this proper qualitie haue ſcorpions alone by themſelues, That they neuer prick the ball of ones hand, nor ſting at all unleſſe they may touch ſome haire. Furthermore, take any little ſtone whatſoeuer, and apply that ſide which lay next the ground vnto the wound, it will eaſe the paine: likewiſe any ſhell or poſſherd which lieth with ſome part of it couered with earth, if it be taken vp and laid vnto the ſore, with earth and all vpon it as it was found lying, is ſaid to heale the ſame perfectly: but in no wiſe they that haue the applying of it muſt looke behind them: they ought alſo to take heed and be very careful that the Sun ſhine not vpon them when they are about this buſineſſe. Earth-worms or mads ſtamped and laid ro, are very good to cure the biting of ſcorpions: and yet they ſerue beſides for many other remedies; in which regard they be ordinarily preferred in hony.

For the ſting of Bees, Weſpes, and Hornets, for the biting alſo of thoſe Horſeleeches called Bloudſuckers, the Howlat is counted a ſoueraigne remedie, by a certaine antipathy in nature: alſo whoſoeuer carry about them the bill of a Woodpecker or Hickway, ſhall neuer be annoyed with any of the ſoreſaid vermin. The ſmalleſt kind of locuſts likewiſe, which are without wings and be called Atrabaji, be aduerſe and contrarie vnto them all.

Ouer & beſides the Inſects aboue named, there be in ſome places certain piſmires alſo very venomous, which *Cicero* calleth Solpuges: but they of Grenado in Spain, Solpuges: howbeit few or none of them are to be found throughout all Italy. But what help is there for them and their poiſon? Surely the heart of a Remouſe, otherwiſe called a bat, hath an operation which is aduerſe not only to them, but to all Ants beſides.

As for the flies named Cantharides, I haue ſhewed before how contrarie they be to the venon of the Salamander: and yet conſidering how hurtfull they be themſelues, and a very poiſon to the bladder, cauſing intolerable pain if they be drunk down, much diſpute & queſtion there is among phyſicians. * how they ſhould be taken and vſed; for how venomous they be, it may appeare by the praſtice of a certaine Egyptian phyſician, whom by occaſion that one *Cosinus* a knight of Rome, a great fauorit of the Emperor *Nero*, was infected with the ſoule tetra called Lichene, the ſaid prince ſent for out of Egypt to cure of that diſeaſe: but he prepared ſuch a drink of Cantharides for his patient *Cosinus*, that it quickly coſt him his life and brought him to his graue. Howbeit there is no doubt, but being applied outwardly they are not only harmleſſe, but alſo very good, eſpecially if they be incorporate in the iuice of the black wilde Vine called Vva Taminia, and ſheeps ſuet or goats tallow. Moreouer, albeit well knowne it is that theſe Cantharides be venomous, yet thoſe Authors that write of them be not agreed and reſol-

* And yet *Matth. Pliny* on *Diſſe*, ſaith it is the *Tetragnatum* which is common in *Tulcan*.

* Namely, whether they are to be ſued inwardly at all? whether with their wings, head & feet, or without them.

pinion, because that blood is hotter, and therefore by so much the better. But when the eyes bee dressed with this blood, it would not be forgotten, that there be a thin bolster boiled in hony, laid aloft, yea, and a lock of greafe wooll vpon it, which had bin soaked either in oile or wine. The blood of the fouls abouenamed helpeth those that cannot see toward a night: the liuer also of a sheep doth the same: but if the said sheep be of a russet or browne colour, the medicine will do the better: for as I obserued before in Goats, those that carry such a coat, bee alwaies esteemed best. Many giue counsell to foment and wash the eyes with the decoction of the said liuer: and if they be in pain and swollen withall, they aduise to annoint them with the marrow of a Mutton. They promise also, That the ashes of scirrh-owles eyes put into a collyrie, will clarify the sight. Indeed the dung of Turtles consumeth the white pearles in the eyes; so doth the ashes of shell-snails or hoddidods: as also the meeting of the kestrell Cenchris, which the Greeke writers will haue to be a kind of Hawke. As for the spot or pearle in the eye called Argem, it may be cured by all those medicines aboue rehearsed, so that they be applied thereto with hony. But the best hony simply for the eyes, is that wherein a number of Bees were forced to die. Whosoer hath eaten a young stork out of the nest, he shall (they say) continue many yeares together, and neuer be troubled with inflamed or bleared eyes: like as they that carrie about them a Dragons head. It is said moreover, That the Dragons greafe incorporated in hony and old oile, dispatcheth and scattereth the filmes and webs that trouble the sight, if they be taken betimes before they be grown too thicke. Some there be who at the full of a Moone put out the eyes of young swallows, marking the time when they haue recovered their sight againe: for then they pluck off their heads and burne them to ashes, which being tempered with hony, they vse for to cleare their owne sight, to ease the pains, and discusse the blearednesse of eyes, yea and to heale them, if they haue caught a blow or ruff. As for Lizards, they vse to prepare them many and sundry waies for the infirmities incident to the eyes. Some take the green Lizard and put her close within a new earthen pot that neuer was occupied, and therewith of those little stones which the Greeks call * Cinadia, (and these are euually applied vnto the face for the swelling glandules and tumors that many times rise there) marking euery one of them respectively by themselves: which being done, they take forth of the pot euery day one; & when the ninth day is come, they let out the Lizard, and then they keepe the said stones thus ordered and prepared, as soueraigne remedies to allay the pain and griefe of the eyes. Others get a green Lizard and put out her eyes, and hestow her in a glasse with a bed of earth vnder her in the bottom thereof, and withall, inclose within the said glasse certaine rings, either of solid yron or masse gold: and so soon as they perceine through the glasse, that the Lizard hath recovered her sight againe, they let her forth: but the said rings they keepe with great care and regard, as a speciall meanes for to helpe any bleared eyes. There be moreover, who vse the ashes of a Lizards head in stead of Stibium or Antimonium, for to make smooth the roughnesse of the eye-lids. Some hunt after green Lizards with long neckes, which breed in sandy and gravelly grounds, and when they be gotten, burne them to ashes, with which they vse to repress the flux of waterish humors which begin to fall into the eyes, yea, and therewith consume the red pearls growing therein. It is said moreover, That if a Vasaels eyes be pecked or plucked out of the head, they will come againe, and thence will recouer her sight: and therefore they practise the like with rings and them together, as I obserued before in Lizards. Furthermore, it is said, That as many as carry about them the right eye of a serpent tied vnto any part, it is very good for to stay the violent rheumes that haue taken to the eyes, but then in any wise the serpent must be let goe a-lieue after that she hath lost her eye. As touching those eyes which be euermore weeping, and do stand full of water continually, the ashes of the star-lizards head called Strellio, together with Antimonium, helpeth them exceeding much. The copwebs which the common Spider maketh, that vseth to catch flies, but especially that which shee hath wouen for her nest or hole wherein the lieth her selfe, is soueraigne good for the flux of humours into the eyes, if the same be applied all ouer the forehead, so as it meet with the temples on both sides: but wot you what, none must haue the doing hereof, either to get the said copwebs, or to lay it vnto the place, but a young lad not as yet vndergrowne, nor foureteen yeares of age: neither must he be of the partie whom hee cureth, in three daies after: ne yet during the space of three daies must either hee or his Patient touch the ground with their bare feet: Which circumstance and ceremonies being duely obserued, it is wonderfull to see what a cure will follow

A follow thereupon. Furthermore, it is said, That these white spiders with the long and slender legs, being punned and incorporated in old oile, be singular for to consume the white pearle in the eye, if the same be dressed with that composition. Also those spiders that worke ordinarily vnder roofes, rafters, and boarded floors of houses, and weaue the thickest webs, if any of them be inwrappd within a peece of cloth and kept bound to the eyes or forehead, do restraime for cure the said rheumes and catarrhes that haue found a way to the eyes. The greene Beetle hath a property naturally to quicken their sight who do but behold them: and therefore these lapidaries and cutters or grauers in precious stones, if they may haue an eye of them once & looke vpon them, take no more care for their eyesight, how it should serue their turnes when they are at their worke. Thus much of eyes.

B As concerning the ears and the infirmities incident vnto them, there is not a better thing to mundifie and cleanse them than a sheepes gall with hony: and a birches milke if it be dropped into them, easeth their paine. Dogs greafe tempered with Wormewood and old oile, helpeth those that be hard of hearing, so doth Goose greafe: howbeit, some put thereto the iuice of an Onion & Garlick, of each a like quantity. In this case also there is much vse of Ants eggs alone without any thing els: for as little and silly a creature as it is, yet the is not without some medicinall vertues: in so much, as Beares, when they feele themselves sickish or not well at ease, cure themselves with eating Pisimmas. As for the manner of preparing as well the greafe of a goose as of all other fouls, this is: first the fat ought to be clenfed and rid from all the skins, veines, and string that are among it, and then to be laid abroad to the Sun in an earthen pan, covered ouer with a new lid of earth likewise which had neuer bin vsed: this done, the said pan must be let ouer seething water, that the said greafe may melt: and then it is to passe through linnen bags that it may be tryed from all the grosse cratchens: and so they put it vp in a new earthen pot, & set it in some cold place against the time that it is to be vsed: howbeit, this is well known, That if some hony be put thereto, it is lesse subiect to corruption or putrification. Moreover, the ashes of burnt milke incorporated in hony, or els foddren with oile of Roses, allaieth the pain in the eares if it be infilled into them. But in case some earwig or such like vermine be crept into the eares, there is not the like means to cause it to come forth againe, as is the gall of miced dissolved in vineger & dropped into them. Also when water is gotten into the head by the eares, Goose greafe, together with the iuice of an Onion, is singular good to draw it out. Moreover, there is a notable medicine made of dormice for all infirmities of the eares, which otherwise could not be cured, but were giuen ouer by all Physitians: for the making whereof, they take a dormouse and flea it, and after the guts and entrails be taken forth, they leech the same with hony in a new earthen vessell. Howbeit, some Physitians there be, who thinke it better to boile the same with Spikenard, vntill a third part be consumed, and so relesue it for their vse: and whensoever after there is need of it, the manner is to infuse the said liqour warme into the eare by a pipe or instrument called an Otenechyte. This is knowne by experience to heale all the accidents of the eares, though otherwise incurable. Also the decoction of earth worms boiled with Goose greafe is singular good likewise to be poured into the eares. But if the eares be excruciated, broken out, and down matter, the red worms ingendred about trees stamped in a mortar with oile, are very proper to heale the same, if they be applied thereto. Lizards that haue hanged vp a long time a drying with their mouths downward, if they be punned with salt, serue to heale the eares that haue caught some hurt either by bruise, crush, or dripe. But about all other, the Lizards that haue brown spots vpon them like rusty yron, and are straked along the taile with lines, are most effectual for these infirmities. As touching the Wool beads or Caterpillars, which some call Mil-leped, & others, Multipeda or Centipeda, which are a kind of earth-wormes keeping vpon the ground, all hairy, hauing many feet, & courbing arch wise as they creep, and if you touch them, they will gather round together: the Greeks, some call them * Oniscos, others Tylos: these * worms (I say) are very effectual to assuage the pain of the eares, if they be foddren with the iuice of Portree in the rind of a pomgranate: some put thereto oile of Roses, & giue aduise to poure this medicine into the contrary eare that is not pained. As for that worm or vermin which scirrh not archwise with some part of the body in creeping, the Greeks, some call it Seps, others Scolopendra; which though it be lesse than the former described, yet mischievous enough & venomous. The snails that carry shells vpon their backs, and are usually dressed for good meat, applied with Myrre or the powder of Frankincense, are very good for the eares that be crackt: so are the little

* Because they be found in the fifth called Cinadia.

* Physicon foundeth Oniscus (which we call a Sow or Wood-louse) with the Caterpillar or wood-bead Mil-leped.

* Indeed our Sows or woodlice, called otherwise Pot-collions, and Multipedes, but not Mil-leped, & which if one touch them, draw themselves round, are good for the eares: but not the scirrhous. Will beards or Caterpillars Mill-peda, which in their creeping rise and fall, &c.

370
tles and broad snails brought into the forme of a liniment with hony, and laid too according: G
ly. The sloughs or skins that serpents cast, calcined upon a tile or porphard red hot, and so red-
ded into ashes and incorporat with hony, are very medicinable for all the accidents of the eares,
if the same be dropped into them; but principally when they stink or yeeld from them a strong
favour; but if they be full of purulent matter, and run withall, it were better to mingle the same
with vinger in stead of hony: but best of all with the gall of a Goat, a Bœufe, or a Sea-Tortois.
The foresaid sloughs or skins if they be above one yere old, or have caught much wet by raine
and water, haue lost their vertue, & do no good, as some are of opinion. Moreover, the bloodie
humour that cometh from a spider, either tempered with the oile of Roses, or els alone by it
scile upon a Locke of wooll, or with a little Saffron, is very good for the eares: so is the Cricket
digged vp and applied to the place earth and all where it lay. *Nigidius* attributeth many prop-
erties to this poore creature, and esteemeth it not a little; but the Magicians much more a fair
deale: and why? Forsooth because it goeth as it were reculing backward, it pierceth and
borereth an hole into the ground, and neuer ceaseth all night long to creake very shrill. The manner
of hunting and catching them is this. They take a flie and tie it about the midst at the end
of a long haire of ones head, and so put the said flie into the mouth of the Crickets hole; but first
they blow the dust away with their mouth, for feare lest the flie should hold her selfe therein:
the Cricket spies the filly flie. sealeth vpon her presently and claspeth her round, and so they
are both drawne forth together by the said haire. The inner skin of a Hens giser, which the
cook vseth to cast away, if it be kept and dried, and so beaten to poulder and mingled with wine,
is good to be dropped or poured for into the eares that runne with matter: so is the fat also
of an Hen. There is a certaine kind of fattinasse to be found in the flie or insect called *Blatta,
when the head is plucked off, which if it be punned & mixed with oile of Roses, is (as they say)
wonderfull good for the eares: but the wooll wherein this medicine is inwrapped, and which is
put into the eares, must not long tarry there, but within a little while be drawne forth againe;
for the said fat will very soone get life and proue a gub or little worm. Some writers there be
who affirm, That two or three of these flies called Blatta foddren in oile, make a soueraigne me-
dicine to cure the eares: and that if they be stamped and spread upon a linnen rag and so appli-
ed, they will heale the eares, if they be hurt by any bruise or contusion: Certes this is but a na-
stie and ill favoured vermine, howbeit in regard of the manifold and admirable properties
which naturally it hath, as also of the industrie of our Ancestors in searching out the nature of K
it, I am moved to write thereof at large and to the full in this place. For they have described
many kindes of them. In the first place, some of them be soft and tender, which being foddren
in oile, they haue proued by experience to be of great efficacie in fetching off werts, if they bee
annointed therewith. A second sort there is, which they call Mylœcon, because ordinarily it
hauntheth about milles and bake-houses; and there breedeth: these, by the report of *Atula* and
Pisito two famous Physitians, being bruised (after their heads were gone) and applied to a bo-
dy infected with the leprosie, cured it the same perfectly. They of a third kind, besides that they
be otherwise ill favoured enough, carry a lothsome and odious smell with them: they are sharp
rumped and pin buttock also: howbeit, being incorporate with the oile of pitch called *Isispe*
læon, they haue healed those vlcers which were thought, *Nunquam sana*, and incurable. Also L
within 21. daies after this plastre laid too, it hath been knowne to cure the swelling wens cal-
led the Kings evil: the botcles or bites named Pani, wounds, contusions, bruises, morimals,
scabs, and fellows: but then their feet and wings were plucked off and cast away. I make no
doubt or question, but that some of vs are so daintie and fine eared, that our stomacke riseth at
the hearing onely of such medicines: and yet I assure you, *Diodorus* a renowned Physitian, re-
porteth, That he hath giuen these foure flies inwardly with rosin and hony, for the jaundie, and
to those that were so strait winded that they could not draw their breath but sitting vpright.
See what libertie and power ouer vs these Physitians haue. who to practise and trie conclu-
sions vpon our bodies, may exhibit vnto their Patients what they list, bee it neuer so home-
ly, so it goe vnder the name of a medicine. Howbeit, some of the more ciuile sort, and who M
carried with them a better regard of man-hood and humanitie, thought it better and a more
cleane kinde of Physicke, to reserue in boxes of horne the ashes of them burnt, for the vses a-
bouenamed. Others also would beat them (after they were dried) into poulder, and minister
them in manner of a clystire unto those that were * Orthopnoicke and Rheumaticke. Certes,

A Certes it is well knowne and confessed, that a liniment made of them will draw forth prickles,
thorns, spils, and whatsoeuer sticketh fast within the flesh. Moreover, the honey wherein Bees
were extinct and killed, is soueraigne for the diseases of the eares. As for the impostumes and
swellings arising behinde the eares, called Pacorides, Pigeons dung applied thereunto, either
alone by it selfe, or with barley meale and oatmeale, driueth them backe or keepeth them down.
Also the liuer or brains of an Owle being resolu'd in some conuenient liquor, and applied ac-
cordingly, cureth the accidents of the lap of the eare, and the foresaid impostumations, so doth
a liniment made of the wormes called Sowes, together with the third part of rosin: and lastly,
the cricquets about rehearsed, either reduced into a liniment, or else bound to whole as they be,
are good in these cases. Thus much concerning those maladies about specified: it remaineth
B now to proceed vnto other diseases, and the medicinable receipts respectiue vnto them, drawne
either from the same creatures, or els from others of that kinde: whereof I purpose to treat and
discourse in the next booke ensuing.



THE THIRTIETH BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY G. PLINIUS SECVNDVS.

The Proem.

CHAP. I.

¶ The original and beginning of Art Magicke. When it first began, and who were the
inventors of it. By whom it was practised and advanced. Also other
Receipts or medicines drawne from Beasts.

E He folly and vanitie of Art Magicke I haue oftentimes already taxed and con-
futed sufficiently in my former books, when and wheresoeuer iust occasion and fit
opportunitie was offered; and still my purpose and intention is to discouer and
lay open the abuse thereof in some few points behind. And yet I must needs say
the argument is such as deferueth a large and ample discourse, if there were but
this only to enuence me, That notwithstanding it be of all arts fullest of fraud, de-
ceit, and couenage, yet neuer was there any throughout the whole world either with like credit
professed, or so long time vpheld & maintained. Now if a man consider the thing well, no mar-
uell it is that it hath continued thus in so great request and authoritie: for it is the onely Sci-
ence which seemeth to comprise in it selfe three professions besides, which haue the command
and rule of mans minde about any other whatsoever. For to begin withall, no man doubteth
but that Magicke tooke root first and proceeded from physicke, vnder the pretence of main-
taining health, curing and preuenting diseases: things plausible to the world crept and insinua-
ted farther into the heart of man, with a deepe conceit of some high and diuine matter therein
more than ordinarie, and in comparison thereof all other physicke was but basely accounted.
And hauing thus made way and entrance, the better to fortifie it selfe, and to giue a goodly
colour and lustre to those faire and flattering promises of things, which our nature is most
giuen

* which Physy-
tians, for a
kind of Scarra-
beus or Blatta.

* Orthopnoicke:
Such as cannot
take their
wind but sit-
ting vpright.

given to hearken after, on goeth the habit also & cloke of religion: a point I may tel you that euen in these days holdeth captiue the spirit of man, and draweth away with it a greater part of the world, and nothing so much. But not content with this successe and good proceeding, to gather more strength and win a greater name, she intermingled with medicinable recits & Religious ceremonies, the skill of Astrologie and arts Mathematical; presuming vpon this, That all men by nature are very curious and desirous to know their future fortunes, and what shall be- tide them hereafter, perswading themselves, that all such foreknowledge depends on the course and influence of the stars, which giue the trust and most certain light of things to come. Being thus wholly possessed of men, and hauing their senses and vnderstanding by this means fast enough bound with three sure chaines, no maruell if this art grew in processe of time to such an head, that it was and is at this day reputed by most nations of the earth, for the paragon & chief of all sciences: in somuch as the mighty kings and monarchs of the Levant are altogether ruled thereby. And verily there is no question at all, but that in those East parts, and namely in the realme of Persia, it found first footing, and was inuented and practised there by * *Zoroastres*, as all writers in one accord agree. But whether there was but that one *Zoroastres*, or more afterward of that name, it is not yet so certainly resolued vpon by all Aurohrs: for *Eudoxus* (who held art Magike to be of all professions philosophical and learned disciplines, the most excellent and profitable science) hath recorded, that this *Zoroastres*, to whom is ascribed the inuention thereof, liued and flourished * 6000 years before the death of *Plato*. And of his minde is *Aristotle* also. Howbeit *Hermippus*, who wrote of that art most exquisitely, and commented vpon the Poeme of *Zoroastres*, containing * a hundred thousand verses twenty times told, of his making; and made besides a Repertorie or Index to euery booke of the said Poësie: this *Hermippus* (I say) reports, That one *Azonaces* taught *Zoroastres* Art Magick; which master of his liued 5000 yeres before the war of Troy. Certes I cannot chuse but maruell much, first, That this Science and the memoriall thereof should so long continue, and the Commentaries treating of it not miscary and be lost all the while, during such a world of years: considering besides, that neither it was ordinarily practised and continued by tradition from age to age; nor the successors in that facultie were professors of the greatest name, and renowned by any writings. For what one is there thinke you among so many thousands, that hath any knowledge, so much as by bare heare-say, of those who are named for the only Magitians in their time, to wit, *Apollonius* & *Zaratras* Medians, *Marmaridius* of Babylon, *Hippocritus* the Arabian, and *Zarmocenis* of Assyria. For bookes haue none extant of their writing, nor any monuments which beare record and giue testimony of such clerks. But the greatest wonder of all is this, that *Homer* the Poet in his *Ilias* (a poem composed purposely of the Trojan war) hath not so much as one word of Magick; and yet in his *Odyssie*, where he discourseth of the adventures, trauels, & fortunes of prince *Ulysses*, such a do and stirre there is with it, as if the whole work consisted of nothing else but magickie. For what is meant by the variable transformations of * *Proetus*, or by the songs of the * *Meremades*, whereof he writeth so much; but that the one was a great forcerer, the other famous witches or Enchantresses. As for that which he relateth of *Iady Cere*, how shee wrought her feats by conjuration only, and raising vp infernal spirits; surely it fauoureth of art Magick and nothing else. I must much also, that after *Homer*'s time there is no writer maketh mention how this art arrived at Telsemus, a city [in the marches of Lycia] wholly addicted to religion, & so famous for the collidge of priests and soothsayers there: or at what time it made a voyage and passed ouer into Thessaly; where it reigned to rise, and was so vually practised in euery towne & city, that with vs here in these parts of the world it tooke the denomination of * that countrey, and retained the same a long time, notwithstanding that the word Magickie indeed was appropriate vnto a strange and far remote Nation. And verily considering how about the time of the war and destruction of Troy, there was no other physick in vse but that which *Chiron* the Surgeon practised, and that during the heat and bloody wars only; it seemeth very strange and wonderful to me, That the nation of Thessaly, and the native country of *Achilles* [and *Chiron*] should become so famous for magick: in somuch as *Menander* also (a Poet by all mens iudgement so famed by nature for deep learning and excellent literature, as that he had no concurrent in his time that came neere vnto him) entituled one of his Comedies, Thessalica; wherein he deciphered and depicted liuely vnto vs the whole order and manner of witches, with all their charmes and incantations, by the vertue whereof they would seem to pull the Moon down from heauen. I would

haue

A haue thought that *Orpheus* soon after and in the age next ensuing, had brought in first these superstitious ceremonies, by reason of the propinquity and neighborhood of that region, and that he proceeded therewith to the aduancement of physick, but for one thing which plucketh me back, namely, that Thrace his natural country and the place of his birth, was altogether ignorant of Magick, and knew not what it meant. But as far as euer I could finde, the first that is recorded to haue commented and written of this art, was *Orpheus*, who accompanied *Xerxes* King of the Persians, in that voyage and expedition which (in warlike manner) he made into Greece: and to say a truth, he it was that sowed the seeds of this monstrous Art, and infected therewith by the way, all parts of the world wherefoeuer he went and came. Howbeit, those Authors, and historiographers who haue searched more neerly into the matter, find down another *Zoroastres*, born in the Isle Proconnetus, who wrote somewhat before *Orpheus*, of that argument: neuertheless, this is held for certain, that *Orpheus* was the man, who most of all other set the Greeke nations not onely in a hot desire, but also in a madding fit and enraged as it were after Magick. And yet I must needs say that I haue obserued, that not only at first, but also from time to time, the greatest name that went of learned men and great philosophers, for their singular skill and profound knowledge, arose from the opinion that was of their insight in this Science. Certain it is, that *Pythagoras*, *Empedocles*, *Democritus*, and *Plato*, were so far in lode therewith, that for to attaine the knowledge thereof, they vndertooke many voyages and journeyes ouer sea and land, as exiled and banished persons, wandering from place to place, more like trauelers than students; and being returned againe into their owne countries, this Art they blazed abroad and highly praised; this they held as a secret and diuine myserie. As for *Democritus*, he raised a great name of *Apollonius* *Capadices*, and *Dardanius* of Phoenicia, as well by the Books of *Dardanius* his master (which he fetched from out of his sepulchre where they were bestowed) as also by publishing commentaries of his owne, which were extracts and draughts out of those authors and their writings; which afterwards, receiued and learned by others, so passed from hand to hand, and were so deeply ingrauen and imprinted in the minds and memories of men, that I assure you I wonder at nothing in the world so much, for so full they are of lyes, & so little or no truth, godlinesse, and honesty is contained in them, that men of iudgement and vnderstanding who approue and esteem his other Books of Philosophie, will not beleeue that these workes were of *Democritus* his making: howbeit, this is but a vaine conceit and persuation of theirs, for well it is knowne & confessed, that *Democritus* led away an infinite number of people by this means, & no man so much, filling their heads with many faire promises, and the sweet impression thereof rauished their spirits after this Art. Moreover, there is yet one point more, whereat I wonder as much as at any other; to wit, that these two professions (Physicke I mean and Magick) flourished both together in one age, and shewed themselves in their greatest glory; which was about the Peloponnesiacke war in Greece, 3000 years after the foundation of our citie of Rome; at what time as *Hippocrates* professed the one, and *Democritus* for his part published the other. Now there is another faction (as it were) of Magitians, which tooke the first foundation from *Admetus*, * *Iamnes*, and *Iotepes*, Iewes; but many thousands of yeres after *Zoroastres*: and yet the * *Cyprian* Magickie is later than so by as many yeres. But to come againe vnto our Magike aboue said: there was a second *Orpheus* in the daies of *K. Alexander* the Great, who (by reason that he attended vpon him in his train, during his journeyes and voyages that he made) was himself in great reputation abroad, and by meanes thereof gaue no small credit and authoritie to his profession; for that hee had opportunity thereby (as no man need to doubt) to trauell and compass the globe of the earth, and so to spread and divulge this learning in all parts. And verily, that this doctrine hath bin heretofore receiued in some nations of Italy, it appeareth as well by good euidences and records extant at this day in the body of our Law written in the 12 Tables, as by other arguments and testimonies which I haue alledged in the former Booke. Certes, in the 657 yere after the foundation of Rome citie, and not before (which fell out to be when *Cn. Cornelius Lepidus* and *P. Licinius Crassus* were Consuls) there passed a decree and act of the Senat, forbidding expressly the killing of mankind for sacrifice: whereby we may euidently see, that vntill this inhibition or restraint came forth, our progenitors and ancestors were giuen to those inhumane and monstrous sacrifices. No question there is verily, but that this Art of Magickie was professed in France, and continued vntill our daies: for no longer is it agoe than since the time of *Tiberius Caesar*, that their Druidæ (the Priests and Wisemen of France) were by his authority put down,

K k

together

* K of the B-
rians, which
some take to
be Abraham.
* Isteems that
in the calcula-
tion of yeres,
27my miltier
the year was
for Plutarch
5ith he liud
600 yeres be-
fore the Tro-
jan war, or els
that the meaner
years are lost
* *Vates* centu-
milia versum,
i. two millions
of verses.
* *Disiodus* Si-
culus faith that
this was meet-
ly a fiction, a-
rising from heu-
re.
That *Proetus*
being king of
Egypt, and be-
ing to the eus-
t of the Egip-
tians kings
for greater
mainely and
stirre, threat-
ning himself ad-
orned with
the enligens,
representing a
Bull, Dragon,
Lion, tree, fire,
and such like:
altering the
fence of these
ornaments,
which contain-
ed some hie-
roglificall mys-
teries appor-
propriat to the
person of a
King.
* Three daugh-
ters of *Admetus*
and *Callippe*
whose names
were *Parthen-*
on, *Ligia*, and
Leucippe, equi-
valled witches,
able to doe
great matters
by charmes.
* For properly
the Magi were
the wife men
of Persia, and
yet at Rome
they vually
ermed Magi-
tians by the
name of Thes-
salians.

* It should seeme
that these were the
Magicians of *Thes-*
salia where many
times, 2. m. chap.
maketh mention, who
would haue con-
fitered the mi-
racles wrought by
Admetus where he
said that *Plutarch* re-
nate in the holy Scrip-
tures, and void of
true religion, nam-
ely *Admetus* the pro-
phet and faithful
God, with such
forcers and en-
chanters. For the
light of the scrip-
telle, attributed all
effects and opera-
ons to nature, as
to Magick; & were
not able to distin-
guish between mi-
racles done by the
finger of God or his
ministers, and the
illusions practised
by the diuell and
his liars.
* Some interpre-
tists be meant of
Christianity, which
was receiued with
the first in Cyprus
by the preaching of
the Gospell, and it
is thought, by S.
Barnabas for that
during the infancy
of heremitic
Church, many mi-
racles were
wrought by the A-
pistles and Disci-
ples of our Saviour
Iesus Christ, the
heaven hold that
Religion of Chris-
tians to be a kind
of Magick. Other
vnderstand this
place of the Priest
Cyprian *Pennus*
called *Cyprianus*.

together with all the pack of such Physitians, prophets, & wizards. But what should I discourse any longer in this wife, of that Art which hath passed ouer the wide ocean also, & gone as far as any land is to be seene, even to the vtmost bounds of the earth; and beyond which, there is nothing to be discouered but a vast prospect of Aire and VWater. And verily in Brittain at this day it is highly honored, where the people are so wholly deuoted vnto it, with all reuerence and religious obseruation of ceremoniesthat a man would think, the Persians first learned all their Magick from *them. See how this Art and the practise thereof is spread ouer the face of the whole earth! and how *those nations were conformable enough to the rest of the world in giuing entertainment thereto, who in all other respects are far different & diuided from them, yea and in manner altogether vnknowne to them. In which regard, the benefit is inestimable that the world hath received by the great prouidence of our Romanes, who haue abolished these monstrous and abhominable Arts, which vnder the shew of religion, murdered men for sacrifices to please the gods; and vnder the colour of Physicke, prescribed the flesh to bee eaten as most wholesome meat.

CHAP. II.

¶ The sundry kinds of Magicke, The execrable acts of Nero: and the destruction of Magicians.

Magick may be practised after diuers fashions, according as *Osphanes* hath set downe in writing: for it worketh by the means of (1) Water, (2) Globes or Balls, (3) Aire, (4) Starres, (5) Fire-lights, (6) Basons, and (7) Axes: yea, and many other means there bee, that promise the foreknowledge of things to come: besides the raising vp and conjuring of ghosts departed, the conference also with Familiars and spirits infernall. And all these were found out in our daies, to be no better than vanities & false illusions, and that by the Emperor *Nero*: and yet was he neuer more addicted to play vpon the cythern, nor took greater pleasure to hear & sing tragical songs, than to study art Magicke: and no maruell if he were giuen to such strange courses, hauing wealth & world at will; and his fortunes besides attended vpon & accompanied with many deep corruptions of the mind. But amid those manifold vices whereunto he had betaken and sold himselfe, a principall desire he had, to haue the gods (forsooth) and familiar spirits at his command; thinking that if he could haue attained once to that, hee had then climbed vp to the highest point and pitch of magnanimity. Neuer was there man that studied harder, and followed any Art more earnestly, than he did Magicke. Riches he had enough vnder his hands, and power he wanted not to execute what he would; his wit was quick and pregnant, to apprehend and learn any thing, ouer and besides other means that he practised to bring about this desire of his, which were so intolerable, that the world could not indure them; and yet he gaue it ouer in the end without effect: an vndoubted & peremptory argument to conuince the vanity of this Art, when yea such an one as *Nero* rejected it. But would to God he had conferred with familiars & spirits, such & taken counsel of all the diuels in hell, for to be resolu'd of those suspicious which were gotten into his head, rather than giuen commission as he did to the professed bawds and common harlots in stinking stews and brothell houses, for to make inquisition from house to house after those whom he had in ieiunation. Certes, no bloudy and detestable sacrifices (how inhumane and barbarous soeuer) he could haue performed, but they had bene far more easie and tollerable, than those cruel imaginations which he conceiued, and whereupon he murdered most piteously so many good citizens, & filled Rome with their restless ghosts. But to return againe to Art Magicke, which *Nero* would so faine haue learned: what might be the reason that he could not reach vnto it? Surely these Magicians are not without their shifts & meanes of euasion to faue the credit of their art, if haply they misse and come short at any time of their purpose: for otherwhiles they beare vs in hand, that ghosts and spirits will not appeare, nor yeeld any seruice to those persons who are *freckled & full of pimples: and haply **Nero* the Emperor was such an one. As for his lims otherwise, he had them all, & found they were: besides, the set daies and times fit for this practise, and prescribed by Magicians, he might chuse at his good will & pleasure. Moreover, an easie matter it was for him to meet with sheep, cote black, & such as had not a speck of white or any other colour; for him (I say) who when he list could sacrifice men, and took greatest delight in those sacrifices: furthermore, he had about him *Tyridates*, the K. of Armenia, a great Magician, to giue him instructions. This prince *Tyridates* being vanquished and sub-

A dued by the Roman captiues vnder *Nero*, and forced by their capitulations to present himselfe personally at Rome for to do homage vnto the Emperor; travelled thither all the way by land (which was a fore charge to the countries & prouinces through which he passed, bringing with him as he did the whole pompe and train for the triumph ouer Armenia and himselfe) & came vnto *Cesar*. And why would not this *Tyridates* passe the seas and saile ouer into Italy, the nearest and most expedit way? Forsooth, so precise he was, that he made a scruple, and thought it vnlawfull (as all magicians do) either to spit into the sea, or otherwise to discharge into it the necessary excrements that passe from mans body, thereby to pollute and defile that Element. Many other magicians he brought with him in his traine. He instructed *Nero* in the principles of Magicke, yea and admitted him to their sacred feasts, and solemne suppers, and all to enter him into that profession: but it would not be: for albeit *Nero* enthronized and enstalled *Tyridates* in his kingdom, and gaue him his royalties againe, all would not serue; for neuer could he receiue at his hands by way of remuneration and recompence, the skill of this Science. And therefore we may be fully assured and boldly conclude, That it is a detestable and abhominable Art, grounded on no certaine rules, full of lies and vanities, how soeuer it carry some shew or shadow rather of veritie: and to say a truth, that certitude which it hath in effecting any thing, proceedeth rather from the diuillish cast of poisoning practised therewith, than from the Art it selfe of Magicke. But what needs any man to seek & hearken after the lies which the magicians in old time haue let flie and sent abroad? When I my selfe in my youth haue seen and heard *Apion* (that great and famous Grammarian) tell strange tales of the herbe *Cynocephalia*, which the Egyptians call *C* Of syrites, and namely that it hath a diuine and heavenly vertue, and was a singular preseruative against all poysons, charmes, and enchantments; but who soeuer plucked or drew it out of the ground (saith he) could not escape present death. The same *Apion* reported in my hearing, that he hath conjured and raised vp spirits, to enquire and learne of *Homer*, what countryman borne he was? and from what parents descended? many hee durst not report what answer was made againe, either vnto him or them.

CHAP. III.

¶ Of Mould-warps: and of many other medicines taken from sundry beasts, which are in their kind either tame or wilde: and the same medicines digested according to diseases as they orderly follow.

One speciall argument this may be, to proue the follie and vanitie of magicians, because of all other liuing creatures, they do admire & set greatest store by these wants or moulds, which Nature seemeth to haue condemned to perpetuall blindness and prison, shutting them vp as it were euermore in a dark dungeon, or keeping them rather vnder the earth, like as they were buried and entred. And yet for all this, these Wise men giue more beleefe to those signes which they spie in their bowels and entrails when they are opened, than to the inwards of any beast whatsoever. This opinion moreover they haue of a mould-warpe, that there is not a creature more capable of religion, and fitter to be employed in sacrifice and diuine seruice, than it may they beth not to aouach & warrant, That who soeuer swallows down a whole the heart of a moule fresh killed, whiles it is yet warme and panting with life in it, shall haue the gift of diuination, and foretell the euent and issue of any businesse in hand. Moreover, they affirm, that the tooth of a moule-warpe taken out of her head whiles shee is alieue, is singular to allay the tooth-ach, if it be hanged about the necke, or tied to any part of the body. They talke of many other wonders wrought by this poore creature, which I purpose to deliuer as occasion shall be offered, in place conuenient. And yet when they haue all said that they can of them, that which carrieth the greatest likelihood and probability, is this, That they should be good against the biting of these mufets or hard shrews, for as you haue heard me say before, the very earth that is pressed down with the wheels in a cart-track, is proper for that purpose. But to leaue these moulds and to follow on (still with this maladie of tooth-ach, the said magicians tel vs a medicine made of the ashes of a dogs head (dying of madnesse) that it should be paining good therefore, if it be mixed with the oile *Cypyrinum*, & so dropped into the ear on the pained side: howbeit this care would be had, That the said dogs head haue no flesh at all sticking to the scalp or scull, when it is burned and calcined. They say moreover, that the greatest cic-tooth of a dog growing on the

left side of his head serues well for this grievance, if the tooth that is in pain be scarrified round about therewith. Also a bone growing out of the ridge or chine of a Dragon, will do as much; or that of the serpent called Enhydriis. Now are these serpents white of colour, and held al to be the male. The greatest tooth of this Enhydriis is thought to be singular for to scarrifie or to let the painfull tooth blood therewith; but in case the teeth in the vpper chaw do ake, they take two of the vpper teeth of this serpent, & apply them fast thereto, but contrariwise if the nether jaw. They that hunt after crocodils, vse to greafe themselves with the fat of this serpent. Moreover, it is good by their saying, to scarrifie the gums about the teeth with the bones taken out of a lizards forehead at the ful of the moon, with this regard, that the same in any wife touch not the ground. Some of them there be who make a collution with dogs teeth foddren in wine till the one halfe be consumed, and therewith wash the teeth that ake; but the ashes of the said teeth incorporate in honey, are singular good for little children which haue much a do in breeding their teeth. The same medicine is holden to be an excellent dentifrice for to make teeth look white. If the teeth that ake be hollow, they vse to put into the concavity thereof, the said ashes incorporate in mice dung, or els the liuer of a lizard dried. Also if one that is troubled with tooth-ach, set his teeth in a snaks heart & bite it, or hang the same about the neck or otherwise, it is thought to be an effectiual remedy for the said disease. Others there be of the magicians, who prescribe to chew and eat the flesh of a mouse twice in a month, and they assure vs by this means that we shall preuent and auoid the tooth-ach. Moreover, it is said that a decoction of earthworms boiled in oile & poured into the eare on that side where the tooth-ach is, doth giue great easement of pain. The ashes of the same mads burnt, put into the hole of a tooth that is rotten and worm-eaten, causeth it to fall out of the head with ease; and if the teeth that do ake be found, rub them with the said ashes and the pain will cease. Now the said worms ought to be burnt or calcined vpon a tele or potheard. Also a decoction of this kind of wormes foddren in squillitick vinegre with the root of a mulberie tree, is a fourcraigne medicine to wash the teeth withall when they vpon a tele or potheard. Also a decoction of this kind of wormes foddren in squillitick vinegre with the root of a mulberie tree, is a fourcraigne medicine to wash the teeth withall when they vpon a tele or potheard. Also a decoction of this kind of wormes foddren in squillitick vinegre with the root of a mulberie tree, is a fourcraigne medicine to wash the teeth withall when they vpon a tele or potheard.

Furthermore, the little grub or worne which is found in the herb Tithall, called *Vermeus* Lauer, hath a wonderful operation to cure the tooth-ach, if it be put into the hole of a faulty tooth; and no maruaile, for the caterpillars that breed in coleworts, will presently fall off if they be but touched with this worm. The puaifes also or wall-lice that come from mallows, infused into the ears with oile of roses, assuage the tooth-ach. The small sandy grit that is found in the horns of shel-snails, conueied into an hollow tooth, presently alliaies the pain. The bare shells of the said snails, hollow as they be and void, calcined and reduced into a fles, and incorporate with myrrhe, are passing good for the gubs: but the ashes of a serpent burnt and calcined in an earthen pot, with salt among, helpeth the tooth-ach, if it be infilled into the eare on the contrary side, with oile of roses. The skin of a snake which she hath cast in the Spring, made hot in oile & the rosin of torchwood, is singular in this case to be distilled into eather of the ears, it makes no matter which: some put thereto frankincense and oile of rofat. The said slough or skin of a snake thus prepared and put into an hollow tooth, causeth the same to fall out of their head without any pain or griefe at all. As touching white snakes, how they cast their slough at the rising or apparition of the Dog-star, I hold to be a mere fable; for it was neuer seen or knowne, that they did so in Italy: much lesse therefore it is credible, that in hot countries they should be so late ere they cast their slough. Moreover, it is commonly beleued, that the said slough kept long and incorporate with wax, draweth out a tooth most speedily, if it be applied thereto. Also, snakes teeth, either worn about the necke, or laid to teeth in pain, assuage their griefe. Some are of opinion, that a very spider all whole as it is, caught with the left hand, bruised and incorporate in oile of roses, and so dropped into the eare of the same side that the teeth ake, is very good to mitigate the pain. It is said also, that if a man take all the little bones of an hen (and saue those onely of the legs whole that be hollow) and keepe them in the hole or crany of a wall, and with one of the said bones either hit the tooth that ake, or scarrifie the gumbes about it, and then presently cast it away when he hath done with it, the paine will immediately be gone. The like effect hath the dung of a rauen, applied hard vnto the place within a locke of wood: likewise of M sparrows, tempered in oile hot and poured into the eare that is next vnto the pained tooth; but surely it will cause an intolerable itch: and therefore many thinke it a more safe and easie remedy, to burn young sparrows in a fire made of Vine-twigs, and the ashes that commeth from them to temper with vinegre, and therewith to rub the said teeth.

CHAP.

A

CHAP. IIII.

How to procure a sweet breath, & to take away the spots that blemish the face: and to amend the infirmities incident to the throat.

It is said, that for to rectifie the offence of a strong and stinking breath, and to make it sweet and pleasant, it is good to rub the teeth with the ashes of mice burnt, and incorporate with honey. Some there be, who mingle therewith the root of fennell. If the teeth be pricked or scraped with a vulturs quill, it will cause the breath to be fowre: but to doe the same with the quill or prick of a porkepine, is a singular thing to strengthen the teeth and keepe them fast in the head. As touching the sores in the tongue, or the scabs and little vlcers breaking out about the lips, a decoction of swallows foddren in honied wine, healeth them; but if the lips be chapped, there is not a better thing than to annoint them with the greafe of a goole or hen. For the same purpose serueth the tried or rindled greafe of sweatie wooll, being incorporate with the powder of gall-nuts: also the white cobwebs that spiders doe weave, or else the little fine ones which they work vnder the planks and floors of high lofts, or routes of houses. * If one chance to burne his mouth inwardly with some scalding broth or otherwise, the milke that a bitch giueth is a present remedie therefore.

As touching the spots that infect the skin of the face, the foresaid tried greafe of wooll vnwashed, called celysum, incorporate with the honey of the Island Corsica (which of al other is counted most vnpleasant and vntoothsome) is proper to subtiliate and scoure them: the same also laid to the face vpon a locke of wooll, causeth the scurfe or scales whereby the skin seemeth to pill, for to fall away: howbeit some thinke it better to put hony thereto. But say there appeare vpon the face any foule and thick morpew that hath pierced deep into the skin, it is good to rub the same with dogs gall, but first the place ought to be pricked thick with a needle that the medicine may enter in. If the skin look wan, or black and blew, take the light of rams or other sheeps dung. The fat of a goole or hen, is a singular thing to preferre & keep soft, smooth, and dilicat, the skin of the face. As for the ringworms or illsaoured tetteres called Lichenes, there is a proper liniment made either of the dung of mice incorporate with vinegre, or the ashes of an vrchin tempered with oile. But in this cure, the face ought to be bathed and fomented before with vinegre and salnitre. For to take away any spots or pimples arising in the face, there is not a better thing to apply to them than the ashes of the little broad snails which are commonly found in euery place, incorporate with honey. And in truth, the ashes of any snails whatsoeuer, are astringent and hot; reason of a certain absterfue qualitie that they haue; which is the reason that they enter into potentiall cauteries, or cautick & corrosiue medicines and therefore they serue in liniments for to kill scabs, scurfs, mange, and leprosie; yea and to scoure away the foule spots called Lentils. Moreover, I read in authors of certain pissmires greater than the rest, called Hierculance, the which being stamped with a little salt put to them, are good for all the infections of the skin mentioned in the former recedit. There is a kind of insect or flie called Buprestis, passing like to a long legged beetle, but seldom or neuer be any fuch found in Italy: kine and oxen catch much harme by this flie, for many times as they graze, they lick it vp with the graffe and swallow it down and hereupon it tooke that name Buprestis: for no sooner commeth it to the gall, but it inflameth and setteth the beast into a great heat, wherupon it swelleth untill it burst againe. So corrosiue it is (as I haue said before) that being incorporate with goats sewer, and so reduced into a liniment, it takes away the tetteres called Lichenes that be in the face. The blood of a vultur [i.e. geire] tempered with the root of white Chamæleon (I mean the herb so called) and the rosin of cedar, heales the leprosie, so that this liniment be couered with colewort leaues. Of the same effect are the feet of locusts braied in a mortar and incorporate with goats tallow. The greafe of a cock, capon, or hen, wel stamped & wrought with an onion, is singular to scoure the spots and specks of the visage also the hony wherin a number of bees were killed and killed is proper for the said purpose: But aboue all, the greafe of a swan is commended both for to cleanse the skin of the face from all flecks and freckles, and also take away wrinkles. As for the marks remaining after the cauterie or hot yron, there is no better means to take them out, than a plaister of pigeons dung and vinegre. If the rheume cause the mur, the pock, or heauinesse in head, I find a pretie medicine to rid it away, by kissing only the little hairie muzzle of a mouse.

K k 2

As

* Si feruentia
inustus exusse-
runt: peraduen-
tore leuamur
neque hinc
foras mitti
the mouth,
called Buprestis.

As touching the uvula and paine of the throat, they may be both of them eased and cured G with lambs ordure, which passeth from them before they have bitten grasse dried in the shade. The juice or slimie humor that shel-fnailes yeeld when they be pricked through with a pin or needle, is singular good in a liniment for to be applied vnto the uvula; provided alwaies, that those snailles do hang after, in the smoke. The ashes that come of swallows calcined & burnt, is likewise very foweraign, being laid to the grieued place with hony; and in that sort prepared, it serueth also for the inflammation and swelling of the tonsils or amygdals of the throat. For the said tonsils and other accidents of the throat, a gargarisme of ewes milke is right foweraigne. There is a certain creeper called, **Cheeldip*, which if it be bruised or stamped, is good for the *st* infirmities: so is pigeons dung gargarized with wine cuit, or applied outwardly with salt nitre & dried figs. If the throat be troubled with hoarsnesse, occasioned by rheume or catarrhe, the foresaid shel-fnailes do greatly mitigat the same infirmitee, being first sodden in milke (all the saue the earthy or muddy substance which they must be cleaned from) and then giuen in wine cuit to the patient for to drink. Some hold opinion, that the snailles found in the Ile *Astypalæa*, are the best of all other for this purpose, but principally the absteriue substance that is found in them. The cricquet called *Gryllus*, doth mitigat catarrhs & all asperities offending the throat, if the same be rubbed therewith: also if a man doe but touch the amygdals or almonds of the throat, with the hand wherewith he hath bruised or crushed the said cricquet, it will appease the inflammations thereof. To come now vnto the Squinancie: a goose gall incorporated with the juice of the wild cucumber, and hony together, is a most speedie and present remedy for it; also the brains of an owle, and the ashes of a swallow drunk in water wel and hot, is good for the said disease: But for this medicine we are beholden to the Poet *Ouid*. Note that when I speak of any medicine (for what maladie fower) made of swallows, the yong wild ones are alwaies the better and more effectuall in operation: and those you may know easily by the fashion of their nests where they do build. But if you would have the best indeed, the yong ones of that kind which are called *Ripariæ*, passe all the rest for medicinale vses, for so they are commonly named which build in the holes of banke sides. Howbeit, some there be who assure vs, that we shal not need to feare that disease for a yeare together, if we do but eat any yong swallow, it skills not of what kind fower it be. Now the order of calcining them from their ashes, is to strangle them first, & giue to burn them in their blood within an earthen vessell: and the ashes thus made, is vsually giuen either wrought in past for bread, or else to be drunk: and some there be who mingle withall, the like quantity of the ashes which come of weazils. And this kind of medicine thus prepared, they giue in drink every day against the kings euill, and falling sicknesse. Moreover, swallows kept and condite in salt, are passing good for the Squinancie, taken in drinke to the weight of a dram at a time: and it is said, that their very nest giuen in drinke, cureth the said maladie. It is a common opinion, that a liniment made with the creepers called *Sowes* or *Multipedes*, is most effectuall to cure the said Squinancie. And some there be who aduise to take one and twenty of these worms stamped, and to giue them in one hemine of mead or honied water for the said disease; but they must be conceiued downe the throat by a pipe or tunnell, for if this medicine touch the teeth once it will do no good. It is said moreover, that if one drinke the decoction of mice sodden with veruaine, it is a foweraign remedy for that disease: as also that a leather thong made of a dogs skin put thrice about the necke, will doe the deed. And some there be, who in this case vse pigeons dung mixed with oile and wine.

As touching the cricks of the nerues or sinewes that serue the nape of the necke; as also for the cramps that draw the head backward, they say, that a twig or branch of a vine taken out of a purtocks nest, and carried about one hanging to the necke or arme, is a spec'iall remedie for the abouenamed accidents.

CHAP. V.

¶ *Medicines for the Kings euill, that is broken and doth run: for the paines lying in the shoulders: as also for the grieue of the humels about the midriffe and precordiall parts.*

The blond of a weazill is good for the wens called the king euill, when they be exulcerat & do run: so is the weazill it selfe sodden in wine and applied; provided alwaies, that they run

A not by occasion of any launcing or incision made by the Chirurgions hand. And it is commonly said, that to eat the flesh of a Weazill, is effectuall for the cure. So are the ashes of a Weazill calcined vpon a fire made of Vine-twigs, if they be incorporat with Hogs grease. Item, Take a green Lizard and binde it to the fore; but after thirty daies you must do so with another, & this will heale them. Some make no more ado but in a little box of siluer keep the heart of a Weazill & wear it about them. If women or maids be troubled with the kings euill, it were good to make choise of old shel-fnailes, and to stamp them felts and all into a plaister or liniment: but especially such as be found sticking to the roots of thrubs and bushes. The ashes of the serpent *Aspis* calcined, are likewise very good for this disease, if they be incorporat with buls tallow, & so applied. Some vse snakes grease and oile together: also a liniment made with the ashes of snakes burnt, tempered either with oile or wax. Moreover, it is thought that the middle part of a snake, after the head and taile both be cut away, is very wholesome meat for those who haue the kings euill: for to drinke their ashes, being in the same manner prepared and burnt in a new earthen pot neuer occupied, may if the said snakes chanced to be killed between two cart-tracks, where the wheeles went, the medicine will look much more effectuall. Some giue counsell to apply vnto the affected place Crickets digged out of the earth, with the mould and all that commeth vpon. Also to apply Pigeons dung only without any thing els, or at the most to temper it with Barley meale or Oatmeale in vinegre. Likewise to make a liniment of a Moldwarps ashes incorporat with hony. Some there be who take the liuer of a Moule, crush and bruite it between their hands, working it into a liniment, and lay the same to the fore, and there let it drie on the place C and wash it not off in three daies. And they affirme, That the right foot of a Moule, is a singular remedie for this disease. Others catch some of them, cut off their heads, stampe them with the mould that they haue wrought and cast vp above ground, & reduce them into certain trochisks which they keep in a box or pot of tinne, and vse them by way of application to all tumors and impostumes which the Greeks call *Apostemata*, and especially those that rise in the necke: but then they forbid the patient to eat porke or any sinewes flesh during the cure. Moreover, there is a kind of earth-beetles called *tauri*, Buls: which name they took of the little hornes that they carry; for otherwise (in colour) they resemble tickes; some tearme them, *Pedunculos terre*, earth-lice: These also worke vnder the ground like warts, and cast vp mould, which serueth in a liniment for the Kings euill, & such like swelling, as also for the gout in the feet, but it must not be washed off in three daies space. Howbeit, this is to be noted, that this medicine must be renewed every year, for the said mould wil continue no longer in vertue than one year. In sum, there be attributed to these beetles, all those medicinale properties which I haue assigned vnto the crickets called *Grylli*. Moreover, some there be who vse in manner and cases aforesaid, the *mould which ants do cast vp. Others for the Kings euill take iust as many mads or earthworms in number as there be wens gathered and knotted together, and bind the same fast vnto them, letting them to drie vpon the place: and they are perswaded that the said wens will drie away, and consume together with them. There be againe who get a Viper about the rising of the Dog star, cut off the head and taile, as I said before of snakes, and the middle part betweene they burne: the ashes that come thereof, they giue afterwards to be drinke for three weeks together, E every day as much as may be comprehended and taken vp at three fingers ends: and thus they cure and heale the kings euill. Moreover, there be some that hang a Viper by a linnen thread fast tied somewhat vnder the head, so long till she be strangled and dead, and with that thread bind the foresaid wens or Kings euill, promising vnto their patients assured remedie by this meanes. They vse also the Sowes called *Multipedæ*, and incorporat the same with a fourth part in proportion to them, of true Turpentine: and they be of opinion, That this ointment or salue is sufficient to cure any impostumes whatfouer.

As touching the paines that lie in the shoulders, there is a proper medicine made in forme a liniment, with the ashes of a Weazill tempered with wax, which causeth the same.

To keepe young boies from hauing any haire growing on their face, that they may seem alwaies young, it is good to anoint their cheekes and chin with Ants egges. Also the marchants or hucksters that buy yong slaues to sell them againe for gaine, vse to hinder the growth of hair as well of the visage, as in the armeholes and vpon the share, that they may be taken for young youths still, by anointing those parts with the blood that commeth from lambs when they be libbed, which ointment doth good also to the armpits, for to take away the ranke and rancid smell

*Of which being raised more & more, come Maure hills, corruptly called Moule-hills: for Ants were in old English called Maures: and Moules neuer cast vp such.

* *Multipeda.*

* For the martins or swallows called *Apodes*, build not, but lay and breed in chimneys and crannies of old walls.

M

net

smell thereof: but first the haire there growing ought to be pulled vpon by the roots.

Now that I am come to speake of the precordial region of the body, know this, That by this one word *Præcordia*, I meane the inwards or entrailes in man or woman, called in Latine * *Extra*, whensoever then there shall be pain felt in these parts or any of them, apply thereto a young sucking whelp, and keepe it hard huggled to the place, doubtlesse the said griefe will passe away from the part to the puppie it selfe, as men say; and this hath been found true by experience in one of those whelpes * ripped and opened aliue, and the said bowels taken forth-for looke what part in man or woman was grieved, the very same was seene infected thereupon, in the puppie. And such whelpes thus vsed for the curing and taking vpon them our maladies, were wont to be entered with great reuerence and ceremoniall deuotion. As touching the pretty little dogs that our daintie dames make so much of, * called Melitæi in Latine, if they be euier and anon kept close vnto the stomacke, they ease the paine thereof. And in very truth a man shall perceiue such little ones to be sicke, yea, and many times to die thereupon: whereby it is euident, that our maladies passe from vs to them.

CHAP. VI.

¶ Of the diseases incident to the lights and liuer. Of those that vse to cast and reach vp blood at the mouth.

Mice are very good for the infirmities of the lungs, especially those of Barbarie, if they be first staied, then sodden in oile and salt, and so giuen to the patient for to eat: This prepared and vsed, they cure them that either spit purulent and filthy matter, or else reach vp there blood. But a dish of meat made of snails with shels, is most excellent for the stomacke. But for the better ordering and dressing of them: first they ought to siuer ouer the fire and take a few waumes till they be parboiled, without touching or meddling one jot with their body: afterwards they must be broiled vpon the coales, without putting any thing in the world vnto them, and then to be serued vp in wine and fish pickle or brine called Garum, and so eaten. But the best for this purpose are those of Barbarie. It is not long agoe, that this experiment was found: but since it was once known, many haue done themselves much good thereby. But (that which I had well neare forgotten) many obserue to take them in some odd number. Howbeit, as hole some as they are supposed to be otherwise, this discommoditie is found by them, That they cause those to haue a strong and stinking breath that vse to eat them. Being stamped without their shels, and so drunk in water, they helpe them that reach blood vponward. But that you may know that there be degrees of them in goodness: The best snails simply are they of Barbary, and namely, those about the quarter neere Soli: Next to them are much esteemed such as are gathered in the Islands Atypeæa, and Sicilia, for they are of a meane bignesse: for such as be grown very great, haue their flesh hard, and be void of humidity. Then are ranged in a third place, those that come from the Balear Islands, called Cavaticæ, because they breed in caues and holes. There be good also brought from the Islands Capreæ. Hole some these shel-snails may be well ynough: but toothsome surely they are not, whether they be old kept, or new taken. Those that be found in riuers, & which haue white shels, carry a rank and strong fauour with them: so do the wild sort that are not kept vp and fed in stews & pits, and be hurtfull to the stomack, but good to loosen the bellie: euen so are all the sort of the little ones. But contrariwise, those that breed in the sea are better for the stomack than others: and most effectfull to allay the pains thereof. Moreover, it is said, that they do most good, of what kind soeuer, if they be swallowed downe aliue & all whole with vinegre. Moreover, there be of these snails called * Aceratæ, of a broad making, and growing in many and sundry formes, of whose properties, and how they are to be vsed, I will write elswhere in place conuenient. The inner skin of a Hen or Capons gesser, preferred till it be drie, and reduced into powder, and so put into a cup of drinke like spice; the same also eaten fresh, & newly roasted or broiled, is singular for the catarrhes that fall into the breast, and for a moist cough. Shel-snails punned raw & giuen in a supping with three cyaths of warm water, serue wel to appease & stay the cough. Take a piece of dogs skin, and tie the same about any one of your fingers, which you will, it staies all rheumes and distillations. The broth made of Ptridges, is souveraine to comfort and refresh the stomack. As touching the griefe or paine of the liuer, it is said, That the flesh of a wild Weazill, or her liuer eaten, is a singular meat there-

Afore so be Ferrets roasted in manner of little pigs. The worms with many feet called sowes or cheefclips, are very proper for them that draw their wind short, but there must be one and twentie of them, neither more nor lesse, dissolved in the best Atticke honey, and so giuen in drinke and swallowed down by a pipe or tunill: the reason why they must be thus conueied through such a cane or tunill is this, because looke what cup or boile they fo touch, they staie the same black. Some take of them to the quantitie of one sextar, and torrie them vpon a pan or platter, vntill they looke white and be calcined, and then incorporate them in honey: [there be Latine writers who call this worme Centipeda, as if it had an hundred feet] and then giue direction, that they should be taken in hot water. Furthermore, it is said, That if the patient do either eat or drinke for the space of nine daies together one snail hot, stamped hell and all in three cyaths of wine cutt he shall find helpe, if he were giuen either to faint and swoone, or to be lunatick and to go beside himselfe, or else be subiect to the dizziness of the head. Others giue order to take them after another maner, namely, one the first day, the morrow twain, the third day three, the fourth two, and the fift one againe: and in this wise they cure those who are shortwinded, or haue an impostume broken within their bodie. There is a kinde of Insect resembling a Locust, but that it hath no wings, which in Greeke is called * Tryxallis; a Latine name it hath not vnder, as some do thinke: and writers there be not a few, who are of opinion, That it is the same that our Gryllus or cricket. Call it what you will: let there be twenty of them torried and drunk in honied wine, it is reported for to be a singular medicine for those that cannot take their breath but through vpright: and for such as spit blood. There is one writer who ordaineth to take snails vn-

C washed, and to poure vpon them either the Mere-gout of the grape that runneth out first without pressing, or else sea-water, and so to boile them therein, and afterwards to eat them for a cough. And the same Authour giueth counsell, to pun them shels and all, and to take them with the foresaid Mere-gout to the same effect.

Touching inward impostumes broken, the honey wherein a number of Bees haue bin drowned to death, hath a peculiar vertue to heale them. The lungs of a Vulture burned to powder in a fire made of Vine-cuttings, giuen in wine morning & euening, if the patient be free from the ague; so there be put thereto one moitie of Pomegranat floures, and the floures of Quinces and Lillies as much of each, is a very foueraign remedie for those that cast vp blood out of their bodie: but if he be in a leauer, the same medicine would be taken in the decoction of Quinces.

D As for the paine of the spleene, if we may beleue the receipts and prescriptions of the Magicians, the patient ought to haue the milt or spleen of a sheep spread and laid ouer the place: but the patient that hath the application thereof, must say these words withall, *This I do to cure the spleene*: VVhich done and said, the same milt of the sheep must be laid vp close and hidden within the wall or behind the feeling of the bed chamber where the sick body lieth, and sealed vp with a signet, for feare it should be taken away: with this charge, that he or she that hath the bestowing of it, repeat the foresaid charme nine times thrice ouer. If a dogs bellie be ripped aliue, and the spleen taken forth, who soeuer eateth thereof, shall find it very good to ease them of the said maladie. But some content themselves with laying it fresh and warme to the region of the spleen. Others giue the spleen of a young whelp but two daies old, in squillitrick vinegre, to the patient; but they make not the patient acquainted with the medicine what it is; or else they minister the spleen of an Hedgehog in the same manner. Likewise they giue the ashes of shell-snails with Linc seed and Nettle seed, putting thereto some honey; and this cure they continue vntill the patient be thoroughly whole. It is said moreover, That a green Lizard taken aliue, and hanged so in a pot iust before the dore of the patients bedchamber: with this charge, that euier as he goes in and out he touch the same with his hand, will worke the same effect. The ashes of a scritch-owls head reduced into an vnguent with oile, is good for this purpose, so is the honey wherein Bees were stifled: and lastly a spider, but especially that which they call Lycos.

The heart of the bird called a * Houpe, is highly commended for the paine of the sides. Also the ashes of shell-snails boiled in Prifane or husked Barley water: and some in this case apply

F the same otherwhiles in a liniment onely without any thing else. The ashes of a dogs head (I meane the bare skalle or skull onely) dying enraged and mad, is good to spie: a cup of drinke withall for this disease.

If the loines be pained, it is said, That the starre-Lizards called Stellions, comming from beyond sea sodden in wine together with the seed of black Poppie to the weight of halfe a denier

* or Tryxallis;
according to
Ælianus.

* Houpe.

is very good, so the decoction be drunk: howbeit, this care must be had, that the head be cut off G first, and the garbage taken forth. The green Lizards are good meat in this case, if they be dressed accordingly, and their feet and head cut away: so are shell-snails, braied legs and all together, and foddren in wine with fifteen grains of pepper. Some vñe the feet and legs of an Aegle in this disease, pulling them away backward from the knees: and the right foot they apply fast to the paine of the right side: but the other if the contrary side be grieved. The many-foot Sowes or Checlips, which I called before Oniscos, help the same pains, if they be taken to the weight of halfe a denarius in two cyaths of wine.

To conclude with the Sciatics, the magicians giue order to put an earth-worm in a treene or wooden dish, which hauing bin clef, was stitched vp again with iron wiew, or bound with a plate or hoope of yron: then to lade vp some water therewith, and in it to wash & rince the said worme H very well, and then to enterre or burie the same again in the very place from whence it was digged forth: which done, to giue the said water anon to the patient for to drinke out the said wooden dish: and this they hold to be a wonderfull medicine.

CHAP. VII.

¶ Remedies for the dysenterie or bloudie flux. And generally for all diseases of the belly.

THE decoction of a leg of mutton foddren in water with Line seed, is singular good for to be supped off to stay a bloudie flux. So is old Cheefe made of Ews milke: and sheeps suet foddren together in some austere wine. The same is singular for the Sciatica passio, and an old cough. The starre-Lizard Stello, which breeds beyond sea, being fild, garbaged, and dressed for meat, so that the head and feet be taken away, and so foddren and eaten, is commended also in this case. Moreouer it is said, That two snails and one Hens egg, stamped the one as well as the other with their shels, and afterwards gently foddren in a new earthen pot with some salt & two cyaths of wine cut, or else with the juice of Dates & 3 cyaths of water giuen to the patient to drinke who is tormented with the dysenterie or bloudie flux, will bring great alleviation of the said disease. It is thought also, That the ashes of the said shell-snails calcined, if they be taken in wine with a little rosin, are foweraign therfore. As touching naked snails without any shels, they be found plentifully in Affrick. Passing good they be for the bloudie flux, if 5 of them be burnt K and calcined together, with halfe a denier weight of Acacia, & 2 spoonfulls of their ashes taken in Myrtle wine or some other austere & astringent wine, and a like quantity of hot water. Some there be who in this sort vse all the snails of * Barbary. Others thinke it better to take siue of the said snails of Affricke, or rather as many of the broad and flat sort, and to clysterize them for the dysenterie. But if the flux be exceeding vehement, then they put thereto of Acacia the quantitie of a beane. It is said moreouer, That the spoile or slough of a serpent boiled with oile rofat in a vessel of tinne, is singular for the * Dysenterie and * Tinsme, to be injected by a clyster: Or if it be foddren in any other vessell, yet with an instrument or pipe of tin it is robe conueighed into the fundament, that the tiwill thereby may be annointed. The broth of a Cocke cureth these infirmities: but if it be of an old Cocke, it is the more effectually. And yet if the L said broth be any thing saltish, it stirreth the bellie & prouoketh to the seege. The inward skin of an Hens giser broiled and giuen with salt and oile, doth mittigat and appease the * wrings caused by the flux of the stomacke. But then this regard must be had before, That neither the Hen haue any come giuen her, nor the patient feed vpon any graine some time before. Pigeons dung being burnt, and the ashes taken in drinke, is of great effect and vertue in these cases. The flesh of a Quoit or Stock-doue foddren in vinegre, is good both for the bloudie flux, and also for the loosensse, proceeding from the imbecillitie of the stomacke. The Thrush or Mauius roasted with Myrtle berries, is foweraigne for the dysenterie: so is the Merle or black-bird. In which respect, great account also is made of the honey boiled, wherein bees were killed. [Of all the paines that be, the * Iliacke passion is most sharpe and grievous to be endured. But it M is said, That the blood of a Bat, torne and plucked in peeces aliue, is very good against it; yea, and if the bellie be annointed therewith, it casteth the torment thereof.] But to come againe vnto the flux of the bellie, shell-snails prepared and made in manner aforesaid for those that be shortwinded, are singular good for to stop the same, and to knit the bodie. So are their

* Vicer of the guts or bloudie flux.
* A continuall desire to the stoole without doing ought.
* *Daloris scilicet arum*. Some read *Colicorum* 2 of the Collicke.

* Which is the tortur, or inflammation of the upper small guts.

A ashes (if they were burnt and calcined aliue) taken in some austere or astringent wine. The liuer of a cocke roasted, together with the skin of the giser, which ordinarily the cocke casteth away, to remedy these accidents: others take the same skin whiles it is new and fresh, which they broil lone beaten to powder and taken in some grosse and astringent wine, is singular to stay a flux of the belly. The wild Ring-doue or Quoit, boiled in vineger and water, is of the same effect. The A liniment likewise made of Pigeons dung and hony, is of great vertue, if the patients belly be annointed therewith.

B Touching those that haue feeble stomacks, and cannot concoct and digest their meate. It is said, That the maw or giser of that kind of Geire or Vulture, which is called in Latine *Ossifragus*, dried, puluerized and drunk, is right foweraigne. Nay, if the patient doe but hold the same fast in his hand whiles he is at his repast, it will help digestion. And in truth there bee diuers that for this cause weare these gisers ordinarily about their necks: but I think it not wholsome to do so, long, for it maketh them leane as many as vse it, and spendeth their body.

To stay a flux of the belly, the blood of Mallards or Drakes is thought also to be singular good. The meat made of shell-snails, disscuseth and scattereth ventosities. The Milt of a Mutton broiled to ashes and giuen in wine, is singular good to allay the wrings and torments of the belly. Of the same operation is the wild Quoit or Ring-doue, foddren in vineger and water. The C greater kind of Swallows or Martins called Apodes, are no lesse powerfull, if they be foddren and taken in wine. The ashes of the bird Ibis plucked & burnt without his feathers, & so giuen to drinke, work the same effect. But strange it is and wonderfull, if that be true which is reported as touching this malady, namely, that if a Ducke be applied aliue vnto the belly which is tormented with such wrings, she shall draw away the disease into her own body, and die of the torment, but the patient that be eased by that means. These painful gripes likewise are cured with foddren hony, wherein Bees sometimes were drowned to death.

As for the Collick, there is nothing so good to assuage the paine thereof, as to eat Larkes, which the Latines name *Galerita*. Howbeit, some giue aduise and thinke it better to burne and calcine them in their feathers within a new earthen vessel, & so to stamp them to ashes or powder, and to drinke therof foure daies together in water by three spoonfulls at a time. Others make no more ado, but take the heart of a Lark, and bind it to the inward part of the thigh: and there be againe who would haue the same to be swallowed downe whole newly taken out of the bird while it was warme. There is a family of the Asprenates, men of good quality and reputation, for that they had bin sometimes Consuls of Rome: in which house, of two brethren, the one was fully cured of the collick by eating these birds, and by wearing ordinarily the heart of one of them about his arme, inclosed within a bracelet of gold: the other being likewise troubled with the said disease, found remedy by a kind of sacrifice which he offered in a little chappell made with vnbacked bricks, piled vp archwise in manner of a furnace: and so soon as the sacrifice was finished, he stoop vp the same againe. That Vulture which is called *Ossifragus*, hath one gut of E wonderful nature, for it is able to concoct and digest whatsoever the said foul deuoureth. And for certain this is known and generally receiued, that the nethermost end thereof cureth the collick, if the patient do but carry it about him. There are other secret and hidden diseases incident to the guts, wherof there be wonders told: and namely, that in these cases, if yong whelpes before they can fee be applied for 3 daies together vnto the stomack especially, and the brest, so that they suck milke from out of the patients mouth the while: the said disease shall passe into the body of the poore whelpes, whereof in the end they shall die. Let the same be ripped & opened, then it will appear evidently what the cause was of the foresaid secret malady of the patient. But such whelpes ought when they are dead to be entered & buried. As for the Magicians, they are aough, That if the belly be annointed lightly with the blood of a Bat, the party thus dressed, shall not need to feare any paine of that part for one whole year after: or if it chance that one be pained in the belly, let him (say they) indure to drinke the water that runneth down from his feet when his legs be washed, and he shall find help anon.

¶ Medicines against the stone and grauell: the paines of the bladder. The swellings in the cuds and the share. Also for the bites and botches called Pani.

For them that are troubled with the stone, it is good to annoint the region of the belly with Moufe dung. It is said, that the flesh of an Vrchin or Hedgehog is very good meat & pleasant in tast, if so be he were killed outright in the head at one blow, before that he had time to sted his owne vrine vpon himselfe: and looke whoeuer eat this flesh, shall neuer be subject to the disease of the strangury. The flesh of an Vrchin killed in this sort, helpeth the bladder, in H the drench himselfe with his owne vrine, as many as eat of the flesh shall fall into the infirmity of the strangury or pissing dropmeale. Moreover it is said, That earthworms drunke either in wine or strung out of their shells, and stamp them; giue 3 of them to the Patient to drinke in a cyath of wine the first day, two the morrow after, and the third day one againe, you shall see how it will helpe the strangurie or pissing dropmeale. But let the empty shells be burnt, the ashes thereof will scoure away and expell the stone. Semblably, it is said, that the same effect followeth vpon drinking the liuer of a water-snake: the eating of the ashes of scorpions calcined, either in bread, or with locusts. Likewise, to take the little stones or grit that be found in the craw of a cocke, or in the gifer or maw of a stock-doue: to beat the same to powder, and therewith to spice the drinke, is singular good for the infirmity aforesaid. To do the like with the skin of a Cocke or Hens giuing to the quantity of three spoonfulls: as also the nest of swallows: and Cricquets infused and dissolved in hot water, are commended for this purpose. Some helpe themselves with the gifer of Ossifragus dried: others vse the decoction of Turtles dung boiled in honied wine, or els the broth of the Turtle it selfe. Furthermore, for the difficulty of vrine, it is whole some to eat blacke birds or Merles, boiled with Myrtle berries: or Grasshoppers fried in a pan: & to drinke the fowls or Cheesflips called Oniscoi, folke make it not strange to do themselves good. But if there be pain in the bladder, it is said, That the broth made of Lambs feet, is souveraine. If the body be bound or costive, a Cocke-broth causeth it to be soluble: and the same doth wichall lenifie the acrimony of humors that cause the foresaid grieue of the bladder. The dung of Swallows likewise procureth loosefesse of belly, in case it be tempered with honey to the forme of a suppositorie, and so put vp.

Touching the infirmities incident to the feat, the tried greafe of vnwashed wooll, (whereunto some adde Tutie and oile of Roses) the ashes also of dogs head are souveraine medicines: the slough likewise which a serpent hath cast, applied with vineger, is good, in case there be chaps and fissures in that part. Likewise, the ashes of dogs dung, which looketh white, incorporat with oile of Roses: & this receipt (they say) was the inuention of *Aesculapius*, and is besides most effectuall to take away werts. The ashes of Mice dung, Swans greafe, & the tallow of Oxe or Cow, are helpfull for this infirmity. If the tuill or gut Longeon be relaxed and hang forth, it is good to annoint the same with the moisture issuing forth of shel-snails that is prickd through with a pin or needle, for it driueth it back again to the right place. If the feat be galled, it is thought that the ashes of the wood-Moufe tempered with honey, cureth the same: or els the ashes of an Vrchin, together with the brains of a Bat, Allum, and the greafe tried out of vnwashed wooll, will skin it againe. In like manner, Pigeons dung with honey: for the swelling blind hemorrhoids or skin it againe. In like manner, Pigeons dung with honey: for the swelling blind hemorrhoids or bopiles called Condylomata, there is a proper remedy, namely, to rub the place with a spiders webbe, after the head and legs be cast away. Against the acrimony and sharpnesse of humors, that they should not fret and burne those parts, there is a faire liniment made with Goose greafe, incorporat with Barbary wax, white lead, and oile rosat. So is the fat of a Swan. These medicines also

* Repellit.

G

A also are said to heale the hemorrhoids that run.

For the pain of the Sciatica, it is thought that raw shell-snails bruised are good, if they be taken in Ammeine wine and pepper: also a greene lizard eaten as meat, without the feet, garbage, and head: so is the starre-lizard *Stellio*, but thereto ought to be put the weight of three o-boll of black poppy seed.

For ruptures, inward spasmes and convulsions, it auaileth much to take sheeps gal with breast milk. In case the priuities haue an itch & a fretting humor vpon them, or if some offensive werts arise in those parts, the dripping or graue that cometh from a rams lights roasted, doth much good, if the place be therewith annointed. As touching other accidents which happen to those parts, the wooll of a ram calcined and reduced into ashes, euen with all the filthinesse that is therein, is thought to be very good, so that the ashes be applied to the affected place with water. The fewer of the kelle of a mutton, but especially that which groweth to the kidneys, incorporat with the powder of a pumish stone and salt, is much commended in this case: also greasie and vnwashed wooll soaked in cold water, is good to be applied to the place: the flesh moreouer of a mutton calcined, so as the ashes be incorporat with water. Item, the ashes of a mules house: and the powder of caples teeth braied & puluerized, if the grieued place be strewed therewith.

To come lower to the infirmities of the cuds: the powder of the bones of a dogs head without any flesh vpon it, puluerized, is singular therfore. If it fall out that one of the genitoirs be relaxed & hang down lower than his fellow, it is good to annoint the same with the waterish slime and some that cometh from shel-snails: so, they say it is an excellent remedy: if there be any foule and malignant vlcers in those parts running with filthy matter, the ashes of a dogges head fresh killed are singular to heal the same: so are the little broad and flat shel-snails bruised and incorporat with vineger, if either the same or the ashes be applied thereto, also the honey wherein bees haue been killed, mixt with rosin: the naked snails likewise which bred (as I said in Barbarie, in case they be stamped & incorporat with the powder of Frankincense & the white of an egg, with this charge, that the said cataplasme be not taken off in 30 daies, by which time it will be ready to fall away of it selfe. Some in stead of frankincense, put the bulbous roots of small onions or scallions. For those who be troubled with the * waterish rupture, it is thought that the star-lizards Stillioness be wonderful full good, in case their head, feet, and guts, bee taken forth, and the rest of the body roasted, but the patient had need to eat of this meat often, and so it D helpeth those who cannot hold their water. The like opinion there is of dogs greafe incorporat with * Alumne de plume, if the patient take thereof to the quantity of a bean: as also the snails of Barbary burnt, flesh, shell and all, so as the patient drinke their ashes. Furthermore, it is said, that the tongues of three geefe roasted and eaten, is a speciall remedy for this infirmity: and * *maxillam* is he that deuised this receipt.

* Hydrotestic.

* Alumine
scibit.

Touching the bites called Pani, sheeps tallow incorporat with salt torrifacted, is singular good to breake them: but mice dung, with the fine powder of frankincense & orpiment or red Arsenicke, is as proper to resolute them: likewise the ashes of a lizard, and the lizard it selfe split aliae and applied hot thereto. In like maner cheesflips or fowls stamped and incorporat with the right terpentine, to the quantity of a third part, & so brought into a cataplasme. Some there be E who to shel-snails punned, adde the common bole-armoniack. Also the ashes of the void shells only alone without the snails mixt with wax, are of a resolutive and discutient facultie. In like manner, a liniment made either of pigeons dung only, or els incorporat with barley meale or oar-meale. The flies called Cantharides mixed with quicklime, are a good potentiall cauterie, and open such bites as well as the Chirurgians launcet. The botches or swellings in the share, a liniment made with the small shel-snails and honey, doth assuage and mitigate. Finally, to keepe down the veins from swelling which be called Varices, it is good to annoint the legs of children with the blond of a lizard, but this must be done, while both the children and the party who hath he doing thereof be fasting.

F

¶ Receipts for the goutts of feet and hands: and generally for the pains or diseases of ioints whatsoeuer.

The tried greafe of vnwashed wooll incorporat with womans miik and white lead, is a very proper liniment to mitigate the pain of the gout: so is the liquid dung of sheep when they

run out behind. Their lights likewise, or a rams gall incorporat with their suet. Some split mice, and lay them hot to the place; also the blood of a weazill reduced into a liniment with Plain-tain; and the ashes of a weazill burnt aliue, tempered with vinegar and rose water, and brought into a thin liniment, so that the place affected may be dressed with a feather. Others temper wax and oile of roses together. And there be again who vse dogs gall for this purpose, but in any wise the hand must not touch it, but the place ought to be annointed with a feather; likewise hens dung, and the ashes of earthworms mixt with hony, with this charge, that this cataplasme be not vndone or removed before the third day. Howbeit it is thought better by some, to apply the same ashes with water; but by others to vse vinegar in measure and with moderation, together with 3 cyaths of hony, hauing before hand annointed with oile rofat the gouty feet. It is said moreover that to drink broad snails, is a singular medicine to take away the gout of the feet, or the paine of any other ioint: the manner wherof is to stamp 2 at a time, and drink them in wine: some apply the same in a liniment with the juice of the herb Parietary. Others content themselves to bruise them and so to incorporat them into a cataplasme with vinegar. Many are of opinion, that the gout may be cured, if the patient vse oftentimes to take the salt, which together with a Viper was calcined in a new earthen pot: as also that it is very good to annoint the feet with Vipers greafe. And they affirme constantly of a Kite that hath bin kept long dried, if the patient reduce it into powder, and drink thereof in water as much as three fingers will well take vp, it cureth the gout thoroughly. But if the feet be full of blood and swollen withall, they vse Nettles thereto. Some there be that take the yong feathers of a Kite so soon as they put forth, and stamp the same with Nettles to a liniment. The very dung likewise that these foules do moue, serueth in stead of a good liniment to annoint the painful gout in any ioint whosoeuer: for do the ashes of a weazill or of shell. snails burnt or calcined and incorporate either with Amydum or gum Tragacanth.

If a man haue gotten a rap or rush vpon any joint, there is not a better thing for to cure it than copwebs: some chuse for this intention, those which be wouen by the spiders of ash colour: like as to vse the ashes of Pigeons dung with parched barley groats and white wine. In any dislocation of ioints, the most present remedy that is knowne, is theepes suet tempered with the ashes of of womens haire burnt. This suet likewise serueth well to be applied with allum to the kibes of the heels: so do the ashes of a dogs head, or of mice dung. But in case there be any vlcere there not yet putrified, adde wax thereto, and it will skin vp and heale the same: and the like effect is wrought by the light ashes of eriquets burnt and tempered with oile, or els with the ashes of the wild wood-mice mixt with hony: of earth-worms also incorporat with old oile: & lastly, many apply thereto the snails that be found naked & without their shels. And verily, the ashes of such snails burnt aliue, heale all sores of the feet, howbeit, if the feet be galled & but lightly ex-coriated, there is not a better thing for them than the ashes of hens dung, or pigeons dung incorporat with oile. If the shoe hath rubbed off the skin, or fretted any part of the foot, the ashes of an old shoe-sole are singular good to heal the same: so are the lights of a ram or lambe. The powder of a caples teeth is a soueraigne and speciall remedy for the feet, if there ouste out any matter from vnder the nails. The blood of a green lizard healeth the galls vnder the foot, yea, and cureth thoroughly the sore feet both of man and beast, if they be dressed therewith.

As for the corns and agnells which arise about the feet, it is good to besmeare them with the vrine of * Mule or mulet, together with the mire in the very place where they staied: also with sheeps dung. The liuer or blood of a greene lizard applied vpon some slocke to the place, or vpon a locke of wooll. Some vse in that order, earth-wormes stamped with oile, or the head of the star-lizard Strellio, incorporat in oile with a like quantity of Agnus Castus. Last of all, others take Pigeons dung foddren in vinegar, and lay the same to the place.

Touching werts, of what sort soeuer they be, there is not a more proper thing to make them fall off, than to bathe them well with the vrine, durt and all, of a dog where he lately pissed: or to apply thereto a salue of dogs dung ashes and wax: it is not amisse also to lay to them sheeps dung, or to rub them wel with Mice-blood new killed: or to apply a Moufe split along the mids aliue: the gall likewise of an Vrchin: the head of a lizard: or the blood: or lastly, the ashes of a lizard calcined: the old slough of a snake also. Lastly, hens dung incorporat with oile and salnitre. If all these medicines fail, begin the cure new with Cantharides incorporat with wilde grapes called Vva tamine: this is a corrosiue, & wil eat them out: but when they be thus fretted & ex-ulcerat

A ulcerat, the cure must be followed with those appropriat means which I haue set downe before in the healing of vlcers.

CHAP. X.

Medicines appropriate for diuers and sundry diseases which possesse the whole body.

Returne we now to the cure of those maladies which are incident not to this or that member, but to the whole body. First and foremost, the Magicians say, that the gall of a blacke dog (a dog I say and not a bitch) is a singular countercharme and preseratiue against all B forceries, enchantments, and poisons, which may indanger a whole house, in case there be a perfume made therewith to purifie the aire thereof, yea, and to hallow and blesse it against all such dangers. The like effect (say they) we are to look for, if the walls of the said house be sprinkled or striked with the blood of the said black dog, with this charge, To burne vnder the threshold or dore fell at the entry of the said house the genitall member of the same dog. Men may maruell well enough at these fooleries and absurdities of theirs: but surely wonder lesse will they thereat, who know what store they set by ill fauored ticks, the foulest and nastiest creatures that be: and why do they thus magnifie so filthy a vermine: because (forsooth) this creature onely of all others hath no passage at all for the voidance of excrements, sucke it neuer so much: and no way there is but death with them when they are thus full, but so long only as they continue hungry and fasting: and yet they say, that they wil indure for a long time, euen a whole feuen-night together with abstinence and spary feeding: may let them feed still to the full, they wil not hold out so long, but burst again in fewer daies space. Well, this tick, so filthy as it is, and of so admirable and strange a nature in their conceit, they hold to bee of exceeding vertue to appease all paines and torments of the body whatsoever, in case a man take one of them, with the left eare of a dog, and carry them hanging to some part about him. And more than that, these Magicians take marks by it, & presage of the life or death of their patients; for they hold it for a certain and assured signe of life, if one hauing a ticke about him, stand at the beds feet where the sicke man lieth, and when he asketh him how he doth, and where he is amisse, &c. if the patient make answer readily vnto him; but in case hee make no answer at all, then surely hee shall die there is no remedy. But take this withall: this ticke must be plucked likewise from the left eare of a dog, and the same dog ought to be cole-blacke without any specke of other colour. And Nigidius hath left in writing, that dogs will not all day long come neare vnto a man nor abide to see him, who hath plucked a ticke from an hogge. But to returne vnto our Magicians: they affirme, that such as be lunaticke and beside themselves, shall come againe to their right wits and senses, in case they be sprinkled with the blood of a moule. They auaunch moreover and say, that if one seeth the tongue, eyes, gall, and guts of a Dragon in wine and oile, and permit this decoction to coole all night abroad in the open aire, it is a soueraigne medicine to chase away such bugs, spirits, and goblins, wherewith folke be haunted and affrighted in the night season, if they be annointed therewith all ouer their bodie, morning and euening. Nicander writeth, that whosoeuer E carry about them the serpent Amphibena dead, or no more but the very skin thereof hanging fast to any part of their bodies, they shall finde it to be a most soueraigne remedy for any through cold or chilling fit that hath surprised them. Nay hee staith not there, but addeth moreover and saith, that if the said serpent be bound vnto any part of a tree that is to be felled and laid along, the workemen that hew at the butt thereof, shall feele no cold all the while; and the tree by that means shall the sooner and more easily be cut downe and ouerthrowne. No manuell therefore, if this serpent afore said dare leaue his nest, and commit himselfe to the cold weather, for he venturth first to come abroad, and is to be seene about ground before the Cuckow begins to sing. But since I haue made mention of the Cuckow, there comes into my minde a strange and miraculous matter that the said Magicians report of this bird; namely, that if a man the first time that he heareth her to sing, presently stay his right foot in the very place where it was when he heard her, and withal marke out the print and just proportion of the said foot vpon the ground as it stood, and then digge vp the earth vnder it within the said compass, looke what chamber or roome of the house is strewed with the said mould, there will no fleas breed there.

* Para, vlcera.

* Muli mulieres
Some take mu-
lur to be the
mule ingh-
died by a male
asse & a mare;
but Mule, to be
that mule that
commeth of
an horse and
female asse.

They say moreover, that the fat which is fletted or skimmed from the broth wherein dormice G and rats be foddren, is excellent good for those that be affraid of the palse, and subiect thereto: also that Sowes or Cheellips called Millipedæ, prepared and taken in drink, in manner as I appointed for the squinancie, are singular for those that find themselves to be faine into a phthy-tick or consumption of the lungs: so is a green Lizard (by their saying) foddren in three sextars of wine, till there be but one remaining, if the patient take thereof a spoonfull at a time every day, vntill he feele himselfe warished and fully cured. Others assure vs of as great effect, by drinking the ashes of shell-snailles in wine.

As for the falling sicknesse, the tried greace of sweatie and vnwashed wooll tempered with a little myrrhe, so that the quantitie of them both arise to the bignesse of an hazell nut, cureth the same, if it be taken infused and dissolved in two cyaths of wine, presently after the patient haue sweated and be come out of the baine. For the same disease, they ordaine the cullions or stones of a ram which haue bin kept long and dried, to be reduced into powder to the weight of halfe a denier Romane, and so to be taken in water, or else in one hemine of asses milke, howbeit with this charge, That the patient forbear drinking of wine fve daies after, and as many before. Furthermore, they do highly commend the drinking of theeps blood: likewise their gall in milke, but principally if it be the gall of a lambea sucking whelp is very good in this case, if it be taken with wine & myrrhe, but first the head and feet must be cut away. Some for this purpose drink the suets or rough werts growing to the legs of a mule, in three cyaths of oxymell: others giue order to drinke in vinegre the ashes of the star-lizard Stellion, which breedeth beyond-sea; and the tender skin or slough of the said Lizard (which the casts in the same manner as a snake doth) taken in drink, helpeth much. Some Physitians are so venturous and bold, that they haue giuen to those who be subiect to the falling sicknesse, the verie Stellion it self, after it is rid and clesed from the garbage or guts, and so kept dried; appointing their patients to drinke the powder thereof in some conuenient liquor, through a pipe of a cane: others appoint it to be roasted vpon a wooden brooch or spit, and so to be eaten for meat. And seeing I haue occasion thus to write of this Stellion, and the skin thereof, it were very conuenient and necessarie in this place to shew the manner how the said slough (which is growne ouer him in winter) may be gotten from him when he hath turned himselfe out of it, considering that he vseth commonly to deuoure and eat it himselfe, because it should not do any man good; for there is not a beast againe more spightfull to mankind, and enuious of our commoditie: inso much as this word * Stellio is growne to be a reprochfull tearme among vs. Well, to meet with this skin of his (as craftie as he is to be guile men of it) they vse to obstrue in hot summer daies, his nestling hole into which he is wont to retire himselfe: and ordinarily they find it to be in some hollow crannies about doores & windows, or else vnder vaults and sepulchres: when they haue espied where it is, they waite for the prime of the Spring, they set iust against his hole certain little cages or leaps made of clouen and sluied reeds, and the same wrought and woven good and thicke: and in very truth he delighteth to get betweene the streights and narrow passages of the staues and windings, whereof the said cages are made, for by means thereof he may the better slip himselfe out of that coat which clogeth his body and maketh him vnweldie: and thus in getting through the said lattices, he leaueth the cage behind him: but after he hath thus done, hard bested he is, for back he cannot the same way again for to eat the said slough. Certes, there is not a medicine preferred before it, for the falling sickness: and yet good reckoning there is made of the brains of Vwezles which haue bin kept and dried: yea and of the liuer so prepared, if they be reduced into powder and so taken in drinke: yea their very genitoirs, and bagg or matrice wherein they beare and breed their young: or their maw likewise sued, dried and condite with coriander seed, are singular good for this maladic, as I haue heretofore noted: and so are their ashes. Some are of opinion, that it is good eating of them whole as they be, especially the wild kind, without any such preparing & dressing, but others esteem ferrets to be as effectual as they, for the falling euil. Moreover, it is said: that the green lizard eaten with some sharp sauce that quickneth appetite, is singular good in this case, but the heads and feet must be first taken away. Moreover, the ashes of shell-snailles together with line-seed & nettle-seed, brought into the form of a liniment with honny, cure those thoroughly of this disease who are all ouer annointed therewith. But I like better yet, that for this maladic one should carrie about him the taile of a dragon bound within a buck or does skin to some part of his body, with the sinews of a stag or hind: or els to tie vnto the left

* Stellionum
erinæ as much
as consage,
or cony-
cuching.

arm

A arme the little stones that be taken out of the craw or gifter of yong swallows: for it is said, that so soone as the old swallow hath hatched her birds, the giueh the. n such little stones to swallow down: but in case this dose be taken in the very beginning, and that the first time that one is faine of this disease, there be giuen to him for to eat, the yong swallow that the dam hatched first, he shall be deliuered from it clearly and neuer haue more fits. But at any time after, swallowes blood and frankincense, or els the heart of a swallow fresh killed, cureth them that be surprized with this malady, if they swallow the same downe. Moreover, it is said, that the little stone found in a swallows nest, if it be but applied vnto man or woman that is faine of this sicknesse, it will raise them out of the fit, and bring them againe to themselves immediately; but if they carry it tied to any part about them, they shall neuer haue fit againe. Much talke there is B also of a kites liuer, that it should be of singular operation to this effect, if it be eaten as also of a serpents old skin which the hath cast off that it will do no lesse. The heart of a vulture flamp together with the own blood, and giuen in drinke 3 weeks together, worketh wonders in this disease. So doth the heart of the yong bird of a vulture, if the patient weare it about his arme, or hang it at his necke: but then they giue counsel, to eat the flesh of the vulture it selfe, & especially when he hath eaten his fill of mans flesh. Some of them ordaine the brest of a vulture to be drunk, but it must be out of a cup or master made of the wood of Cerrus: and others there be who to this purpose cause the stones of a cock to be kept and dried, and the same to be giuen to the patient in water and milke, after he hath abstained fve daies from drinking wine. To conclude, there haue bin of them, that prescribed vnto their patients in this case, 21 of these fandy or reddish flies (which they must be dead ones) for to be taken in drinke: howbeit, if they were but of a feeble complexion, they gaue fewer of them.

CHAP. XI.

¶ Against the Jaundise and Phrensie. Against Feuers and the Dropisie.

THE excrement ingendred in the eares, called commonly **Bare wax**, mightily withstandeth the jaundise: so doth that ordure also which gathereth about the vlders & tears of sheepe and goats, if the patient drinke thereof to the weight of one denier in two cyaths of wine, with some myrrh, though it be neuer so little: the ashes of a dogs head calcined, taken in honied D wine: one of these fows or Cheellips with many bet, in one hemine of wine: earthworms in honied vineger with myrrh, be all excellent for the said disease. Moreover, it is said, that a hen with yellow feet is very good therefore, in case the said feet be clesed and washed first in faire water, afterwards bathed and rinsed in the wine that the patient is to drinke. The brains of a Partridge Egle, or other birds of prey, taken in three cyaths of wine, is very proper also therefore. The ashes of dates, those also of the entrails of black doves, giuen in honied wine to the quantity of three spoonfulls, are soueraigne in this malady: likewise the ashes of sparrows burnt in a fire made of vine-wood, work the same effect, if they be taken in mead to the quantity of 3 spoonfulls. A bird there is called in Greeke Isterus, of the yellow colour which the feathers carry; which if one that hath the jaundise do but looke vpon, or see the same presently cured thereof; but the E poore bird is sure to die for it: I suppose that this is the same bird which in Latine is called Galgulus.

As for the Phrensie, it seemes that the lights of a mutton, applyed hot round about the head, and so kept fast, is soueraigne to bring their heads againe into temper; who are besides themselves. Say that true it were, that not only the brains of mice giuen in water to drinke, or the ashes of a weazil, but also the flesh of an archin kept in salt or dried, are very good for such as are bereft of their right wits, who will venture to giue them these medicines, be they neuer so certain and assured? For as touching the ashes verily of Scorch-owls, which the Magicians so highly commend for the phrensie, I take it to be one amongst many other of their illusions, whereby they mocke and abuse the world. But about all this, the course that they take in the cure of Feuers, saueoth nothing at all of Physick, which indeed is opposite to all their rules and proceedings: for they haue diuided and digested the same into all the 12 signes in the Zodiack, according as the Sun or Moone passeth through any of them: All which, is nothing els but a meere mockerie to be reiected and vtterly condemned, as I will plainly proue, and shew to the view of the eye by some few examples and instances gathered out of many. For in the first

place they ordain, that when the Sun is in Gemini, the combs, the ears, the nails, and claws of G
cocks should be burned, and the ashes thereof tempered with oile, wherewith the sicke persons
are to be annointed all ouer: but if the moon do passe through the said sign, the same cure (they
say) is to be done with the ashes that come of their barbs & spurs: whilst either Sun or Moone
be in Virgo, the cure doth alter, and is to be wrought with barley corns in the same manner vied.
But how if either of these 2 planets bee in Sagittarius? then the wings of a Bat must serue the
turne. In case the moone be entred into Leo, they employ the leaues and branches of the Tama-
riskes, mary it must be the tame and garden Tamarisk in any case. Lastly, if she be in Aquarius,
they prescribe the coles made of box wood, punned and puluerized. Certes, I purpose not to run
through all their receipts: such onely as are found and approved good, or at leastwaies carry some
shew and probability thereof. I am content to set downe: as namely, when they giue order for
strong odours and perfumes to be applied vnto patients lying of a lethargy, for to awaken
and raise them out of their dead sleepe: among which peraduerture, the stoncs of a weazill dried
and long kept, or their liuer burnt, may doe some good. And whereas they thinke it conuenient
to apply hot vnto their heads all about, the lungs of a Mutton, they speake not altogether be-
sides sense and reason.

As for quartane agues, so far as much as it is often seen, that all the physicke that is vsed about
them doth little good or none at all, be a Physician neuer so Methodical, Rational, & Diligent,
yea, though he visits such patients ordinarily, & be present with them by their beddesides: in that
regard I will not stick to relate many of their medicines and receipts for this disease; beginning
first with those that are local, and outwardly to be applied, hanged, or worne about any part of
the body. *Imprimis*, they say, that the dust or sand wherein any hawke or bird of prey hath bask-
ed or bathed her selfe, is singular good for the quartane ague, if the patient wear it in a linnen
cloth tied with a red thred. *Item*, the longest tooth in the head of a cole-black dog, is very proper
for this purpose. There is a kind of bastard wasp, which the Greeks thereupon call Pseudosphes-
ces, and ordinarily they do flie alone, and not in troups as others doe; which, if they be caught
with the left hand, and hanged about the neck vnder the chin, do cure quartans, as some Magi-
tians say: howbeit, others attribute this effect to one of these waspes, which a man saw first
the same yeare. Cut the head of a Viper off, or take out the heart aliue, and wrap the one or the o-
ther within a little linnen rag, and carry it about you, the quartane ague will be gone anon,
by their saying. Some of them take only the little pretty snouts end of a mouse, or the very tips of K
the ears, and injoin the patient to lap the same in a red carnation coloured cloth, and so to carry
it about him; but then the mouse must in any case be let go againe and not killed. Others pluck
out the right eie of a green lizard aliue, which done, within a while after they chop off the head:
then they infold them both in a piece of goats skin, and giue the patient in charge to haue the
same about him: and many there be, who by the direction of magitians carry about them in like
manner for the same purpose, one of these flies or Beetles that vse to roll vp little bals of earth:
and in very truth, in regard of this kind of beetle, the greater part of Egypt honour all beetles,
and adore them as gods, or at leastwise haueing some diuine power in them: which ceremoniall
deuotion of theirs, *Apian* giuerh a subtill and curious reason of, for he doth collect, that there
is some resemblance between the * operations and works of the Sun, and this flie: and this he L
setteth abroad, for to colour and excuse the superstitious rites of his countrymen. Howbeit, the
Magitians employ in the cure of a quartan ague, another kind of them * which hath little horns
turning backward, but they must be gotten likewise with the left hand, or els they will doe no
good. As for the third sort, spotted with white, and called in Latine by the name of Fullo, they
appoint one of them to be slit through in two, and the 2 pieces to be tied to both armes of the
patient, whereas those of other kinds, they bind to the left arme only. Semblably they say, that
the heart of a snake taken out of her body aliue with the left hand, cureth the quartan, if the pa-
tient carry it about him: as also, that who soeuer takeh foure of the knots or joints of a scorpion
taile, together with the sting, and carrieth the same about him inwrapped within a piece of
black cloth, with this charge, That for 3 daies space hee doe not see either the scorpion which M
was let go, nor the party who tied the said cloth and that which is within it about him, he shal
be deliuered from the quartan ague: but after the returne of the third fit, the patient must hide
this clout and the joints aforesaid, & bury them in the ground: some there be who lap a cater-
pillar in a little piece of linnen cloth, & bind the same thrice about with linnen thred, making
three

A three knots thereof, laying at the knitting of every knot, that this they do to cure him or her of a
Quartane feuer. Others carry about them a naked snail in a little piece of fine leather: or else
four heads of snails cut off and inclosed within a small reed. Many thinke it better to infold
one of these (sows or Cheellips within a Locke of wooll, and so to carry it about them against
the quartane, or els the little grubs or worms whereof come the oxe-flies, before their wings bee
grown. And there be that for this purpose fit themselves with those small worms couered all ouer
with a kind of down or Cotton, which are found in thickets, & among bushes or shrubs. Some
wal nut shels, & to bind them to some part of the patient, or els the snails which be found naked
without their shels. Others put a liue Stellion or star-lizard in some little casket or box, & lay
the same vnder the pillow or bolster where the patient laieih his head: but when the ague be-
ginneeth to decline and is like to go away, they let the Stellion go againe at liberty. They pre-
scribe likewise to swallow downe the heart of a sea-gull or cormorant, taken forth of the bodie
without any knife or instrument of yron: if not so, to keepe the same dried, to beat it to powder,
and then to drink it in hot water. The hearts of swallows condite in hony, and so eaten, bee ex-
cellent good for the quartane ague, as our Magitians say. And yet some of them make no more
ado, but giue of their dung to the weight of one dram, in 3 cyaths of goats milke and ewes milke,
or els of wine cuit, before the access come. Howbeit, others would haue the Swallows them-
selves to be eaten whole without any dressing at all. The people of Parthia drink for the quartan
ague the sixt part of a denier weight of an Aspis skin, with the like poise of pepper, & they hold
it to be a soueraigne remedy. *Chrysippus* the Phyloosopher was of opinion, and so he hath put down
in writing, That to carry one Phrygianum tied to some part of the body, is excellent for the quar-
tan. But what liuing creature he would meane by that same Phrygianum, neither hath he him-
selfe described, nor euer could I meet with any man that knew it: howbeit, I thought it good
to set downe this remedy, being thus deliuered by so graue an Author as *Chrysippus* was, to stir
vp the diligence of others, if haply there be any so industrious as will take paines to search far-
ther into the thing, and learne what it might be.

In any of these long diseases which be called Chronique, it is commonly thought, That to
eat the flesh of a Crow, & to apply vnto their body their * nest, is most excellent to bring them
to an end.

* Videtur Some
made of Ierom.

D As for Tertian agues, it were an easie matter to try the experiments of such receipts as are gi-
uen out for them: considering how the poore patients in hope of ease are willing enough & de-
lighted to be doing and working conclusions: and namely to see whether the copweb, nest, and
all, of that spider which they call * Lycos, incorporat with rosin and wax, & so applied as a fron-
tale to the forehead and temples on both sides of the head, will do any good to rid them away. * I. Wolf. Sup-
posed to be
our common
spider that
hunneth flies.
Certes, some vse to wear about them the spider it selfe, inclosed within a quill or piece of a reed:
in which sort it is reported to auail much in the cure of other fevers. Also it is thought, That a
green lizard hung about the neck aliue in some box sufficient to receiue it, is as effectuall. And
these kind of medicines they affirm to be of great efficacy for to driue away those agues which
by way of relapse vse often to returne againe when they were thought to be cleane gone.

E Touching the dropsie, the tried greafe of sweet wooll taken in wine with a little Myrrh, so
that the whole arise to the quantity of an Hazel nut, is supposed to be a singular receipt: but some
put thereto Goose greafe also and oile of Myrtles. The filthy ordure that gathereth about Ewes
vdders, hath the same effect. Likewise, the flesh of an vrehin long kept in powder or otherwise,
and eaten, doth much good. To conclude, it is thought, that if the belly be rubbed well and an-
ointed with that which a dog doth vse to cast by way of vomit, it helpeth those that bee in a
dropsie, for it is reported to haue a speciall vertue to draw a water, and to drie vp the superfluous
humidity ingendring that disease.

CHAP. XII.

Medicines for S. Anthones fire, Carbuncles, fellons, burns, or ampes, or contractions of sinewes.

T He suet or greafe of vnwashed wooll incorporat with oile of Roses and Tutie, is a proper
liniment for S. Anthones fire: so is the blood of a tike, and earth-wormes reduced into an
vnguent with vineger: but especially these C ricquets, crushed and wrought within ones
hand

* Haply be-
cause all these
beetles be con-
sist of the male
sex, & none of
them female:
for in those lit-
tle roundles of
earth these
beetled grubs,
which turne
so be in the
end beetles.
* This beetle
he called be-
fore Taurus,
i. Bull.

and soon do fonder greene wounds: in which operation they are so effectuall and speedy withal, G
That if the sinewes be cut quite asunder, it is a common opinion, that they will consolidat and
vnite them again in lesse space than a week: and therefore, because they should be ready and e-
uer at hand, many preferre them for this purpose: condite in hony. Indeed, when they be reduced
into ashes, they are effectuall to eat downe the hard callosities growing in the sides and edges of
vicers, if they be incorporat with Tarre, or the Sicilian hony called Hyblæum. Some vse them
vnles, if they be incorporat with vineger, for wounds: but this cataplasme they doe not re-
died in the Sun and tempered with vineger, for wounds: but this cataplasme they doe not re-
moue vntill 2 daies be past. After the same manner, the terrene or earthly substance of shel-snails
do much good: yea, and taken forth whole as they be out of their shels, stamped and so applied, H
they conglutinate greene wounds, and stay the running farther of corrosiue vicers. Also there is a
certain luting creature, which is called Herpes by the Greeks; the same hath a peculiar proper-
ty to heale any sore that * runneth on still and corrode as it goeth. For which kinde of vicers,
tissels, bruised shels and all, be passing good: and the same incorporat with Myrrh and Frankin-
cense, haue the name to heale sinewes that be cut in two: Moreover, the fat of a Dragon dried
in the Sun, is very effectuall like as the brains also of a Cock, to heale green wounds, if the pati-
ent withall eat salt to his meat, which was calcined together with Vipers flesh: and by this
means (they say) that any vicer will sooner yeeld to the cure, and be healed with more speed.
The renowned Physitian Antonius Musa, hauing certain Patients in cure vnder his hand, who
had vicers that were thought incurable, prescribed them to eat Vipers flesh: and wonderful it
is how soone he healed them cleane by that means.

The ashes of certain Locusts without wings, called by the Greeks Tryxalides, cause the thick I
roufs and escars that grow about the brims of vicers to fall off, and they consume the hard cal-
losities thereof applied with hony. The ashes likewise of Pigeons dung tempered with Orpi-
ment or Arsenick and hony, serue as a corrosiue to eat away any excrescence that ought to bee
consumed: the brains of scrich-owls incorporat with greafe, doth wonderfully conglutinat any
wounds. As for those morimals, named by the Greekes Cacoethe, the ashes of a ram (shank-
wounds. As for those morimals, named by the Greekes Cacoethe, the ashes of a ram (shank-
bones & legs mixt with breast milk, is singular to heale them, so that the said sores were first well
and thoroughly washed and bathed with fine linnen cloaths soaked in some conuenient liquor.
There is a bird called an Hulat, which if it be foddren in oile, & so resolu'd, is good therefore, in
case the same be incorporat with butyr made of ewes milk and hony. If the sides or brims of any
vicer be growne callous and hard, the Bees that are stifled and killed in hony, doe mollifie very
well. The blood and ashes of a Weazill calcined, doe cure the white filthy leprosie called Ele-
phantiasis. The wounds occasioned by whipping and scourging, the marks also and wales remai-
ning to be seen black and blew after such lathes and stripes, are done away and go presently out,
with applying thereto a sheeps skin fresh and newly flaid. If there be any joint bruised or crac-
ked, the ashes of a Sheeps leg bone, burnt, haue a speciall vertue to help the same: but much bet-
ter, if they be incorporat into a cerot with wax. Of the same operation there is another plaster
made, namely, if there be calcined with the former the jaws of the said Sheep, and a Harts horn:
and if the wax be softened and resolu'd with oile rosat. When bones bee broken, it is good to
apply vnto the fracture the brains of a dog spread vpon a linnen cloth or inwrapped therein, co-
uering the said cataplasme with wooll laid aloft, and the same est-toones moistened and wet
thoroughly [* in some astringing liquor:] this manner of cure doth fonder them lightly in
14 daies at the farthest. The ashes also of field-mice work the like effect as speedily, if the same
be tempered with hony, or mingled with the ashes of earth-wormes: which also is able to draw
forth spils of bones, and make them to worke out. The lights of a Mutton and of a Ram espec-
ially, reduce skars to their liuely colour againe, futable vnto the skinne about: their tallow also
mixed with sal-nitre: so do the ashes of a greene lizard: the slough that snakes cast off in the
Spring boiled in wine: and Pigeons dung tempered with hony, and so applied. The same me-
dicines do take away the filthy white Morpew, called in Latine Vitiligo, if they be vsed with
wine: for which Morpew or infection of the skin, it is good to apply Cantharides, with twice
as much of Rue leaues, which the patient must indure and abide, lying still vpon the place in the
Sunne, vntill such time as the skinne begin to rise in pimples and little blisters. Afterwards it is
needfull to foment and bathe the said place thus offended, yea, and to annoint it wel with oile:
which done, to returne againe to the former emplastration, and so hold on this course by
turnes for many daies together, but in any wise to take heed that the exulceration in this cure

* As oile of ro-
sared wine

A go not ouer deep. For the same morpew, many giue order to make a liniment with flies & the
root of docks, and herewith to annoint the places infected with this morpew: also, to apply
thereto hens dung, I mean as much thereof as is white: for which purpose they keep the same in
oile within horne boxes, for to serue the turne as need requirith. Likewise, to annoint them with
the blood of bats, or the gall of an Vrchin tempered with water. As for the running scalls, the
brains of a scrich-owle is very good, incorporat with salt-petre: but dogs blood hath no tel-
low to repress the same: like as to kill the itch, the little broad snails stamped and brought
into a liniment, are soueraigne. If there be any spill or thiner of arrowes, if any piece of a dart or
whatsoeuer els stick within the flesh, which would be gotten forth, split a liew mouse in the
middle, and lay the same hot to the place, you shall see how it will draw the same out. But a Lizard
passeth all the rest, being in this wise slit along and diuided: or if the head only be stamp-
ed with salt, and applied accordingly. There be certain shel-snails that creep in troupes toge-
ther for to deuour the yong spring and green leaues of plants, which serue to this effect, if they
be punned with their shels and laid to the place. Those also that vse to dresse and eat, if they
be taken forth of their shels: but if you put thereto the rennet of a yong hare or leucuer, it is won-
derfull to see how effectuall they will worke. Snakes bones incorporat with the rennet of any
four-footed beast whatsoeuer, within lesse than 3 daies shew the same effect, and draw forth a-
ny thing that sticketh within the body. Finally, the flies called Cantharides are much commen-
ded for this operation, if they be stamped and incorporat with barley meale.

CHAP. XIII.

¶ Proper remedies for the cure of womens maladies: and to help them for to goe
out their full time, and bring forth the fruit of their wombs fully
ripe and accomplished.

THE skin or secundine which an Ewe gleaneth after the bath yeaned, and which inlappeth
the lambe within her belly, prepared, ordered, and vsed (as I faid before) as touching goars,
it is very good for the infirmities that properly be incident vnto women and occasioned
by their naturall parts. The dung likewise of sheep, be they rammes, ewes, or weathers, hath the
same operation. But to come vnto particulars, the infirmity which otherwhiles putteth them to
passe their vrine with difficulty and by dropmeale, is cured principally by sitting ouer a perfume
or suffumigation of Locusts. If a woman after that she is conceiued with child, vse est-toons to
eat a dish of meat made of cock-stones, the infant that she goeth with shall proue a man child,
as it is commonly thought and spoken. When a woman is with childe, the meanes to preferue
her from any shift and slip that she may tarry out her full terme, is to drinke the ashes of Porke-
pines calcined: also the drinking of a birches milk maketh the infant within the womb to come
on forward & to grow to perfection, before it seek to come forth vntimely: also, if the child stick
in the birth, or otherwise make no haste to come forth of the mothers body when the time is
come, the skin wherein the bitch bare her whelps within her body, and which cometh away
from her after the hath puppi'd, hasteneth the birth, if so be it were taken away from her before
it touch the ground.

If women in labour drinke milke, it will comfort their loins or smal of the back, Mice dung
delaid and dissolved in rain water, is very good to annoint the breasts of a woman, new laied, to
break their kernel, and to allay their ouermuch strutting presently after child birth. The ashes of
hedgehoggs preferueth women from abortion or vntimely births, if they be annointed with a li-
niment made of them and oile incorporat together. The better speed and more ease shall those
women haue of deliuerance, which in the time of their trauell drinke a draught of Goose dung
in two cyaths of water: or else the water that it sueth out of their owne body by the naturall parts
a little before the child should be borne, and that out of a weazils bladder. A liniment made of
earth-wormes, if the nouch or chine of the necke and the shoulder blades be annointed there-
with, preferueth a woman from the pain of the sinews, which commonly followeth vpon child
bearing: and the same send away the after-birth, if when they bee newly brought to bed, they
drinke the same in wine curd. A cataplasme made of them simply alone without any other thing,
and applied to womens sore breasts which are impostsu'd, bring the same to maturation, breake
them when they are ripe, draw them after that they runne, and in the end heale them vp cleane
and

* Grauidis,
et puerperis,
hoc puerperis.

and sk in all again. The said earthwormes also if they be drunk in bonied wine, bring down milk into their breasts. There be certain little worms found breeding in the common Coich-grasse, called Gramen, which if a woman weare about her neck, serue use effectually, to cause her for to keep her infant within the wombe the ordinary terme: but the mnst leaue them off when the drawes neere to the time when she should cry out: for otherwise, if they be not taken from her, they would hinder her deliuerance. Great heed also there must be taken, that these wormes bee not laid vpon the ground in any hand. Moreouer, there be Phyticians who giue women to drink 5 or 7 of them at a time, for to help them to conceiue. If women vse to eat snails dressed as meat, they shall be deliuered with more speed, if they were in hard labour: let them be applied to the region of the matrice or naturall parts with Saffron, they hasten conception. If the same be reduced into a liniment with Amylum and gum Tragacanth, and laid too accordingly, they do stay the immoderat flux of reds or whites. Being eaten in meat, they are soueraigne for their monthly purgations. And with the marrow of a red Deere they reduce the matrice againe into the right place, if it were turned a-to-side: but this regard must be had, that to euery snail there be put a dram weight of Cyperus also. If the matrice be giuen to ventrosities, let the same snails be taken forth of their shells, stamped and laid too with oile of Roses, they discusse the windnesse thereof. And for these purposes before named, the snails of Astypala be chosen for the best. Also for to resolute the inflation of this part, there is another medicine made with snails, especially those of Bararie, namely, to take two of them and to stampe them with as much Fenigreeke seed as may be comprehended with three fingers, adding thereto the quantity of four spoonfulls of hony, and when they be reduced all into a liniment, to apply the same to the region of the wombe, after the same hath been well and thoroughly annointed all ouer with the iuice of Ireos, i. Flour-de-lis. There be moreover, certaine white snails that be small and long with all, and these be commonly wandering here and there in euery place. These being dried in the Sun vpon tiles, and reduced into powder, they vse to blend with bean flour, of each a like quantity. And this is thought to be an excellent mixture for to beautifie their body, and make the skin white and smooth. Also, if the itch be offensive, so as a woman be found euer and anon to scratch and rub those parts, there is not a better thing therefore than the little flat snails, if they be brought into a liniment with fried Barly groats. If a woman with child chance to sleep ouer a Viper, shee shall be deliuered before her time of an vnperfect birth. The like accident will befall vnto her, in case she go ouer the serpent Amphibizna, if the same were dead before. And yet if a woman haue about her in a box one of them aliue, shee shall not need to feare the going ouer them, though they were dead. And one of these Amphibiznes dead as it is, and preferred or condite in salt, procureth safe and easie deliuerance to a woman that hath it about her. A wonderfull thing, that it should be so dangerous for a woman with child to passe ouer one of them which hath not bin kept in salt: and that the same should be harmelesse and do no hurt at all, if immediately after it hath bin so kept, shee slept ouer it. A perfume made with a snake long kept and dried, procureth the desired sickness of women. The old slough of a snake, which the hath cast, applied vnto the loines of a woman that is in labour, helpeth her to better speed: but it must be removed presently after that she is deliuered. Many vse to giue it vnto women with child for to be drunk in wine with frankincense: for being taken otherwise it causeth abortion. The rod or wand whereby one hath parted or taken off a frog or toad from a snake, helpeth women that be in trauell of childbirth. And a liniment made with the ashes of the vnwinged Locusts called Tryxalides & hony tempered together, helpeth forward their monthly purgations. The spider likewise that commeth downe spinning from aloft, hanging by her fine thred which she draweth in a length, if she be caught with the hollow of the hand, bruised & applied accordingly, worketh the same effect: but take the same spider winding vp her yearme, and returning back to her nest vpward, it will worke contrariwise, & stay the fluxes of women. The Ægie stone called A tires, because it is found in an Ægles nest, preferueth & holdeth the infant still in the mothers wombe to the full time, against any indre & practise of sorcery or otherwise, to the contrary. If a woman be in hard labor of childbirth, put a Vultures quill vnder her feet, it will helpe her to a more speedy deliuerance. Great belied women, as it is well knowne & found by proofe, ought to be very chairey and to beware of rauens eggs, for if they chance to goe ouer one of them, they shall fall to labour presently, and dip an vntimely birth with great danger of their life. It seemeth to many, that the meuting of an Hawke drunke in bonied wine, maketh women which were

A were barren before, to be fruitful. Certes, the greafe of a goose or swan doth mollifie any hard rumors, schirrh, and impostumations of the matrice and secret parts. Goose greafe mixt with the oile of roses and Ireos, preferueth womens breasts after they be newly brought to bed. In Phrygia and Lycania it is found by experience, that the fat of the Bistard or Horn-owle is vepain of their breasts: but for women that are in danger to be suffocated with the pricking or shooting mother, they haue a liniment also made with the beetils or worms called Blattæ. The ashes of the Partridge egges calcined, mixed with brasse ore called Cadmia, and wax, and so reduced into a cerot, preferueth womens breasts plume and round, that they shall not be riuelled or haggie: and it is thought, that if a woman make three imaginary circles round about them with a partridge egg, they shall continue knit vp and well trusted, and not hang downward illaforeably: let a woman vse to sup them off, she shall be both a fruitful mother of many children, and also a good milch nurse for to reare them vp. Also it is a general receiued opinion, that if womens paps be annointed all ouer with goose greafe, it will allay the grieue and paine thereof: likewise there is not a better thing for to dissolue and scatter Moon-calues and such like false conceptions in the wombe: or to mitigate the scurfe or manginess incident to that member, than to apply to those parts a liniment made of punaises bruised or stamped to the purpose.

Bats blood hath a depilatorie facultie to fetch off haire, and lett the growing thereof; howbeit sufficient it is not alone to worke that feat in boies cheeks and chins whom we would keep smooth and beardless, except the place be rubbed afterward with the seed of rocket or hennecouer be but soft down: it is thought that their brains also will come vp there, or els it will brains be of two sorts, to wit, red and white: howbeit some giue counsell to mingle with the said rill her flesh be thoroughly foddren, and as tender as may be, hauing before rid her from all her bones; and it they vse for a depilatorie: but first they plucke vp all those haire by the roots if it be mixed with the brains of a Bat, and goats milke. Then, the ashes thereof simply mingled againe be plucked vp; or if those places be annointed therewith where neuer yet grew any, none shall spring there afterwards. The same effect (by report) hath the blood of a tick that was taken from a dog: and finally, the blood or gall of a swallow.

CAP. XV.

¶ Many Receipts handled together disorderly one with another for sundry maladies.

It is said, that Ants egges stamped & incorporated with flies likewise punned together, will giue a louely black colour to the hairs of the eye-browes: also if a woman be desirous that her infant should be born with black eyes, let her eat a rat while she goes with child. To preserue the haire from being gray and grisle, annoint them with the ashes of earth-worms and oile oliue mixt together. If sucking babes be wrung or gnawne in the belly, by reason of some cruddled milk which they draw from their nurses, or doth corrupt so in their stomack, it is good to giue them in water the rennet of a yong lambe to drink: but in case this accident commeth by caulding of the milke, they vse to giue vnto them the said rennet in vineger for to discusse the same.

E For the paine that they abide in toothing, the brains of an hare is soueraigne to annoint their gums withall. It falleth out that yong infants many times be tormented with an vnaturall heat and burning of their head, called Siriasis; for to ease and cure them thereof, they vse to take the bones that are found in dogs dung, and to hang them about their necks or arms. Yong infants are subiect to ruptures and descents of the guts, in which case it is good (some say) to apply a greene lizard vnto their bodies whiles they lie asleepe, and to cause it to bite the place: but then afterward the said lizard must be tied fast to a reed and hung vp in the smoke: for look how it decayeth and dieth by little and little, so shall the rupture knit and heale again. The foamisture that shell-snails yeeld, if childrens eyes be annointed therewith, doth not only redeth & causeth them to grow. The ashes of burnt shell-snails reduced into a liniment with frankincense

* Trino, as followeth in the next chapter e not annoint, as it is in most prints:
* From swelling, hardness, or the ague, as women call it.

* Leporis or pericoris, (i.) of a sheepe.

kinense and the white of an egg, doth in the space of 30 daies cure those that are bursten bellied. In the little horns of shell-snails there is found a certaine hard substance resembling grit or sand, which if it be hanged about a young infant, is a means that it shall breed teeth with ease. The ashes of snail shells when the snails are gon, incorporat in wax, and applied to the seat of the fundament, putteth backe the end of the tiwill that is fallen down and ready to hang out of the body: but you must not forget to mingle with the said ashes the bloody substance that is let out of a vipers brains when her head is pricked. The braines of a viper if they be put in a little fine skin, & worn by a young child, helpeth it to breed teeth without any great pain: for the same purpose serueth also the teeth of serpents, so they be choſen the biggest that are in their heads: raues dung wrapped in wool and hung to any part of young infants, cureth the chin-cough.

Some things there remain as touching this argument, which hardly methinks I should not handle feriously & deliuer in good earnest: howbeit since there be diuers writers who haue put them down in writing, I must not passe them ouer in silence. They are of opinion and doe giue order, to cure the rupture and descent of the guts in little children, with a lizard: but how? first it ought to be of the male kind which is taken for this purpose, and that may soone be knowne, if vnder the taile it haue one hole and no more: then there must be vsed all means possible that the said lizard do bite the tumor of the rupture through a piece of cloth of gold, cloth of siluer, or purple: which done, the said lizard must be tied fast within a new cup or goblet that neuer was occupied, & so set in some smoky place where it may die. If little infants pisse their beds, a ready way to make them containe their water, is to giue them foddren mice to eat. If there be any suspection of forcerie, witchcraft, or enchantment practised for to hurt young babes, the great horns of beetles, such specially as be knagged as it were with smal teeth, are as good as a countercharm and preferuatiue, if they be hanged about their necks. There is (as they say) a little stone within the head of an ox or cow, which they vse to discharge and spit out when they be in danger of death: the same if it be taken out of one of their heads which is suddenly stricken off before the beast be ware thereof, & hanged about an infants necke or other part of the body, is wonderful good for breeding of teeth. Semblably they preferbe their brains to be caried about them in like manner, & for the same purpose: also the little bone or stone found in naked snails back. Moreover, the anointing of childrens gumbes with the braines of a young sheepe, is singular good and effectual to cause them to breed their teeth with facilitie: like as goose greafe infused with the iuice of basil into their ears, cureth the infirmities thereof. There be in many prickly herbs certain rough & hairy worms, which if they be hung about the necks of young infants, do presently cure them, if haply there were any thing in their meat that sticke and lay hard in their stomach, for they wil cause them to puke it vp. To prouoke sleep there is not a better thing than the tried greafe of vnwashed wool, with some myrrh, be it neuer so little infused & dissolved in two cyaths of wine, or els incorporat with goose greafe and wine of myrtles: for which intent they vse to take the bird called a Cuckow, and within a hares skin tie it to the patient, or els to bind the bill of a young heron to the forehead, within a piece of an asse skin: and they are of opinion, that the same bill alone is as effectual, so it be well washed in wine: contrariwise, the head of a bat dried and hanged about the neck, keeps one from sleep altogether. A lizard drowned to death in the vrin of a man, disablen him from the vse of venery, who * drank the liquor whereof that vrine came: and no maruel, for why? the magicians repose a great thing in a lizard in loue matters. The excrements of snails which resemble dung, as also the dung of pigeons, tempered in a cup of wine and giuen to drink, coole fleshy lust. The right lobe or side of a vultures lungs prouoke men to Venus sports, if they carry it about them enwrapped within a cranes skin. In like manner the yelkes of fiew pigeons eggs incorporat with swines greafe to the weight of one denier Roman, and so supped off, work the same effect. Some eat sparrows vually for this purpose, or sup their eggs. Also there be who carry about them the right stone of a cock, inclosed fast within a piece of leather made of a rams skin, and to good effect, if all be true that magicians say: who affirm also, that those women who are anointed with a liniment made of the ashes of the bird Ibis, incorporat with goose greafe and the oile Treos, shall if they be conceiued with a child go out their full time: and they say, that whosoever be anointed with a liniment made of the stones of a fighting cocke and goose greafe, shall haue but little mind to performe the act of generation: or if the same be tied vnto any part of them within a piece of leather made of a rams skinne. In like manner, it is said that the stones of any other dunghill cock are of the same effect.

* Biberis, some
reide fecrit,
i. who made
the said water.

A effect, if together with the blood of the said cock, they be but laid vnder ones bed. If one pluck the haire out of a mules taile while the stallion couereth her, and bind the same together in a wreath or knot, & apply them to the legs or loins during the act of generation, they will cause (women) to conceiue whether they will or no. Whosoever maketh water vpon the very place where a dog hath lift vp his leg and pissed, so as both vrines be mingled together, folke say, he that toucheth it report likewise of the ashes of a star-lizard or Stellion: that if the same be wrapped within some lint or linnen rag, & held in the left hand, it stirreth vp the heat of lust, but if the same into the right hand, it wil coole one as much. Moreover, that if one put vnder the pillow where a woman laies her head, a few flockes, or Locke of wooll foked well in batns blood, it wil let her on to desire the company of a man; or if she do take a goose tongue either in meat or drink. The old skin or slough that snakes do cast off in the Spring, whosoever drinketh in his ordinary drink, it wil kill all the vermin or lice of the body within three daies: so doth the whey of milke after the cheefe is gathered, if one drinke the same with a little salt. If the braines of a cheefe so made, shall neither corrupt all summer long, nor be eaten by the mouse. The ashes of the same weazill giuen to chickens or young pigeons among the past that is made for to feed them, secureth them from the weazill. Furthermore, it is said, that if a batt be tied vnto a horse that grieue and impediment: if they haue the wringing of the guts, or be troubled with the bots, there will ensue ease of their paine, presently vpon the making three turns or compasses round about their shap and naturall parts with a stockdoue. But see a marvellous matter! the doue be would know a remedy against drunkennesse, make this experiment; Giue for three daies together to great drunkards the eggs of an owle continually in their wine, they will take a loathing same before he sit downe to drinking, shall not be ouertaken or drunken, how freely soeuer he powreth downe the wine. The ashes of swallowes bills incorporat with myrrh, will secure any man from drunkennesse, and cause him to beare his drinke well, in case the wine that he drinketh be spiced therewith: And *Horus* king of the Assyrians, deuised first this receipt against drunkennesse.

ouer and besides all this, there by many other singular properties behind, worthy to be noted, which are attributed vnto sundrie beasts, and doe properly pertaine to this present treatise handled in this booke: for these magicians tel vs of a certain bird in Sardinia called *Gromphæna*, like vnto a crane, but I belceue verily that the Sardinians at this day know not what bird it sembleth a stag, but in no place els doth it breed: and the very same authors haue told vs of another manner of beast it should be, nor the place where it should breed. I doubt not verily but such fourtime there were, considering that they haue shewed diuers medicines that they do affoord.

* A Muffie, as
Master it
keeth it.

And *M. Cicero* writeth of a beast named *Byturos*, which gnaweth the vines in Campania.

CHAP. XVI.

Strange wonders reported of certaine beasts.

Here remains yet certain wonderful things to be spoken of, depending vpon those brute creatures, of which I haue treated already: namely, that whosoever haue about them the secondine of a bitch, that is to say, the skin wherin her whelps lay within her belly, or hold in their hands either the hair or dung of an hare, no dogs will bark at them wheruer they come. Also that there be a kind of gnats called *Muliones*, which lye not about a day. Moreover, as many as haue about them the bill of a woodspecke when they come to take honey out of the cell of past or bread, the brains of a rauen, they will follow him whither soeuer he goes. Furthermore, that if one be strewed with the dust wherin a mule hath wallowed & tumbled her selfe, she shall be wel cooled in loue, how amorous soeuer he were before.ouer & besides, take a rat & cut

out his stones, and so let him go againe, he will make all other rats to run away. Make a mash or drench of a snakes skin, salt, red wheat called Far, with some wild running thyme, stamped all together, in one and the same day; put all into wine and conuey the same into the throat of a cow or ox, about the time that grapes begin to ripen vpon the vine, the said beasts will stand to health for a whole yeare after or giue them young swallows, and cause them to let the same downe their body in some past or bread at three seuerall times. Gather the dust together out of the place where you see a snake hath gone and made a tract, fling the same vpon a swarme of bees, they shall returne againe to their hieue. Tie vp the right stone or cullion of a ram, he shall get none but ram-lambs. And looke whoeuer haue about the strings or sinewes taken from the wings and legs of a crane, they shall not be tired and faint in any labour that they take. If you would haue mules not to winke and fling out with their heels, giue them wine to drinke. If last of all, I cannot ouerpasse one notable and memorable example as touching the house of a mule: when *Antipater* should send the venomous water of the fountaine *Stryx* for to poyson king *Alexander* the great, he could meet with no matter that would hold this poyson, without piercing and running through it, but only the house of a mule: and to the knowledge hereof hee came, by the direction of *Aristotle* the Philosopher, who deuised a cup to be made thereof. A foule staine and blot of *Aristotles* name, for being priuie to such villanie, and setting it forward as he did. Thus much of Land-creatures: it remaineth now to returne againe to those of the Waters, and their vertues in Physicke.



THE XXXI. BOOKE OF THE HISTORIE OF NATURE,

WRITTEN BY C. PLINIUS

SECVNDVS.

The Proem.

CHAP. I.

¶ *The medicinable vertues of creatures liuing in water. The admirable nature of waters.*



OW followeth the discourse of Water-beasts, and how beneficiall they be vnto vs in regard of Physicke: wherein verily dame Nature (the mother and workemistress of all things) sheweth how little idle shee is, not ceasing euen there also by her continuall operations to make knowne her wonderful power, among the waues and surging billowes, amid the reciprocal tides of the sea, ebbing and flowing in their alternatiue turnes; yea and in the swift course and streames of great riuers. And verily, to say a truth and speak as it is, there is no part of the World wherein the might and majesticke of Nature more appeareth, than in the waters: for this one Element seemeth to rule and command all the rest. Waters deuoure and swallow vp the earth: waters quench and kill the flames of fire: they mount vp aloft into the aire, and seeme to challenge a feignorie and dominion in the heauens also; whiles by a thick feeling and floore as it were of clouds, caused by the dim vapours arising from them, that vitall spirit which giueth life vnto all things, is debarred,

stopped.

of Plinies Naturall Historie.

A stopped and choaked. And what might the reason els be of thunder and lightnings flashing and breaking forth in that violence, and causing such trouble and broils, as if the world were at war within it selfe? And can there bee any thing more wonderfull and miraculous, than to see the waters congealed aboue in the aire, and so to continue pendant in the skie? And yet as if they were not contented to haue risen thus to that exceeding height, they catch and snatch vp with them into the vpper region of the aire, a world of little fishes: otherwhiles also they take vp another Element. The same waters falling downe againe in raine, are the very cause of all those things here below which the earth produceth and bringeth forth. And therefore considering the wonderful nature thereof, and namely, how the corne groweth vpon the ground, how trees and plants doe liue, prosper, and fructifie by the means of waters, which first ascending vp into the skie, are furnished from thence with a liuely breath, and bestowing the same vpon the herbs, cause them to spring and multiply; we cannot chuse but confesse, that for all the strength and vertue which the Earth also hath, shee is beholden to the Waters, and hath receiued all from them. In which regard, aboue all things, and before I enter into my intended discourse of Fishes and beasts liuing in this Element, I meane first to set down in generallity the maruellous power and properties of water it selfe, and to illustrat the same by way of sundry examples: for the particular discourse of all sorts of waters, what man liuing is able to performe?

CHAP. II.

¶ *The diuersitie of waters: their vertues and operations medicinable: and other singularities obserued therein.*

HERE is in maner no region nor coast of the earth, but you shall see in one quarter or other waters gently rising and springing out of the ground here and there, yeelding fountains in one place cold, in another hot; yea and otherwhiles there may be discouered one with another neere adioyning: as for example, about *Tarbelle* a towne in *Guienne*, and the *Pyrenean* hills, there do boile vp hot and cold springs, so close one vnto the other, that hardly any distance can be perceiued between. Moreover, sources there be, which yeeld waters neither cold nor hot but luke-warme, and the same very holefome and proper for the cure of many diseases; as if Nature had set them apart for the good of man only, and no other liuing creature beside. To these fountains so medicinable, there is ascribed some diuine power, in so much as they giue name vnto sundry gods and goddeses, and seeme to augment their number by that means: yea and otherwhiles great towns & cities carrie their names: like as *Puteoli* in *Campane*; *Statyellæ* in *Liguria*; *Aque Sextiæ* in the prouince of *Narbon* or *Picmont*: but in no countrey of the world is there found greater plenty of these springs, and the same endued with more medicinable properties, than in the tract or vale *Baïanus* within the realm of *Naples*, where you shall haue some resembling the nature of *Bitumen*, and others againe of a mixt qualitie, partly soure, and partly salt. Furthermore, you shall meet with some of them, which naturally serue as a stoupe or hot-house, for the very iteeme and vapour only which ariseth from them, is wholefome and profitable for our bodies: and those are so exceeding hot, that they heat the baines, yea and are able to make the cold water to seeth & boile again which is in their bathing tubes: as namely, the fountaine *Posidians* within the foresaid territory *Bajanus*, which name it tooke of one *Posidius* a soure sometime, and enfranchised by *Claudius Caesar* the Emperour. Moreover, there be of them *Licinian* springs, which beare an egg or any other viands or cates for the table. As for the reeke againe, euen out of the very sea. See how good Nature is to vs, who amid the waues and billows of the sea, hath afforded healthfull waters! But now to discipher their vertues in Physicke according to their seuerall kinds: thus much in generallity is obserued in these baths. That are good for dislocations of ioints, for gout of the feet, & sciatica. Some more properly bellicke & to purge; and as there be of them which heale wounds and vlcers, so there are againe that more particularly be reserued to the accidents of the head and eares; and among these, those which beare the name of *Cicero* and be called *Ciceronianæ*, be soveraign for the eyes. Now there

M m 3

* Somethinke
Baion in
France.

is a memorable manour or faire houle of plaifance, fituat vpon the fea fide in the very high way G which leadeth from the lake Auenus to the citie Puteoli; much renowned for the groue or wood about it, as also for the ftately galleries, alliees, and walking places adioyning therunto, which for our and beautifie the faid place very much: this goodly houle, *M. Cicero* called Academia, in regard of fome refemblance it had vnto a colledge of that name in Athens, from whence he tooke the modell and pattered: where he compiled thofe books of his which carrie the name of the place, and be called * *Academicæ quæftiones*: and there he caufed his monument or fepulchre to be made, for the perpetuie of his memoriall, as who would fay, he had not fufficiently immortalized his name throughout the world, by thofe noble works which he wrote and commended vnto pofteritie. Well, loone after the decafe of *Cicero*, this houle and Forrest both fell into the hands and tenure of * *Antiftius Petus*; at what time, in the very forefront as it were H and entrie thereof, there were difcovered certaine hot fountains breaking and fpringing out of the ground, and thofe paffing medecinable and wholefome for the eies. Of thefe waters, *Laurea Tullus* (an enfranchifed vaffall of *Cicero*) made certaine verfes, and thofe carying with them fuch a grace of maftey, that at the firft fight a man may eafily perceiue how affectionat and deuout he was to the feruice of his lord and mafter: and for that the faid Epigram is worthy to be read not onely ther, but alfo in every place, I will fet it downe here as it ftandeth ouer thofe baines to be feene, in this Decaficon.

*Quo tua, Romane, vindex clariffime linguae,
Sylua loco melius surgere iuffa vires,
Atque Academia celebratam nomine villam.
Nunc reparat cultus fub potiore Vetus
Hic etiam apparent lymphæ non ante reperiæ,
Languida quæ infufio lumina vix leuant.
Nimirum lacus ipfe fui Ciceronis honori
Hoc dedit, hæc fontes cum pascerefci ope,
Vt quantum totum legitur sine fine per orbem,
Sint plures, oculis quæ medeantur, aquæ.*

O prince of Romane Eloquence, loe here thy Groue in place How greene it is, where planted firft it was to grow apace: And *Petus* now, who holds thy houle, Faire Academic height, Spares for no coft, but it maintains and keeps in better plight. Of late alfo, frefh fountains here brake forth out of the ground, Most wholefome for to bath fore eies, which earft were neuer found. Thefe helpfull fountains, the Soile no doubt, prefenting to our view, To *Cicero* her ancient lord, hath done this honour due; That fince his backes throughout the world are read by many a wight, More waters ftill may cleare their eyes, and cure decaying fight.

In the fame tract of Campaine, and namely toward Sinueffa, there be other fountains called L Sinueffan waters: which haue the name not only to cure men of lunacie and madnes, but alfo to make barrain women fruitful and apt to conceiue. In the Ifland Enaria there is a fpring which belpeth thofe that be troubled with the ftone and grauel: like as another water which they call Acidula, within 4 miles of Teanum in the Sidicins country, and the fame is aually cold: alfo there is another of that kind about Stabij, called by the name of Dimidia: like as in the territory of Venafum, that which proceeded from the fource Acidulus, and gaue name to the forefaid water Acidula. The fame effect they find who drink of the lake Velinus, for it breaks the ftone. Moreover, *M. Varro* maketh mention of fuch another fountain in Syria at the foot of the mountaine Taurus. So doth *Callimachus* report the forefaid operation of the riuier Gallus in Phrygia: howbeit they that take of this water muft keep a meafure, for otherwife it diftracts their vnder- M ftanding, & driues them befides their right wits: which accident hapneth to thofe (faith *Crispian*) who drink of the red fountain (for fo it is called) in Ethiopia: as touching the waters neer Rome called Albulæ, they are known to heale wounds: thefe waters are neither hot nor cold: but thofe which go vnder the name of Cutillæ in the Sabins country, are exceeding cold, & by a certain

A mordication that they haue, feem to fuck out the humors & fuperfluous excrements of the body, being otherwife moft agreeable for the ftomacke, finewes, and generally for all parts. There is a fountain at Thefpie, a city in Beotia, which doth great pleasure to women that would faine haue children, for no fooner drinke they of the water, but they are ready to conceiue: and of this propriety is the riuier Elatus in Arcadia. In which region alfo the Spring Linus yeeldeth water, which if a woman with child do drink, the fhall go out her full time & not be in danger to flip lake or meere * *Alphion* is medecinable, and cures the foule Morphew, *Varro* mine author makes mention of one *Tittus*, a man of good worth and sometime lord Prætor, who was fo bewitched & painted all ouer his face with fports of Morphew, that he looked like an image made of fpo- B ted marble. Cydnus, a riuier of Cilicia, hath a vertue to cure the gout; as appeareth by a letter written from *Cassius* the Parmezan vnto *M. Antonius*. Contrariwife, the waters about Trezen are fo bad, that all the inhabitants are thereby fubject to the gout and other difeases of the feet. There is a citie in * *Gaul* named Tungri, much renowned for a noble fountain, which runneth at many pipes: a smacke it hath refembling the ruft of yron, howbeit this ruft is not perceived but at the end & loofe only: This water is purgative, driues away tertian agues, expels the ftone and cureth the Symptomes attending thereupon. Set this water ouer the fire or neare to it, you fhall fee it thick and troubled, but at the laft, it looketh red. Between Puteoli and Naples, there be certain wells called Leucogæi, the water whereof cureth the infirmities of the eies, and healeth wounds. *Cicero* in his booke entituled Admiranda, i. Wonders, among other admirable things C hath ranked the moores or fens of Reate; for that the water iffuing from them, hath naturally a propriety from all others, to harden the houfes of hofes feet. *Eudæmus* reporteth, That in the territory of Heftria, a citie in Theffalie, there be two fountains, the one named Ceron, of which, as many fheepe as drink, proue blacke: the other Melas, the water whereof, maketh blacke fheep turn white: let them drink of both waters mingled together, they will proue flecked and of diues colour. *Theophrastus* writeth, That the riuier Crathis in the Thurius countie, caufeth both kine and fheep as many as drink thereof, to looke white: whereas the water of Sybaris giueth them a black hew. And by his faying, this difference in operation is feene alfo vpon the people that vfe a more curled hair than others: contrariwife, the drinking of Crathis caufeth them to looke white D to be more foft skinned, & their bufh of haire to grow at length. Semblably in Macedonia they that would haue any cattell to grow white, bring them to drinke at Aliacmon the riuier: but as many as defire they fhould be brown or black, drue them to water at Axius. The fame *Theophrastus* hath left in writing, That in fome places there is no other thing bred or growing but brown & dusky, infomuch as not only the cattell is all of that lere, but alfo the corne on the ground, & other fruits of the earth, as among the Meffapians. Alfo, at Lufæ, a city of Arcadia, there is a certain wel, wherein there keep ordinarily land-mice. As for the riuier Aleos, which paffes through E Frythæ, it makes them to grow hairie if their bodies ouer as many as drink thereof. In Beotia likewife, near to the temple of the god *Trophonius* & hard by the riuier Orchomenas, there be two fountains; the one helps memory, the other caufeth obliuion, wherupon they took their names. E In Cilicia, hard at the town Creteum, there runs a riuier called * *Nus*: & by the faying of *M. Varro*, whofeouer drink thereof, fhall find their wits more quicke, and themfelues of better conceit than before. But in the Ifle * *Chios* there is a fpring, which caufeth as many as vfe the water to be dull and heauie of fpirit. At Zamæ in Affrick, the water of a certain fountain, makes a cleare & shrill voice. Let a man drinke of the lake Clitiorius, he fhall take a mifliking and loathing of wine, faith *M. Varro*. And yet *Eudoxus* & *Theopompus* report, That the water of the fountains be- forefaid make them drunk that vfe it. *M. Varro* affirms, That out of the fountain vnder the temple of father *Bacchus*, within the Ifle Andros, at certaine times of the yere for 7 daies together, there runneth nothing but wine, infomuch as they call it the wine of god *Bacchus*: howbeit, remove the faid water out of the profpect and view (as it were) of the faid temple, the faft will turn to be waterish again. *Polyclitus* writeth of a certaine fontaine of Cilicia neere vnto the citie Soli, which yeeldeth an vnction or oleus water, that ferueth in ftead of oile. *Theophrastus* reports the fame of another fountain in Ethiopia, which hath the like quality. And *Lycus* faith, That among the Indians there is a fontaine, the water whereof is vfed in lampes to maintaine light. And the like is reported of another water about Ecbatane [the capitall citie of Media,] *Theopompus*

* Otherwife called *Anger*: but this name is taken of *Apollonius*, which fignifieth a kind of white murre, *He* meaneth the Low countries, called fomme Belgæ Gallia. * Called now the earh of Syghot Spaw.

* For the fox, me is called *præp*, or *præp*, the late *præp*, wit and vnderftanding. In Chio.

Theopompus writeth, That neere to *Scotusa* [in Macedonie] there is a lake, the water whereof is so- G
ueraign for the healing of wounds. Morouer, king *Tuba* hath left in writing, That in the *Troglo-*
dites country there is a lake, for the hurtful water, that it beareth, called the *Mad lake*, which
thrice a day becommeth bitter and salt; and as many times for, it turneth to be fresh and sweet:
which course it keeps also in the night season, breeding otherwise white serpents twenty cubits
long, of which it is crawling full. The same Prince (mine author) reports, That in *Arabia* there
is a spring boiling out of the ground with such a force, that it scorneth and checketh any thing
that is throwne into it, and cannot be kept downe with any weight whatsoeuer. *Theophrastus* maketh
mention of the fountain *Mariyas* in *Phrygia*, neere vnto the town *Celæna*, which casteth
vp great stones. And not farre from it be two other springs **Clæon* and *Gelon*, so called by the
Greeks for the contrary effects which they worke. At *Cizicum* there is a fountain of *Cupid*, and H
whosoever drinke of the water thereof, shall lay aside and forget all affection of loue, as *Muti-*
us doth both report and beleue. At *Cranon* there is a hot spring, and yet not so boiling as
many others be: the water thereof, if it be put into a bottle or flaggon of wine, will maintain the
heat thereof for three daies together, that it shall drinke hot. In *Germany* beyond the river
Rhene, there be waters so hot, that whosoever drinketh thereof, shall sensibly find the heat in his
body 3 daies after: The springs that yeeld this water be called *Mattiaci*. This peculiar property
besides hath this water, that about the edges and brims thereof there engender pumish stones.
Now if any man suppose some of these strange reports to be incredible, let him learne & know,
that in no part of the world Nature hath shewed more admirable works than in this element of
Water. And albeit in the beginning of this mine historie I haue written in ample manner of I
many a wonder obserued in the waters, yet somewhat remaineth still to be related. For *Clephas*
saith, That the *Indians* haue a lake or poole, wherein nothing will swim, but all sinks to the bot-
tome. And *Celius* also our countryman auoucheth, That the leaues which fall into the lake *A-*
vernus will fettle downward and not flote aboue. And *Varro* auoucheth morouer, That what
birds soeuer flie ouer it, or approach the aire and breath thereof, they will die presently. Contra-
riwise, in *Apulcidamus* a lake of *Affrick*, nothing goes down, but all swims aloft. The like doth
Appion report of *Phinthia*, a fountain in *Sicilie*: as also of a lake in *Media*, and namely the pit or
well of *Saturne*. The fountain *Limyra* is wont ordinarily to change his seat, and to passe into
places adjoining, but neuer for nought, prefaging alwaies thereby some strange accident to en-
sue. And wonderfull it is, that the fishes therein should follow and do the like. Now when this K
water is thus removed, the inhabitants of the country, desirous to know the issue of things to
come, repaire thither as to an Oracle, and seek to be resolu'd by the foresaid fishes, and therewith
offer to them some meate: if they come vnto it and swim away with all, it is a good token, & this
they take for an affirmative answer; as if they said, Yea, to their demands; but in case they refuse
the meate and flirt it away with their tailes, they collect the contrary, and this is their flat nay.
There is a river in *Bithynia* called *Ollachas*, running close to *Briazus* (which is the name both
of a temple, and also of the god therein honoured) the water whereof will discouer and detect a
perjured person: for if he that drinketh thereof, feele (as it were) a burning fire within his body,
take him for a false forsworne villaine. Furthermore, in *Cantabria* or *Biscay* the fountains of
the river *Tamaricus*, are endued with a secret vertue to presage and foretell future euents; and three L
heads or sources there be of them, eight foot distant one from another: they meet all at length
in one channell, and maintaine the great and mighty river *Tamaricus*. Howbeit, twelue times
every day, yea and otherwhiles twenty times they are dry, and haue no shew at all or appearance
of water, notwithstanding there be another fountain or well neere to them, that yeeldeth plenty
of water, and neuer giueth ouer running. And this is held for an ominous and fearefull presage,
if when folke are desirous to see them, they seeme not to run at all: as it was seene of late daies
by *Lartius Licinius*, sometime lord Pretour and afterwards Lieutenant Generall vnder the Con-
suls. For within a seven-night after, a great misfortune happened vnto him. In Iurie there is a
river which euery Sabbath day is dry. Thus much of waters medicinable and miraculous, and
yet not simply hurtfull. Contrariwise, there be others of as wonderfull a nature, but dangerous M
they are and deadly withall.

Clephas writeth, That there is a fountain in *Armenia*, breeding and bringing forth black Fi-
shes: whereupon, as many as feed, are sure to die for it immediately. I haue heard the like reported
of such dangerous fishes about the head of the river *Danubius*, vntill a man come to a foun-
taine

A raine which presently dischargeth it selfe into the channell of the said river; for beneath that
place such fishes go not, nor enter lower into the river. And hereupon the fountain is by the
general voice of people taken to be the very source and head of *Danubius* as afore said. The selte-
same accident as touching fish, is reported by a poole in *India*, called the poole of the nymphs.
In *Arcadia* neere vnto the river *Pheneus*, there floweth a water out the rocks called *Styx*,
which is present death to as many as drinke thereof, as heretofore I haue shewed: And *Theophras-*
tus saith morouer, that in this water there be certaine small fishes (a thing that a man shall ne-
uer writeth, That in *Thracia* there be waters about the place called *Chropolis*, which kill those
that drinke thereof. And *Lyens* maketh report of another fountain in the *Leontines* country,
B whereof as many as drinke die within three daies. *Varro* hath left in writing, That neere to the hill
Soracte there is a fountain foure foot large, which at the rising of the Sunne ouerfloweth like
boiling water: but the birds that haue tasted of the water die presently, and are there to be seen
lying dead. For this secret mischief there is besides in many of these waters, that they are faire
and cleare to see to, and thereby seeme to allure both man and beast to drinke thereof, for their
ownebane and destruction: as we may see by *Nonacris* in *Arcadia*; for surely this fountain gi-
ueth no suspicion at all, whereby we should mistrust a venomous quality, and yet some are of opi-
nion, That the hurt which commeth thereby, proceedeth from excessive cold; and they ground
their reason vpon this, That the water issuing out of it into riuers and rills, will congeale and
grow to a stony substance. It fareth otherwise about the vale of *Tempe* in *Thessalie*, where the
C water of a certaine fountain is fearefull to see to, and there is no man but abhorreth the sight
thereof, besides the corrosiue quality that (by folks saying) it hath, to fret and eat into brasse and
yron: the best is, that (as I haue shewed before) it runneth not farre, and the course that it holdes
is but short. But wonderfull it is, that a certaine wild Carob should enuiron this source round
about with his roots, and the same continually beare purple flours, as it is reported to do. Also,
in the very brinke and edge of this fountain there is another herbe of a kind by it selfe, which
abideth fresh and Greene from one end of the yeare to another. In *Macedonie*, not far from the
tombes of *Euripides* the Poet, there be two riuers run together, the one yeelds water most whole-
some for to be drunke: the other is as noisome and deadly. Neare to *Perperena*, a towne in *Tro-*
as, there is a spring the water whereof giueth a stonie coat or crust to all the earth that it either
D ouerfloweth or runneth by: of which nature are the hot waters issuing out of a fountain neare
Delium in *Euboea*; for look what way soeuer the riuers runs, you shall see the stones to grow still
in height. About *Eurymena*, which is in *Thessalie*, there is a well, cast into it any chaplets or
guirlands of floures, they will turne to stones. There runneth a river by *Colossi*, a city in *Phry-*
gia, into which if you throw bricke or tiles that be raw and vnbacked, you shall take them forth
again as hard as stones. Within the mines of the Isle *Scyros* there is a river, which conuerteth
into stone all the trees that it runneth by or toucheth, as well the boughs as the bodies. In the
famous and renowned caues called *Corycia*, all the drops of water that distill from the rocks,
turne to be as hard as stones: and no maruell, for at *Meza* in *Macedonie*, a man shall see the
drops of water become stone, as they hang to the very vaults of the rocks, much like to yfickles
E from the caues of houses in Winter time: whereas at *Corycum* abouenamed, the said drops turn
into stone when they are fallen downe, and not before. In certain caues they are to be seen con-
uerted into stones both waies, and some of them are so big, as they serue to make columns and
pilastres of, and those otherwhiles of diuers colours to the eyes: as may be seen in the great caue
of *Phausia*, which is within the Chersonese of the *Rhodians*. Thus much may suffice by way of
examples, to shew the varietie of waters, with their sundry vertues and operations.

CHAP. III.

The qualitie that is in waters. How a man may know which be good and wholesome
from such as be naught and vnhol; some.

Much question there is & controuersie among physicians, What kind of water is best and
yet with one generall consent they condemne, and that iustly, all dead and standing wa-
ters; supposing those that run to be better: for it standeth with good reason, that the very
agitation and beating vpon the banks as they beare streame in their current, maketh them more
subtile,

subtile, pure, and cleare, and by that meanes they get their goodnesse. Which considered, I G
maruaile very much at those who make most account of the * water gathered and kept in ce-
sternes: But they ground their opinion vpon this reason, because raine water is of all others
lightest, as consisting of that substance which was able to rise and mount vp aloft, and there to
hang about in the aire. Which is the cause also, that they preferre Snow water before that
which cometh downe in shoures: and the water of yce dissolued, before the other of melted
Snow, as if the water were by yce driuen together and reduced to the vntmost point of finenesse.
They collect hereby, that these waters, to wit, raine, snow, and yce, bee all of them lighter than
those that spring out of the earth: and yce among the rest farre lighter than any water, in pro-
portion. But this opinion of theirs is to bee reputed as erroneous, and for the common good
and profit of mankind to be refuted: For first and foremost, that leuitie whereof they speake, can
hardly and vnneth bee found and knowne by any other meanes than by the sense and feeling
of the stomacke: for if you goe to the weighing of waters, you shall perceiue little or no differ-
ence at all in their poise. Neither is it a sufficient argument to proue raine water to be light,
because it ascendeth on high into the aire, for wee may see stones likewise drawne vp into the
clouds: and besides, as the raine falleth downe againe, it cannot chuse but be infected with the
grosse vapours of the earth. Whereby it cometh to passe, that wee find raine water ordina-
rily to bee most charged and corrupted with ordure and filthinesse: and by reason thereof it
heateh most quickly and corrupteth soonest. As for snow and yce, that they should bee
thought to bee composed of the subtile parts of this Element, and yeeld the finest water,
I wonder much, considering the neare affinitie which is betweene them and haile, which might
induce vs also to thinke the same of it: but all men confesse and hold, that the same is most
pestilent and pernicious for to bee drunke. Moreover, there are amongst them not a few, who
contrary vnto the opinion of other Physicians their fellows, affirme flatly and confidently
the water of snow and yce to bee the vniuersall drinke that is, for that all the puritie and
finenesse thereof hath bene drawne and sucked out. And in very truth, wee find it by ex-
perience, that any liquor whatsoeuer doth diminish and consume greatly by being fro-
zen and congealed into an yce. Wee see besides, That ouer-grosse and foggie dewes breed
a kinde of scurfe or scab in plants: white frosts burne and fengde them: and both of these, the
hore frost as well as the dew, proceed from the same causes in a manner that snowes doe.
Certes, all Philosophers agree in this one point, That raine water puttifieth soonest of any
other, and least while continueth good in a ship, as saylers know full well. Howbeit, *Epige-*
nes auoucheth and affirmeth, That the water which hath bene seuen times putrified and as
often purified againe, is subiect no more vnto putrification. And as for cistern waters, the
Physicians also themselves confesse, That they breed obstructions and schirrhosities in the
bellie, yea, and otherwise be hurtfull to the throat. As also, that there is not any kinde of wa-
ter whatsoeuer, which gathereth more mud or engendreth more filthie and illsaououred
vermin than it doth. Neither followeth it by and by, that all great riuier waters indifferently
are the best: no more than those of any brooke, or the most part of ponds and pools are to
be counted and esteemed most wholesome. But of these kinds of water wee must conclude
and resolute with making distinction, namely, That there be of euery sort thereof those which
are singular and very conuenient, howbeit, more in one place than in another. The kings and
princes of Persia bee serued with no other water for their drinke but from the two riuers, Cho-
aspes and Euleux: onely: And looke how farre fouer they make their progresse or voyage
from them two riuers, yet the water thereof they carry with them. And what might the rea-
son be therefore? Certes, it is not because they be riuers which yeeld this water, that they like
the drinke so well: for neither out of the two famous riuers, Tygris and Euphrates, nor yet
out of many other faire and commodious running streames doe they drinke. Moreover,
when you see or perceiue any riuier to gather abundance of mud and filth, wote well, that ordi-
narily the water thereof is not good nor wholesome: and yet if the same riuier or running streame
bee giuen to breed great store of yeeles, the water is counted thereby wholesome and good
ynough. And as this is a token of the goodnesse, so the wormes called * Tinea, engendered
about the head or spring of any riuier, is as great a signe of coldnesse. Bitter waters of all o-
thers bee most condemned: like as those also which sone follow the spade in digging, and
by reason that they lie so ebbe, quickly fill the pit. And such be the waters commonly about
Troezen.

A Troezen. As for the nitrous, brackish, and * salt waters found among the deserts, such as trauell
through those parts toward the red sea, haue a deuise to make them sweet and potable within
two houres, by putting parched barley meale into them; and as they drinke the water, so when
they haue done they feed vpon the said barley grots, as a good and wholsom gruel. Those spring
waters are principally condemned, which gather much mud and settle grosse in the bottome:
those also which cause them to haue an ill colour who vse to drinke thereof. It skilleth also very
much to mark if a water haue any vessels with a kinde of Greene rust; if it be long before pulle
vp, and lastly, if it furthore vessels with a thicke rust wherein it vseth to be boiled: for all these
be signes of bad water.ouer and besides, it is a fault in water, not only to stink, but also to haue
any smack or tast at all, yea though the same be pleasant and sweet enough, and inclining much
to the rellice of milk, as many times it doth in diuers places. In one word, would you know a
good and wholsome water indeed? Chuse that which in all points resembleth the aire as neere
as is possible. At Cabura in Mesopotamia there is a fountaine of water which hath a sweet and
redolent smel: setting it aside, I know not any one of that qualitie in the whole world againe:
but hereto there belongs a tale, namely that this spring was priuileged with this extraordinary
gift, because queen *Imo* (forsooth) sometimes bathed and washed her selfe therein: for other-
wise good and wholsome water ought to haue neither tast nor odor at all. Some there be who
iudge of their wholsomnesse by their ballance, and they keep a weighing and poising of waters
one against another: but for all their curiositie they misse of their purpose in the end; for sel-
dom or neuer can they find one water lighter than another. Yet this deuise is better and more
certain, namely, to take two waters that be of equal measure and weight: for looke whether of
them heateh and cooleth sooner, the same is alwaies the better. And for to make a trial herof,
lade vp some fetching water in a pale or such like vessel, & set the same down vpon the ground
out of your hand, to ease your arm of holding it hanging long in the aire; and if it be good wa-
ter, they say it will immediatly of scalding hot become warm and no more. Well, what waters
then, according to their sundry Kindes in generalitie, shall we take by all likelihood to be best?
If we go by the inhabitants of cities and great towns, surely, wel-water or pit water (I see) is sim-
ply the wholsomest. But then such wells or pits must be much frequented, that by the continual
agitation and often drawing thereof, the water may be more purified, and the terren substance
D passe away the better by that means. And thus much may suffice for the goodnesse of water re-
spectively to the health of mans body.

But if we haue regard to the coldnesse of water, necessarie it is that the Wel should stand in
some coole and shadowie place not exposed to the Sun, and nathelesse open to the broad aire,
that it may haue the full view and sight (as it were) of the sky. And about all this, one thing
would be obserued and seen vnto, that the source which feedeth it spring and boile vp directly
from the bottom, and not issue out of the sides: which also is a main point that concerns the per-
petuities thereof, and whereby we may collect that it will hold still, and be neuer drawn dry. And
this is to be vnderstood of water cold in the wyne nature. For to make it seem actually cold
to the hand, is a thing that may be done by art, if either it be forced to mount aloft, or fall from on
E high, by which motion and reuerberation it gathers store of aire. And verily the experiment
herof is seene in swimming; for let a man hold his winde in, he shall feele the water colder by
that means. Now the Emperor deuised to boile water, & when it was taken from the fire to put
it into a glasse bottle, and so to set it in the snow a cooling: and verily the water became thereby
exceeding cold to please and content his tast, and yet did not participate the grossenesse of the
snow, nor draw any euill qualitie out of it. Certes, all men are of one opinion, that any water
which hath bene once sodden, is far better than that which is still raw. Like as, that after it hath
been made hot, it will become much colder than it was before, which I assure you came first
from a moist subtil and witty inuention. And therefore if we must needs occupy naughty water,
the only remedy that we haue to alter the badnesse thereof, is to seeth it wel vntil the one halfe
F be consumed. Now if a man desire to know the vertue and commoditie of cold water: first, it ordi-
narily stancheth any flux of blood, if it be cast vpon the place. Also if one be not able to en-
dure the heate in a bain or hot-house, the best way to auoid this inconuenience, is to hold in his
mouth cold Water all the while. Moreover, many a man hath found by a verie familiar expe-
rience,

* *Salsus*, also
though some
reade *Salmaci-*
da, which be
holden for wa-
ters that will
effeminate the
that drinke
thereof. But
such waters be
improper to the
this place: the
dne we
read of the
fountain *Sal-*
macis to be in
this desert.

* Which forse
take for Sows.

rience, that the coldest water in the mouth is not alwaies the coldest in the hand. And contrari-
wile, when it is exceeding cold without to be felt, it is not so sensibly cold within to be drunk.

Of all Waters in the world, that which wee call here in Rome Martia, carrieth the greatest
name by the generall voice of the whole City, in regard both of coldnesse and wholesomnesse.
And verily we may esteeme this water for one of the greatest gifts that the gods haue bestowed
vpon our city. In times past it was called Aufseia, and the very fountaine from whence it com-
meth, Piconia. The head or source thereof ariseth at the foot of the vmoſt mountains of the
Pelignians: it runneth through the Marsians country, and passing through the lake Fucinus, it
tendeth no doubt euē then directly toward Rome; but anon it is swallowed vp within a hole
vnder the ground, so as it is no more seen vntill it shew it selfe again in the territorie of the Ti-
burines; from which place it is conueyed vnder vaults, and so carried through to Rome by
arch-work for the space of nine miles. The first that began to bring this water to the city, was
*Ancus * Martius* one of the Roman Kings. Afterwards *Qu. * Martius Rex*, in his Pretorship fin-
ished the said worke: and when in proceſſe of time it was fallen to decay, *M. Agrippa* repaired it
again: who also brought the water named Virgo to the city, which hath her head eight miles
from Rome, in a certaine noue or by-corner about two miles turning from the great port way
leading to Præneste. Neere vnto it runneth the riuier Herculeaneus: but this water keepeth still
behinde, as though it fled from it, whereupon it tooke the name Virgo. Compare these two ri-
uers together which are conueyed to Rome, you shall see the difference before said as touching
the coldnesse of waters; for looke how cold Virgo is to the hand, so much is Martia in the
mouth. But long ago haue wee of Rome lost the pleasure and commoditie of these two Rills,
through the ambition and auarice of some great men, who haue turned away these waters from
the City, where they yielded a publique benefit to the Commonwealt; and deriued them for
their priuat delight and profit, into their owne manners and houses in the country, for to water
their gardens, and serue to other vses.

And here in this place I thinke it not impertinent to adioine to this present treatise, the ma-
ner and skill of searching and finding our waters. And first to speake in general terms: springs
ordinarily be found in Vallies, in the pitch or crest of some little hill where it hath a fall
and descent, or els at the foot of great mountaines. Many are of opinion, That in any tract what-
soeuer, that side or coast which regardeth the North is giuen to haue water in it. And verily
it were not amisse to shew how Nature disposeth her selfe and worketh variably in this be-
halfe. First, a man shall neuer see it raie on the South side of the mountaines in Hyrcania,
which is the reason, that on that part onely which lieth to the North they are giuen to beare
wood, and be full of forrests. But Olympus, Ossa, Parnassus, Apenninus, and the Alpes, be re-
plenished with Woods on all sides, and are furnished with their Springs and Riuers euerie
where. In some countries the hills be greene, and watered on the South side onely. As for ex-
ample in Candy, the mountaines called * Albi: so that there is no need to be taken by this, for
the rule holdeth not alwaies. But to come now vnto particulars: Looke where you see grow-
ing Rushes, Reeds, or the * Herbe whereof I made relation before, be sure you shall find water
vnderneath. Item, Where soeuer you finde Frogs lying in any place vpon their breasts, make
account of good store of water there. As for the wilde and wandering Sallow, the Allertree, L
Agnus-Castus, or Yvie, they come vp many times of their owne accords, in some low grounds
where there is a fetling or stay of raie water fallen from higher places: inſomuch as they
that goe by these signes to finde some Spring may ſometime be deceived. A surer aime yet by
farre, is a miſt or exhalation, which a man may discouer a farre off a little before the Sunne ri-
sing. And for to espie it the better, ſome there be who get vp into an high place, and lay them-
ſelves grouelgong with their chinnes touching the ground; and by that meanes diſcerneth
where any ſuch ſmoke or vapor doth ariſe. There is alſo another ſpeciall means beſides to find
out Waters, but knowne it is vnto thoſe onely who be ſkillfull and expert in this feat. For
they that are guided by this direction to Water, goe forth in the hoteſt ſeaſon of the yeare,
and about the noone-tide of the day to make the reuerberation of the Sunne beames in any
place: for if this repercution and rebounding appeare moiſt, and namely when the face
of the earth looketh dry and thirſtie, they then make no doubt but to finde Water there.
But they had need to looke ſo intently and earnestly, that oftentimes their eyes ake
and

* No manuell
then if it were
called Martia,

* As we say, in
the White.

* To wit, wild
Folefoot, ca. 6.
lib. 26.

A and be pained withall. For avoiding which trouble and inconuenience, ſome betake themſelves
to other experiments, and namely, they dig a trench or ditch ſix foot deep within the ground;
the mouth whereof they couer all ouer with earthen veſſels of potters worke vnbacked, or els with
a barbars braſen baſon well enſhield; and withall a lamp burning: ouer all which, they make a
little arch-work of leaues and boughs, and mould thereupon. Now if they come within a while
after to this place, and either ſee the earthen pots broken or wet, or perceiue a dew or ſweat ſtan-
ding vpon the braſſe, or ſinde the lamp aforeſaid gon out, and yet no want of oile to maintaine
light, or if they feele a lock of wool which they hung within the trench to be moiſt, they aſſure
themſelves they ſhall find water if they ſink the pit deeper. Some there be, who for better aſſu-
rance hereof make a fire in the place, and burne it thoroughly, for then the veſſels aforeſaid if
they proue to be wet, giue a more inſallible hope of a Spring. Moreover, the very leire it ſelfe of
the ſoile, if it be ſpotted with white ſpecks, or be altogether of a reddiſh bright colour, promi-
ſeth ſpring water to be vnderneath; for if the ground look black, lightly the water will ſoon fail
if there be any ſpring there found. If you chance to ſight vpon a vein of potters clay or chalk,
make account you ſhall meet with no ſpring there, ſink as deep as you will: and therefore work-
men when they come to it giue ouer preſently. For a great regard they haue to obſerue the
change of euery coat (as I may ſo ſay) of the earth as they dig, to wit from the black deſe, vntill
they meet by degrees with the veins aforeſaid. Furthermore it is to be noted, that the water
gritty ſoile doth yeeld, is commonly colder than any other: and ſuch a kinde of ground alſo is
allowable for the prooue of good waters, for it ingendreth ſweet and whoſome water, light alſo is
of digeſtion, and pure withal, by reaſon that as it paſſeth by a ſoft grit as it were, through a ſtrau-
nell, it aſſordeth ſmall and ſlender ſprings, and thoſe not durable; beſides, the water will quickly
gather mud. Ground giuen to beare * pibbles or the groſſer ſort of grauell, giue vs no ſecurity
that the ſprings therein will hold all the yeare long, howbeit the water is very good & pleaſant.
The hard and compact grauell called the male grauel, and the land which ſeemeth full of black
table. But red ſtones yeeld the beſt ſimply, and thoſe that we may be ſure will neuer giue ouer
and faile. And therefore when wee ſhall perceiue the foot of a mountaine ſtanding vpon ſuch
D ſtone, or vpon ſlint, wee may boldly reckon of wholeſome and euerlaſting ſprings; and this giſt
they haue beſide, to be paſſing cold. Moreover, in digging and ſinking pits make this for an
aſſured and inſallible ſigne that you approach vnto water; namely, if the earth appeare and ſhew
moſt more and more, ſtill as you go lower and lower: alſo if the ſpade enter more willingly,
and then chance to meet with a veine of brimſtone or alume, the damp will ſtop their breath
and kill them preſently, if they take not the better heed: and therefore to foreſee and preuent
this danger, they vſe to let downe into the pit a candle or lampe burning; for if it goe out, they
may be ſure it hath met with the dampe. Therefore if pits be ſubiect to the riſing of ſuch va-
pours, cunning and expert workemen make on either ſide of ſuch pits, both on the right hand
and the left, certaine out-caſts, tunnels, or venting holes, to receiue thoſe hurtfull and dange-
rous vapours, whereby they may evaporate and breathe forth another way. Otherwiſe it falls
out, that the aire which they meet with in digging very low, doth offend the pioneers, albeit
there be no brimſtone nor alume neere: but the ready meanes to amend the ſome and auoid the
danger, is to make winde and freſh aire with continual agitation of ſome linnen cloathes. Now
when the pit is ſunke and digged as far as to the water, the bottome muſt be layd, and the low-
eſt ſides of the wall reared of ſtone ſimply without any mortar made of [lime and] ſand, for
beginning of the ſpring are of this nature, That they grow to be exceeding cold, namely
ſuch as haue their ſource or ſpring lying betubb; for they are maintained only of winter rain:
Others againe begin to be cold at the riſing of the Dog-ſtarre. And verily we may fee the ex-
perience both of the one and the other about Pella the capitall city of Macedonia; for the wa-
ter of the meere or marſh there before the towne in the beginning of Summer is cold; and
afterward when the weather is at the hoteſt, the ſpring water in the higher parts of the Citie is
ſo extreme cold that it is readie to bee frozen. The ſemblable happeneth in Chios, where
N n there

* In Tophe.

* Sabulum.

* Clarea.

be of that capacity, as need requireth.

And since I am false into the treatise and discourse of fountains, I wonder much at *Hemer*, that he hath made no mention at all of hot springs, and yet otherwise throughout his whole poem, hee bringeth in oftentimes those who bathed and washed in hot baines. But it may verie well be, that the reason thereof is, because in those times there was not that vse of them in physick as at this present: for now adays, if folk be amisse or ill at ease, straightwaies they run to the baines and bath for remedy. And in truth, these waters which stand vpon brimstone, be good for the sinewes: such as come from a veine of slume, are proper for the palsey, or such like infirmities proceeding from resolution of the nerues. Moreover, they that hold of bitumen or nitre (such as be the fountains. *Cutilla*) be potable and good to be drunke, and yet they are purgatiue.

To come to the vse of natural baines and hot waters: many men in a brauerie sit long in a bath, and they take a pride in it, to endure the heat of the water many hours together, and yet is there nothing to hurtfull for the body: for in truth, a man should continue little longer in them than in ordinary artificiall baines or stoups, and then afterwards when he goeth forth, hee is to wash his body with fresh cold water, not without some oile among. Howbeit, our common people here, thinke this to be very strange, & will not be brought to it: which is the reason, that mens bodies in no place are most subject to diseases: for the strong vapours that steme from thence, stuffe and fill their heads; and although they sweat in one part, yet they chill in another, notwithstanding the rest of their bodies stand deep within the water. Others there are besides, who on the like erroneous conceit, take great joy in drinking a deal of this water, straining a vein who can poure most of it downe the throat. I haue my selfe seen some of them so puffed vp and swolne with drinking, that their very skin covered and hideth rings vpon their fingers; namely, when they were not able to deliuer againe the great quantity of water that had been taken in. Therefore this drinking of much water is not good to be vied, vntill a man do els foons ear * false with all. Great vse there is and to good purpose, of the mud which these fountains do yeeld; but with this regard, that when the body is besmeared and bedawbed outwardly therewith, the same may dry vpon it in the Sun.

Well, these hot waters be commonly full of vertue; howbeit, this is not generally. That if a spring be hot, by and by we should thinke it is medicinable, for the experience of the contrary is to be seen in *Egesta* of *Sicily*, in *Larissa*, *Troas*, *Magnesia*, *Melos*, and *Lipara*. Neither is it a sure argument of a medicinable water (as many are of opinion) if a piece of silver or brass which hath bin dipped therein, lose the colour: for there is no such matter to be seene by the natural baths of *Padua*; neither is there perceived in them any difference in smell from others.

Concerning Sea waters, the same order and mean is to be obserued, especially in such as bee made hot, for to help the pains and infirmities of the sinewes: and many hold them good to soulder fractures of bones, yea and to cure their bruises and contusions: likewise they haue a defecatiue vertue, whereby they dry rheumaticke bodies, in which regard, men bath also in sea water actually cold. Moreover, the sea affordeth other vses in diuers and sundry respects, but principally the aire thereof is wholesome for those who are in a phthisicke or consumption (as I haue before said), and cureth such as doe reach or void blood vpwart: and verily, I remember of late daies, that *Annam Gallico* after that he was Confull, tooke this course; namely, to saile vpon the sea for this infirmity. What is the cause thinke ye, that many make voiaiges into *Aegypt*? surely it is not for the aire of *Egypt* it self, but because they lie long at sea, and be sailing a great while before they come thither. Furthermore, the vomits also which are occasioned at sea by the continual rolling and rocking of the ships neuer standing still, are good for many maladies of head, eies, and breast; and generally they doe cure all those accidents, for which the drinking of *Ellebore* serueth. As for sea water to be applied simply of it selfe vnto the outward parts, physicians are of opinion, that it is more effectual than any other, for to discusse & resolute tumors: & more particularly, if there be a cataplasme made of it and barley mealle sodden together, it is singular for the swellings behind the ears, called *Parotides*. They mingle the same likewise in plasters, such especially as be white and emollitiues: and if the head be hurt, and the * brain touched and offended, it is soveraigne to be infused into the wound. It is prescribed also to be drunke: for albeit the stomack take some offence and hurt thereby, yet it purgeth the body well, and doth evacuate melancholick humors and black choler; yea, and if the blood bee cluttered within the body, it sendeth it out one way or other, either vpwart or downward. Some haue ordained it to be

A be giuen for the quartan feuer; others aduise to saue and keep it a time, for to serue the turne in case of Tinesmes, which are vnordinat straining at the stoole to no effect: also for all gouts and pains of joints: and in very truth, by age & long keeping, it forgoeth all that brackish salt, which it had at the first. Some boile it before: but all in general agree in this, To vse for these purposes that sea water which was taken out of the deep far from the land, such as is not corrupt with any then also do they mingle with it, either vinegar or wine for that purpose. They that giue little oylemell, for to prouoke the patient to vomit againe. Moreover, they vse otherwise to minister a clyster made of sea water, first warmed: & verily there is not a better thing than it for to bath and foment the eads withall, if they be swelled either with ventosities or waterish humors. Albeit it is much commended for kided heels, if they be taken before they are broken and exulcerated: and in like manner they kill the itch, cure scabs, tetters, and ringwormes. Sea water serueth wel to wash the head, & to rid it of nits and filthy lice: yea, and reducere black and blew marks in the skin, to the fresh and liuely colour againe. In all these cures, after the vse of salt-water, it is passing good to foment the place affected, with vinegar hot.ouer and besides, it is thought to be very wholesome and good against the venomous stings of serpents, and namely, of the spiders some saluation or spittle of the *Alpis* called *Pryas*: but in these cases it must be taken hot: furthermore, a perfume made with sea-water and vinegar, is singular for the head-ach. If it be clysterized hot, it allaieth the wrings and grindings of the belly; yea, and stancheth the violent motions of cholerick humors working vpwart and downward. I hold that be once chaufed and set into an heat with sea water, shall not so easily feele cold againe. When womens paps are ouer-grown, and so exceeding great that they meet and kisse one another, there is not a better thing to take them downe, than to bath in a tub of sea-water: the same also may serue to amend the griefe of the bowels and precordiall parts, yea, and to restore those that be exceeding leane and worn away. The fumes and vapors of this water boiling together with vinegar, are soveraign for those that be hard of hearing, or troubled with the head-ach. Sea water hath this especiall property, that of all things it scoureth away rust vpon ironest. The scab that annoieth theepe, it healeth, and maketh their wooll more soft and delicate. But what meane I to say thus much of sea water, knowing as I do full well, that for those who dwell far vnto the maine, and inhabit the inland parts, all this may seem needlesse, and superfluous? And yet there hath bin means deuised to make artificiall sea-water, wherewith euery man may serue his own turn when he will. In which inuention, one wonderfull thing is to be seen; namely, if a man put more than one sextar of salt to foure of water, the nature of the water will be so soone ouercome, that salt shall not dissolve nor melt therein: but if you mingle one sextar of salt iust with foure sextars of water, you shall haue a brine as strong as the saltest water that is in the sea: but to haue a kind & most mild brine, it is thought sufficient to temper the foresaid measure of water with 8 cyaths of salt: and this water thus proportioned, is very proper for to heat the sinewes, without any fretting of the skin at all. There is a certain compound sea water kept in manner of a Syrrupe, which they call *E Thalassomeli*, made of Sea-water, hony, and raine water, of each a like quantity. Now the foresaid sea-water they fetch for this purpose out of the very deep, and this composition they put vp in earthen vessels well pitched or varnished, and reserue it for their vse. An excellent purgatiue smell both are very pleasant and delectable. As touching the mead called *Hydromell*, it consisteth in times past of raine water well purified, and hony: a drink ordained and allowed onely to sick and feeble persons when they called for wine, as being thought lesse hurtfull to be drunke: howbeit, rejected it hath bin these many yeares, and condemned: for by experience it was found at length, to haue the * same discommodities that wine, but farre short it was of the good and whole some qualities of wine.

Moreover, forasmuch as sea-faring men and saylers be many times at a fault for fresh water, and thereby much distressed, I thinke it good to shew the means how to be provided for the supply of this defect. First and foremost therefore, if they spread and display abroad certaine fleeces of wooll round about a ship, the same will receiue and drinke in the vapours of the Sea, and become moist and wet withall: presse or wring them well, you shall haue water fresh enough,

Item, let downe into the sea within small nets, certain pellets of wax that be hollow, or any other void and empty vessels wel closed & lured, they will gather within them water that is fresh and potable: for we may see the experience hereof upon the land: take sea-water & let it run through clay, it will become sweet and fresh.

But to proceed vnto the other medicinable properties of water: let there be any dislocation in man or beast, by the swimming in water (it matters not of what kind it be) the bones will very quickly and with great ease be reduced into joint againe.

It falleth out many times that trauellours be in feare and danger of some sickness, by change of waters, and such especially as they know not the nature and quality of. To prevent this inconvenience, they drink the water cold which they doubt and suspect, so soone as euer they be come out of the baine; for then they shall find it presently.

As touching the moss which is found in the water, *loueraigne* it is for the gout, in case it be applied outwardly mixed with oil thereto, and reduce it into the forme of a cataplasme or liniment, it ease the paine, and taketh down the swelling of the feet about the ankles. The fume & froth that stoth about the water, causeth warts to rise off, if they be well rubbed therewith.

The very sand likewise vpon the sea shore, especially that which is small and fine, & the same burnt as it were with the heat of the Sun, is a *loueraigne* remedy to dry vp the watery humors in a dropie, if the body be covered alouer therewith, and to that purpose it serueth also for rheums and catarrhs. Thus much may suffice concerning water it self: it remaineth now to treat of such things as the water yeeldeth. In which discourse, begin I wil (as my order & manner hath bin in all the rest) with those matters which be chiefe and principall, and namely, salt and sponges.

CHAP. VII.

¶ *The sundry kinds of salt: the making thereof: the vertues medicinable of salt: and diuers other considerations respectiue thereto.*

SALT is either artificiall or naturall: and both the one and the other is to be considered in many and diuers sorts, which may be reduced all into 2 causes: for salt commeth either of an humor congealed, or els dried. In the gulfe or lake of Tarentum, the salt is made of the sea water dried by the heat of the summer Sun, for then you shall see the whole poole converted into a masse of salt: and verily the water there, is otherwise very low & ebbe, and not about knee high. The like is to be seen in Sicily within a lake called Cocanicus, as also in another neare to Gelas: but in these, the brims & sides only about the banks, wax dry and turn into salt, like as in the salt-pits about Phrygia and Cappadocia. But at Aspenchum, there is more plenty of salt gathered within the poole there, for you shall haue the same turn into salt, euen the one halfe to the very mids. In which lake, there is one strange and wonderful thing besides, for look how much salt a man taketh out of it in the day, so much ordinarily will gather againe by night. All the salt of this sort is small, and not growne together in lumps. Now there is another kinde of salt, which of the owne accord commeth of sea-water, and it is no more but the some or froth which is left behind sticking to the edges of the banks, or to rocks. Both the one & the other become thick and hard in manner and form of a candied dew: howbeit, that which is found in the rocks, is more quick and biting than the other. There is besides of salt naturall, a third distinct sort from the former: for in the Baetians country there be two great and huge lakes, which naturally do cast vp a mighty quantity of salt: the one lieth toward the Seythians, and the other bendeth to the Arians country: like as neere to Citium, a city in the Isle Cyprus, and about Memphis in Egypt, they draw forth salt out of lakes, and afterwards dry the same in the sun. Moreover, there be certain riuers which beare salt, and the same congealed aloft in their vpper part, in manner of yce, and yet the water runneth vnderneath and keepeth the course wel enough. As for example, about the lucces and straits of the mount Caspius; and thereupon they be called the Riuers of salt: also in other riuers of Armenia, and about the Mardians country. Moreover, Oxus and Orthus, two riuers passing through the region Baetiana, carry ordinarily downe with them in their streame, great peeces and fragments of salt, which fall from the mountaines adjoining vnto them. There are besides in Barbary, other lakes, and those verily thicke and troubled, which ingender and beare salt. But what will you say, if there be certain Fountaines of hote Waters which breed salt? And yet such be the Baynes or Springs called Pagafai.

Thus

A Thus far forth haue I proceeded in those kinds of salt which come of waters naturally. There are besides certain hills also which are given by nature to bring forth salt, and such is the mountain Oromenus among the Indians, wherein they vse to hew salt as out of a quarry of stone, and out of it, than either by their mines of gold, or the pearles which those coasts do yeeld. Furthermore it is evident, that in Cappadocia there is salt * Minera, digged out of the earth: and it appeareth plainly, that it is a salt humor congealed within. And verily, they vse to cut it out of the ground after the manner of * glasse stone in lumps; and those exceeding heavy, which the people commonly call * crums of salt. At Carthage, a city of Arabia, all the walls thereof, as also the houses of the inhabitants, be reared & built of hard stones: and the same be laid by Masons what time as he incamped about Pelusium, a city of Egypt, and cast vp a trench to fortifie the delfe of sand they met with salt. After which manner also they practised to dig in the desert & dry sands of Africk, and found more as they went, euen as far as to the Temple and Oracle of Jupiter Ammen. And verily they might perceiue this salt to grow in the night season, according to the course of the Moone. As for all the tract and country of Cyrene, famous it is, and much plentiful and lustre it resembleth that Alumene Plumbe, which the Greeks call Schistos: it groweth in long lumps or peeces, and those not transparent: the taste is vnpleasant, howbeit, this salt is of good vse in Physicke. The clearest thereof is taken for the best, especially when it is well washed with water, and reduced into straight flakes. A strange and wonderful nature it hath if it be right: for so long as it lieth vnder ground within the mine, it is passing light in hand, and may be easily welded; take it forth once, and lay it abroad about ground, a man would not beleeue or imagine how exceeding heavy it is. But surely the reason thereof is evident: for the moist vapors contained within those mines where it lieth, beare vp the said peeces of salt, and are a great ease to those that deale therewith, much like as the water helpeth much to the stirring and managing of any thing within it, be it neuer so weighty. Well, this Ammoniacke salt is corrupted and sophisticate, as well with the spit: salt of Sicily called Cocanicus, as also with that of Cypresse, which is wonderful like vnto it. Moreover, neare Egellata, a city in high Spaine, there is a kinde of salt-gem or Minera salt digged: the peeces or lumps whereof are so cleare, as a man may in a manner see through them: and this hath of long time bin in great request and of such name, as the Physitians giue vnto it the price and praise above all other kinds. But here is to be noted, that all places where salt is found, are euer barren, and will beare no good thing els. And thus much may be said concerning salt that commeth of the owne accord.

As touching salt artificiall, made by mans hand, there be many kinds thereof. Our common salt, and whereof we haue greatest store, is wrought in this manner: first they let into their pits a quantity of sea-water, suffering fresh water to run into it by certain gutters, for to be mingled therewith for to help it to congeale, whereto a good shower of raine auaileth very much, but aboue all the Sun shining therupon for otherwise it wil neuer dry & harden. About Vtica in Barbary they vse to pile vp great heaps of salt in manner of Mounds: which after that they be hardened and seasoned in the Sun and Moone, scorne all raine and foule weather, neither will they dissolve, in so much as folke haue enough to doe for to break and enter in with pick-axes. Howbeit, in Candy the Salt is made in the like pits, but of Sea-water onely, without letting in any fresh water at all. Semblably, in Egypt, the Sea it self ouerfloweth the ground which (as I take it) is already foked and drenched with the water of Nilus, and by that means their Salt is made. After the same manner they make salt also out of certain wells, which are discharged into their Salt-pits. And verily in Babylon, the first gathering or thickening of the water in their salt-pits, is a certain liquid Bitumen or Petroleum, an oleous substance, which they vse in their lamps, as we do oile: and when the same is scummed off, they find pure salt vnderneath. Likewise in Cappadocia they do conuey and let in water out of certain wells and fountaines into their Salt-pits. In Chaonia there be certaine * Springs of saltish water, which the people of that country doe boile, and when it is cooled againe, it turneth into Salt: but it is but dull and weak in effect, and besides, nothing white. In France and Germany the manner is when they would make salt, to cast

* *Sal Gemma.*

* *Lapis specula-
ris, quoniam vit-
gleas, Ma-ru-
or: Lapis Ara-
bicus.*
* *Micum Salis.*

* *Of Alum in
Greece, which
is found.*

* *This seemeth
to be our Bay-
salt.*

* *This is the
order of salt
with vs in our
wiches here
in England.*
Sea.

sea-water into the fire as the wood burneth. [In some parts of Spain there be salt springs, out of which they draw water in manner of that brine, which they call Muria.] But tholeverly of France and Germany be of opinion, that it skilleth much what wood it is that serueth to the making of such fire. Oke they hold the best, as being a fewell, the simple ashes whereof mixt with nothing els, may go for salt. And yet in some places they esteeme Hazell wood meetest for this purpose. Now when the said wood is on fire and burning, they poure salt liquor among, whereby not only the ashes but the very coales also will turne to be salt. But all salt made in this sort of wood, is the black. I treade in *Theophrastus*, That the Islanders of Imbros were wont to boile in water, the ashes of reeds and canes, untill such time as there remained little moisture vncconsumed, and that which was left they vsed for salt. The brine or pickle wherein flesh or fish hath bin kept salt, if it be boyled a second time vntill the liquor be spent and consumed, returneth to the own nature, and becommeth salt again. Certes, we find, That the salt thus made of the pickle of Pilchors or Herings, is of all others most pleasant in tast. As touching the salt made of sea-water, that of the Isle Cyprus, and namely, that which comes from Salamis, is commended for the best. But of poole salt, there is none comparable to the Tarentine and Phrygian, especially that which they call Tarteus, of the lake Tatta: and in truth, both these kinds of salt be good for the eyes. The salt brought out of Cappadocia in little earthen pipes, hath the name to make the skinnie slick and faire: but for to lay the same plain and euene, and make it look full and plump without riuels, the salt which I called Cittricus hath no fellow. And therefore women after they be newly deliuered of child, vse to annoint and rub their bellies with this salt, incorporate together with Gith or Nigella Romana. The driest salt is euermore the strongest in tast: the Tarentine salt is taken for to be most pleasant and whitest withal. Otherwise, the whiter that salt is, the more brittle it is, and readier to crumble and fall to powder. There is no salt but raine water will make it sweet and fresh. The more pleasant it will be & delicate to the tast, in case the dew fall therupon: but North-east winds ingender most plenty therof. In a Southerly constitution of the weather, and namely when the wind is sul fourth, you shall see no salt ingendred. The * floure of salt (commonly called Sperma-Ceti) is neuer bred but when the North-east winds do blow. The salt Tragacutis wil neither spit, crackle, leap, nor sparkle in the fire, nor more will Acanthus (so called of a towne of that name): neither doth the some of salt, nor the gobbets and fragments, ne yet the thin leaues of Agrirentum, a city in Sicily, will abide the fire and make no sparkling: put it into water, it will keep a spitting and crackling. Great difference there is in salt, in regard of the colour. At Memphis [i.e. Caïre] in Egypt, the salt is of a very deperd: but about the river Oxus in Baetiana, more tawny or inclining to a russet. And the Centuripine salt within Sicily is purple. About Gela in the same Island, the salt is so bright and clear, that it will represent a mans face, as in a mirror. In Cappadocia, the Minerall salt which they dig, is of a yellow Saffron colour, transparent, and of a most redolent smell. For any vse in Physicke, the Tarentine salt was in old time highly commended about the best: after which they esteemed most all the sea salts; and of that kind the lighter, and that which especially is of the nature of some for the * eyes of horses and Bœufes, they made great reckoning of the Tragacutan salt, and that of Grando or Boetia in Spaine. For dressing of viands and cates, for to be eaten also with meat; the better is that salt, which sooner melteth and runneth to water. That also which by nature is moister than others, they hold to be better for the kitchen or the table (for lesse bitterness it hath) and such is that of Attica and Eubœa. For to powder and keep flesh meat, the dry salt, & quicke at tongues end is thought to be meetest than other, as we may see in the salt of Megara. Moreover there is a certain confite or condit salt, compounded also with sweet spices & aromatical drugs: which may be eaten as a dainty kind of gruel or sauce, for it stirreth vp and whetteth appetite, eat the same with any other meats: in so much, as amongst an infinit number of other sauces, this carrieth away the tast from them all; for it hath a peculiar smack by it selfe, which is the cause, that the pickle Garum is so much sought after for to giue an edge to our stomach: & not only we men are solicited & moued by salt more than by any thing els too: r meat, but muttons, Bœufes, and horses also haue benefit thereby in that respect: they feed the better, giue more store of milke, and the cheefe made thereof hath a more dainty and commendable taste by that means. And to conclude all in one word, the life of mankind could not stand without salt, so necessary an element (if I may so say) it is for the maintenance of our life, that the very delights & pleasures of the mind also are exprest by no better term than Salt: for such gifts and conceits

A Of the spirit as yeeld most grace and contentment, we vse in Latine to call Sales. All the mirth of the heart, the greatest cheerfulness of a lightsome mind, & the whole repose & contentment that a man findeth in his soule, by no other word can be better shewed. Moreover, this terme in Latine of Sal, is taken vp and vsed in war, yea, and diuers honours and dignities bestowed vpon braue men for some worthy seruice, go vnder this name, and be called Salaries. And how highly our ancestors accounted therof, it may appeare by the name of that great port-way or street Salariæ, so called, because all the salt that went into the Sabines country, passed that way. Moreover, it is said that *Anca Marcius* K. of Rome, was the first that erected the salt houses, and gaue vnto the people a congiary or largesse of 6000 Modij of salt. And *Varro* writeth, That our ancestors in times past vsed salt ordinarily in stead of an household gruell: for they were wont to eat salt with their bread & cheefe, as may appeare by the common proverbe that testifieth so much. But most of all we may gather in what request and account salt was in sacrifices and oblations to the gods, by this, that none are performed and celebrated without a cake of meale and salt. Furthermore, where salt is truly made without any sophistication, it rendereth a certain fine and pure substance (as it were) the most subtil cinders of ashes; which as it is lightest, so none is so white as it. There is that also which is called the Floure of salt, altogether different from salt, as being a kind of dew, of a moister nature, resembling saffron in yellow colour, or els inclining rather to a sad red or russet colour, and is as a man would say, the rust of salt: the strong & vnplesant smell likewise, which commeth neere vnto that of the pickle Garum, bewaileth that it is a distinct thing from salt, as well as from the froth therof. This Floure of salt came first from Egypt, and it seemeth as though it floted vpon the riuer Nilus, & were carried down the stream therof. And yet there be some fountains which doe beare and put vp the same, vpon which it swimmeth aloft. Of this kind, the best is that which yeeldeth a certain fatty and vntuous oyle: for this you are to think, that salt is not without a kinde of fatnesse, wonderful though it be. This floure of salt is sophisticated & commonly coloured with red ocre, or els many times with if it be a false and artificiall colour, water will wash it off: whereas the true floure of salt indeed, will resole by nothing but by oyle, and verily the Apothecaries & confectioners of sweet oiles and ointments, vse it most of all for the colour sake, when they would giue a fresh & lively tinge to their compositions. Being put vp in any vessell, it seemeth white & hoarie aloft: but the middle part within, is as I haue said, more moist ordinarily. As touching the properties of this floure of salt, by nature it is biting, hot, and hurtfull to the stomach; it moueth sweat, and looseth the belly taken in wine & water; good also it is for to enter into those ointments which are devised for lassitude and wearinesse; and by reason of the abstersiue faculty that it hath, fit for sope and scouring bals. Nothing so effectually to cause the haire to fall from the eie-lids. As for the resence or grounds therof, setting in the bottom of the pot where this floure is kept; they vse to shog and shake the same together, to bring it again to the colour of Saffron.ouer and besides, there is in salt houses another substance like brine, which in Latine is called *Salsugo* or *Salsiflago*, altogether liquid, saltier in tast than sea-water, but in strength far short of it, and different, and yet is there one kind more of an exquisite and dainty liquor in manner of a dripping, called *Garum*, proceeding from the garbage of fishes, and such other offall as commonly the cooke vseth to cast away as it lieth soking in salt: so as if a man would speake properly, it is no other but the humor that commeth from them as they do lie and putrifie. In old time this sauce was made of that fish which the Greeks called *Garon*. Where by the way this commeth to my mind, that it is a woman fit ouer the perfume or suffumigation of the head of this fish whiles it burneth, it is of power to fetch away the afterbirth that staid behind when the child is borne.

CHAP. VIII.

Of the fishes called * *Scomberi*, of fish pickle: and the fish sauce, named in old time *Alex*.

NOW adae the most dainty and exquisite *Garum* is made of the fish called *Scomberi*; and that in new Carthage, where there groweth such store of Spart or Spanish broome; and namely, in the stews and ponds by the sea side where fishes are kept salted. In times past, and yet it beareth the name of the * *Allies* sauce, as their *Garum*, so costly and so much in request,

* Commonly taken for Ma. quercis.

* *Gark*, *scim*

* *Kalos*, *autis* which be rendered in *Ros-jalis*: whereas indeed *Ros-jalis*, the floure of salt, is another thing, as himself sheweth elsewhere by the name of *ros-jalis* *sevilla* *salis*.

* *Scomberi*.

is

if it be sodden in wine cuir to the consumption of the one halfe: and so is it good for the spots G that arise in the cies. The decoction of nitre boiled within the rind of a pomegranat in wine cut- it cure the fore nails and the raggednesse thereof: and reduced into an ointment with honey, it cl- areth the cie- fight: a collution made thereof, sodden in wine with pepper, caseth the tooth-ach if the mouth and gums be washed therewith: so doth the decoction thereof with leeks. Burn or calcine nitre into powder, it maketh an excellent dentifrice for blacke teeth, and reduceth them again to their naturall whitenesse: annoint the head with nitre & Terra Samia incorporat together in oile, it killeth the lice and nits that breed therein: dissolved in wine, and poured into the ears that run atty, it cureth them: dropt into them with vineger, it catcheth and consumeth the filthy excrements of that part: conueied dry into the said ears, it discusseth the ringing & ringing therein. A liniment made of nitre and fullers earth, of each a like weight, incorporat with vine- ger, taketh away the foule morthew, if the skin be annointed therewith: mixed with rosin, or with raisons of white grapes stamped pines and all, it draweth vncoms and fellons to an head, and breaks them: reduced into an ointment with swines greafe, it preferueth the genitoirs from in- flammation, & cureth them: good likewise for the meafils and small pocks which break out in all parts of the body: put rosin thereto, and incorporat them both in a liniment with vineger, it healeth the biting of a mad dog, so it be taken betimes at the beginning: and in this manner, it cureth also the sores occasioned by the sting of serpents, eating vlcers, which consume to the bone, such likewise as be corrosiue and apt for putrefaction, so it be mixed with quick-lime and tempered with vineger. Stamp nitre with figs, and bring it into the form of a cataplasme or li- niment, it doth much good for the droppe: the ventosities causing wringings and painful gripes I of the belly, it discusseth, if the decoction thereof be drunk; namely, when to the weight of one dram, it is sodden with rue, dill, or cumin. Annoint their bodies all ouer who are weary, with ni- tre, oile, and vineger, you shal see how effectually it is to refresh them and driue away their lassit- ude. Rub and chaufe both hands and feet, with nitre & oile wrought together, its singular good against quaking and shivering cold: giuen with vineger, especially in a wet, to those who are painted with the jaundise, it representeth the itch that troubleth them: if a man be poisoned with taking venomous mushtoms, he shall find means to auoid the danger thereof by drinking nitre in oxyerat or vineger & water mingled together. Hath one swallowed down the hurtfull fly By- preffis? let him take a draught of sal-nitre in water, it wil saue him, for it causes vomit: to those that haue drunk buls bloud, it is vsually giuen with the spice Lafer: incorporat with honey and K cow milk, it healeth the breaking out and the exulcerations in the face. Torrific nitre vntill it begin to look blacke, beat it then to powder and cast the same vpon a raw place that is burnt, it wil take out the fire and skin it vp again: for the pain of the belly and the kidneys, for the stifne- nesse and starknesse of the liins, the grievance also of the sinews, it serueth well in a clystire: lay it to the tongue with bread, it is soueraigne for the palsey or resolution of the sinews: it helpe- those that be short-winded, if they take it in a Pisan, or with husked barley. The floure of nitre incorporat in Galbanum, and the rosin called terpenentine, of each an equal weight, and reduced into a lochoch, so as the patient swallow down the quantity of a Bean at once, cures an old cough

* Burn or calcine nitre, temper it afterwards with liquid pitch or tar, and giue it to drink, it cu- reth the squinancy. The floure of nitre incorporat with the oile Cyprinum, makes a pleasant li- niment to annoint the body withal in the Sun, for the gout or any paine of joints: drunk in wine it doth exterminat and driue away for euer, the jaundise: it scattereth and discusseth ventosities, it stoppeth bleeding at the nose, if the patient receiue into the nostrills the vapour of it out of boiling water: mixed well with alum, it riddeeth away an itch: foment or bath the arme pits du- ly every day therewith in water, it correcteth the ranke smell thereof. Make a liniment or cerot of snitire and wax tempered together, it healeth the vlcers occasioned by steamafter which manner it is good also for the sinews. Being injected by a clystire, it helpeth the flux of the belly, proceed- ing from a feeble stomack. Many Physitians haue giuen direction to annoint the body all ouer with sal-nitre and oile, before the cold fits of agues: which ointment serueth likewise for the leprosie, and the vnclemy spots or freckles that blemish the skin. To sit in a tub of nitre within the baine, & therewith to bath the body, is a soueraigne thing for those that haue the gout, be in consumption, and either draw backward with the crampe, or stretched and plucked so strait and stiffe therewith, that they seem all of one entire piece. Sal-nitre, if it bee boiled together with sulphur, turneth to be as hard as a stone.

CHAP. XI.

The nature of Spunges.

Many sorts there be of Spunges, according as I haue shewed already more amply in my treatise of water-beasts, and those especially of the Sea, and their severall natures: how- beit some writers distinguish them after another manner, into male and female: for some of them they haue thought to be of the male sex, to wit, those which haue smaller pipes or con- cavities, and those growing thicker and more compact, whereby they sucke vp more moisture, and these, our delicate and dainty people, die in colours, and otherwhile giue them a purple tin- B ture. Others they count of the femal sex, namely such as haue bigger pipes, & the same running throughout one continuity without interruption. Of the male kind, some be harder than others, which they call Tragos, the pipes whereof are the finest, and stand thickest together. There is an artificiall deuise to make spunges look white; to wit, if the softest and tendrest of them be taken while they be fresh in summer time, and so bathed & foked wel in the some of saltwater which they ought to be laid abroad in the moon-shine, to receiue the thick dew or hoary frosts (if any fall) with their bellies vpward into the aire, I meane that part whereby they cleaue fast to rocke or sand where they grew, that thereby they may take their whitening. That spunges haue life, yea and a sensible life, I haue proued heretofore; for there is found of their bloud settled within them. Some writers report, that they haue the sense of hearing, which directs them to draw in C their bodies at any sound or noisemade, and therewith to squeeze out plenty of water which they contained within; neither can they easily be pulled from their rocks, and therefore must be cut away, whereby they are seen to shed a deale of bloud, or that which resembleth bloud yvee ner. Many do prefer the Spunges growing in places exposed to the North-wind, before any other: neither doe any hold and maintaine longer in any place their owne breath, as Physicians doe hold; who as firme, that for this regard they be good for our bodies, namely, if wee entermingle their breath with ours by application: for which purpose, the fresher taken and the moister they be, the better they are thought: but this their operation is lesse perceived, in case they be wet in hot water, and so applied: likewise if they be foked in any vnctuous liquor, or bee laid vpon any part of the body annointed. This also is obserued by them, that the thickest of them, to wit, such D as haue the least pipes, sticke not so hard to a place as others. As touching the softest and finest spunges, called Penicilli, if they be applied vnto the cies after they haue beene foked in honyed wine, they do away and bring down any swelling in them. The same are abstersiue and singular good to clarifie and cleane the cies that be giuen to bleerednesse: but those (I say) ought to be of the finest and softest kind. For to stay the violent flux of rheumaticke humors into the cies, there is nothing better than to apply spunges of any sort with oxyerat, that is to say, vinegre and water: but with vinegre alone actually hot, they be singular for the head-ach and otherwise, any sponge that is fresh gotten, doth discusse, mollifie, & mitigat. Old spunges do conglutinat and foulder any wounds. There is a general vse of all spunges, to wipe and mundeify any place, to foment and bath withall: to keep off the aire also and to couer it after fomentation, vntill another E medicine be made ready for to be laid on fresh. Moreover, they be desiccative, & therefore if they be applied to rheumatick and moist vlcers, and namely in old folke, they dry vp the superfluous humors that find a way thither: neither is there any thing so fit for to foment a fracture or green wound, as spunges. Also, when any part of the body is cut off or dismembred, what is so hand- some to suck and soke away the bloud quickly, (that the cure may be thoroughly seen, & the order thereof) as a sponge? Furthermore, spunges themselves serue to be laid to wounds, sometime drie and sometime dewed or sprinkled with vinegre, one while wet in wine, another while moist- ned with cold water, and all to defend them from inflammation: but if they be bathed in raine water, and so applied to members new cut, they will not suffer them to swell and impostumat. They are besides laid usually to the found parts, where no skin is broken, if there be any hidden F and secret humor that runs vnder the place, and puts it to paine and trouble, such as needeth to be discuffed or resolved: also to impostumes, if they be first annointed with boiled hony. In like manner, for the paine of the joints they are proper to be applied, one while wet in vinegre with salt, another while dipped in vinegre and water: and if the gout be hot, they would be laid to foked in water only. The same spunges ought for the dissolving of hard callosities, to be wet with salt

falt water: & againſt the ſting or prick of ſcorpions, with vinegre. In the cure of wounds, ſponges may be vſed in ſtead of vnwaſhed greaſe wooll, ſometimes applied with wine and oile, and ſometimes alſo with the ſaid wooll: this only is the difference. That ſuch wooll doth mollifie, whereas ſponges do reſtrain and ſmite backe: and yet a facultie they haue, to ſerch out and ſucke away the filthy excrements, attyr, and quitter, that gather in fores and wounds. They may be bound about the body of thoſe that haue a dropſie, either drie, or elſe wet in warme water or vinegre; according as need requireth, either to goe gently to worke, or to couer and dry the ſkin.ouer and beſides, good it is to apply ſponges to thoſe accidents and infirmities of the body which then require euacuation; namely, if they be well foked and thoroughly wet in hot water, and then preſſed and ſtrained between two tables or boards. After which manner, they are good to be laid to the ſtomack, and in a feauer, againſt extremities of heat. For thoſe that be troubled with the oppilation or hardnes of the ſpleen, there is not a more effectual remedy, than to apply ſponges to the place affected, wet in oxycrat or vinegre & water together: like as for ſhingles and *S. Anthonicus* euill, with vinegre only. But in this application of them, conſideration muſt be had that they couer the ſound parts alſo round about as well as the other. Sponges wet in vinegre and cold water, ſaunch any flux of blood. If there be any place of the ſkin blacke and blew, vpon a freſh or new ſtriſe, lay thereto ſponges well drenched in falt water, changing them often one after another, and it ſhall recouer the naturall colour againe: in which order, they bring down the ſwelling of the coles, and allay their paine. Being hacked and cut ſmall, they ſerue to good purpoſe for to be laid to the biting of mad dogs; ſo that eſſoones and euer and anon they bewet and reſreſhed with vinegre, cold water, or hony good ſtore, one with another. The ſponges of Africke or Barbarie being burnt or calcined, doe make ſoueraigne aſhes for to be drunke with iuice of vnſet leeks in cold water (ſo there be put vnto a draught thereof, a quantitie of falt) by ſuch as caſt or reach blood vpwart at the mouth. The ſame aſhes reduced into a liniment, either with oile or vinegre, and ſo applied as a frontall to the forehead, driue away tertian agues. Theſe African ſponges haue this peculiar qualitie, to diſcuſſe any tumors, if they be applied to them well foked in oxycrat or water and vinegre mixed together. The aſhes of any ſponges whatſoever, burnt together with pitch, ſaunch the bleeding of any wound: and yet ſome there be who in this caſe burn thoſe only with pitch which are of a groſſe and looſe making, and not ſo compact as the reſt. Moreouer, for the accidents of the eies, ſponges are many times burnt and calcined, in an earthen pot vnbacked: and the aſhes which come thereof, do much good alſo vnto the pilling and aſperities of the eie lids, the excrescence of fleſh, and whatſoever in thoſe parts needeth attrition, or otherwiſe to be vnited, ſowdred or incarnat: and for theſe effects, it is much better to waſh the ſaid aſhes. Furthermore, ſponges, in friſtion and rubbing of craſie bodies, may well ſtand in ſtead of currying combs, and coure linnen cloaths: beſides, they ſerue right handſomely and fitly, to couer and defend the head againſt the extreame heat of the Sun. Moreouer, the ignorance of our Phyſicians, is the cauſe that all ſponges be reduced to two only kinds, to wit, vnder the name of African, which be of more tough and firme ſubſtance; and the Rhodiacke, which are ſofter, and therefore meet for fomentations. At this day the tendreſt and moſt delicate ſponges are found about the walls of the citie Antiphellus. And yet *Tragus* writeth, that about Lycia, the ſoſteſt ſponges called Penicilli, do grow in the deep ſea, and namely in thoſe places, from whence other ſponges beforetime had been plucked and taken away. Finally, *Polybius* doth report, that if ſponges be hung about the reſter or ſeeling of a bed ouer ſicke perſons, they ſhall take the better reſt and repoſe all night for it. Now is it time for me to returne vnto Beaſts of the Sea, and other creatures liuing and bred in the waters.

THE

A



THE XXXII. BOOKE OF
THE HISTORIE OF NATVRE,
WRITTEN BY C. PLINIVS
SECVNDVS.

The Proem.

¶ Medicines taken from liuing creatures of the Sea.

C



Having ſo far proceeded in the diſcourſe of Natures hiſtorie, that I am now arrived at the very height of her forces, and come into a world of Examples, I cannot chuſe but in the firſt place conſider the power of her operations, and the infiniteneſſe of her ſecrets which offer themſelves before our eies in the Sea: for in no part elſe of this vniuerſall Frame, is it poſſible to obſerue the like maieſtie of Nature: in ſo much as we need not ſeek any further, may we ought not to make more ſearch into her diuinitie, conſidering there cannot be found any thing equal or like vnto this one Element; wherein ſhe hath ſurmounted and gone beyond her owne ſelfe in a wonderfull number of reſpects. For firſt and formeſt, Is there any thing more violent than the Sea, and namely, when it is troubled with blaſting winds, whirlpuffs, ſtormes, and tempeſts? Or wherein hath the wit of man bene more employed (ſeek out all parts of the whole world) than in ſecending the waves and billowes of the Sea, by ſaile and oare? Finally, Is there ought more admirable, than the innarrable force of the reciprocal ſides of the Sea, ebbing and flowing as it doth, whereby it keepeth a current alſo, as it were the ſtreams of ſome great riuier?

CHAP. I.

¶ Of the fiſh Echeneis, and her wonderfull propertie. Of the Crampe-fiſh Torpedo, and the Sea-hare. The wonders of the Red ſea.

E



He current of the Sea is great, the tide much, the winds vehement and forcible; and more than that, ores and ſails withall to helpe forward the reſt, are mighty and powerfull: and yet there is one little ſillie fiſh, named Echeneis that checketh, ſcorneth and arreſteth them all: let the winds blow as much as they will, rage the ſtormes and tempeſts what they can, yet this little fiſh commandeth, their fury, reſtraineth their puiſſance, and maugre all their force as great as it is, compelleth ſhips to ſtand ſtill: A thing, which no cables, be they neuer ſo big and ſtrong, no ankers, how maſſie and weightie ſoever they be, ſticke they alſo as faſt and vnmoouable as they will, can perſwade. Shee bridleth the violence, and ramenth the greateſt rage of this vniuerſall world, and that without any paine that ſhe putteth her ſelfe vnto, without any holding and putting backe, or by any other meanes, ſaue only by cleauing and ſticking faſt to a veſſell: in ſuch fort, as this one ſmall and poore fiſh, is ſufficient to reſiſt and withſtand ſo great power both of ſea and nauie, yea and to ſtop the paſſage of a ſhip, doe they all what they can poſſible to the contrary. What ſhould our fleets & armadoes at ſea, make ſuch terrers in their decks and forecaſtles: what ſhould they fortiſie their ſhips in warlike maner, to fight from them vpon the ſea, as it were from more and rampier on firme land? See the vanity of man! alas, how footiſh are we to make all this ado: when one little fiſh, not about halfe a foot long, is able to arreſt and ſtay perforce,

perforce, yea and hold as prisoners our goodly tall and proud ships, so well armed in the beake-head with yron pikes and brazen times, to offensive and dangerous to bouge and pierce any enemy ship which they do encounter. Certes, it is reported, that in the nauall battell before Actium, wherein *Antonius* and *Cleopater* the queene were defeated by *Augustus*, one of these fishes staied the admirall ship wherein *M. Antonius* was at what time as he made all the haist & means he could deuise with help of ores, to encourage his people from ship to ship, and could not preuaile, till he was forced to abandon the said admirall and go into another galley. Meane-while the armada of *Augustus Caesar* seeing this disorder, charged with great violence, and soonenidged the fleet of *Antony*. Of late daies also, and within our remembrance, the like happened to the royal ship of the Emperour *Caius Caligula*, at what time as he rowed back and made saile from *Astura* to *Antium*; when and where, this little fish detained his ship, and (as it fell out afterwards) prelaged an vnfortunat euent thereby: for this was the last time that euer this Emperour made his returne to Rome; and no sooner was he arriued, but his owne souldiers in a mutinie fell vpon him, and stabbed him to death. And yet it was not long ere the cause of this wonderful stay of his ship was knowne: for so soon as euer the vessell (and a galliace it was, furnished with fise banks of ores to a side, was perceiued alone in the fleet to stand still, presently a number of tall fellows leapt out of their ships into the sea, to search about the said galley, what the reason might be that it stiered not; and found one of these fishes sticken fast to the very helme: which being reported vnto *Caius Caligula*, he fumed and fared as an Emperour, taking great indignation that to small a thing as it, should hold him back perforce, and checke the strength of all his mariners, notwithstanding there were no fewer than foure hundred lusty men in his galley that laboured at the oare all that euer they could to the contrary. But this prince (as it is for certaine known) was most astonied at this, namely, That the fish sticking only to the ship, should hold it fast; and the same being brought into the ship and there laid, not worke the like effect. They who at that time and afterward saw the fish, say, it resembled for all the world a shalle of the greatest making: but as touching the forme and sundry kindes thereof, many haue written diuersly, whose opinions I haue set downe in my treatise of liuing creatures belonging to the waters, and namely in the particular discouerie of this fish. Neither do I doubt but all the sort of fishes are able to doe as much: for this wee are to beleene, that Pourcellans also be of the same vertue, since it was well knowne by a notorious example, that one of them did the like by a ship sent from *Periander* to the cape of *Gnidos*: in regard whereof, the inhabitants of *Gnidos* doe honour and consecrate the said Pourcellan within their temple of *Venus*. Some of our Latine writers do call the said fish that thus staith a ship, by the name of *Remora*.

As touching the medicinable properties of the said stay-ship *Echeneis* or *Remora* (call it whether you will) a wondrous matter it is to see the varietie of Greek writers: for some of them (as I haue shewed before) do hold, that if a woman haue it fastened either about her neck, arme, or otherwise, she shall go out her full time if she were with child; also, that it will reduce her matrice into the right place, if it were too loose and ready to hang out of her body. Others againe report the contrary, namely, That if it be kept in salt and bound to any part of a woman graven with child and in paine of hard trauell, it will cause her to haue present deliuerance; for which vertue, they call it by another name **Odinolon*. Well, howeuer it be, considering that mighty assistance which this fish is well known to haue in staying ships, who will euer make doubt hereafter of any power in Nature her selfe, or of the effectfull operation in Physicke, which she hath giuen to many things that come vp by themselves. But say we had no such euidence by the example of this *Echeneis*; the Cramp-fish *Torpedo*, found and taken likewise in the same sea, were sufficient alone to proue the might of Nature in her workes, if there were nothing else to shew the same: for able she is to benum and mortifie the arms of the lustiest & strongest fishers that be; yea and to bind their legs as it were, how swift and nimble soeuer they are otherwise in running; and howeuen by touching only the end of a pole, or any part of an angle rod, which they hold in their hands, although they stand aloft and a great way from her. Now if we cannot will nor chuse, but must needs confesse by the euident instance of this one fish, that there is some thing in nature so penetrant and powerful, that the very smell only or breath and aire proceeding from it, is able thus to affect, or infect rather the principall lims and members of our bodies, what is it that we are not to hope for and expect from the vertue of all other creatures that Nature (through her bounty) hath endued with medicinable power for the remedy of diseases? And

And in very truth, no lesse admirable be the properties which are respected of the sea-Hare: for to some a very payson it is, taken inwardly either in meat or drinke; to others againe, the onely aspect and sight thereof is as venomous. For if a woman great with child chance but to see the female only of this kind, she shall sensibly therupon feele a sicke wambling in her stomacke, she shall presently fall to vomiting, and anon to vntimely labour, and the deliuerie of an abortiue fruit. But what is the remedy? Let her weare about her arme in bracelets, any part of the male, which ordinarily for this purpose is kept dry and hardened in salt, shee shall passe these dangerous accidents. The same fish is hurtfull also in the sea, if it be touched only. Neither is there any liuing creature that feeds vpon this fish, but it dieth theron, vnlesse it be the sea Barbell onely: the harme that this fish catches by eating of it is this, that the flesh is more tender by that means, and nothing so fast as it was before; besides, the meat is more vnpleasant, & not so much set by in the market, nor bought vp by Caters for the kitchen. If man or woman chance to be infected by eating of the sea-Hare, they presently smell and sent of the said fish; and this is the first signe and argument to proue that they be imposed therby; howbeit, they die not immediately but may continue so many daies as the said Hare liued after it came out of the sea. And therefore (according as *Licinius Macer* hath left in writing) this payson hath no set and preinit time wherein it killeth any body. As touching the sea-Hares among the Indians, it is constantly affirmed, that taken they cannot be aliue; and that by way of counterchange, a man is their payson: for if he do no more but touch one of them with his finger in the sea, it will forthwith die: And it is said withall, that far bigger he is there than in other seas: like as all other beasts whatsoever. King *Tuba* in those booke which he wrote to *C. Caesar*, sonne to *Augustus* the Emperour, as touching the historie of Arabia, saith, That their limps, muskles and cockles, are so big in those seas, that one of their shels will contain a measure of three hemines. Also that there haue been known Whales six hundred foot long, and carrying a breadth of three hundred and sixtie foot, to haue (thor themselves out of the sea into the great riues of Arabia: the fat of which Whales, (like as the grease of all other sea-fishes there) is much set by and sought after by merchants, who in all those quarters vse it for to anoint their trauelling cammels, for to drie away the Breese or Gad Bee from them, which indeed cannot abide the smell of that oile.

CHAP. II.

The naturall wit, docilitie, and gentlenesse of some fishes. Also where they be so tractable, that they will take meat at a mans hand. Finally, in what part of the World fishes giue answer by way of Oracle.

WUnderfull in my conceit is the wit and subtiltie of some fishes, if all bee true which *Ouid* the Poet hath reported of them, in that booke of his which he intituled *Haliuticon*: For first and forme he saith, That the Goldenie *Scarus* perceiving himselfe to be taken in a weire, or enclosed within a wicker-net or leape, neuer strueth to get out againe with the head forward, or to thrust his muffle betweene the oifers, for feare he should be caught by the head; but turning his taile vnto them, keepeth such a flapping therewith, that he makes himselfe way by that means, and so breaks forth of prison backward. Now, in case whales he strugleth and laboureth thus to get out, another Goldenie that is without happen to espie him thus a prisoner, the same will take hold with his mouth of his fellows taile, and helpe to get him forth out of the said net, which he endeauoures to break through. Also that the sea pike *Lupus*, when he seeth that hee is compassed about with nets, maketh a furrow with his taile into the sands, wherein he coucheth and lieth close, that when the fishers draw their nets vnto them, they may glide and passe ouer him. As for the Lampreis, knowing what a smoothe, round, and slipperie back they haue, they make no more adoe, but seeing themselves within the net, get between the very maihes, which with their much winding and wrigling they will wrest wider and wider still, vntill they be gotten through and escaped.

The Pulse fish or Pourcuttill, maketh at the very fishhooks which hee searcheth after, and if hee biteeth not at, but claspeth hard and gripeeth round about with his clees and armes that he hath; and neuer letreth he his hold goe, vntill hee hath gnawed and eaten off the bait cleane, vnlesse before hee haue done, he perceiue that he is like to be drawne vp out of the water by the angle;

manner of poisons, whether it be that a man haue taken it by the mouth, or be stung and bitten G
by any venomous beast.

As touching fishes kept in salt, they are not without their medicinable vertues: for to eat salt
fish is very good for them who are stricken with serpents, or otherwise bitten or stung by any
venomous beast, so they drink to it effusions pure wine of the grape, and withal be sure to cast vp
again by vomit toward euening their foresaid meat which they did eat that day. The same salt
fish more peculiarly serueth for them who haue bin hurt and wounded with the venomous Li-
zard * Chalcis, the horned serpent Cerafites, or the venomous horn-fretters called Sepes: being
otherwise singular to heale those who haue bin smitten with the serpent Elops, or bitten with
the thirly tooth of the worme Dipsas: but if a man be pricked by the Scorpion, good it is for
him to feed fully of salt fish, howbeit in no wise to vomit the same vp again, but rather to indure H
the drinell & thirst occasioned thereby; and many hold, that it is a proper remedy to apply to
the fore a Cataplasme made of the foresaid salt fish. Verily against the biting of Crocodiles there
is not thought to be a more present and effectual remedy, than it. But to grow vnto particulars,
Sprots salted haue a special propertie to heal the biting of the beetle or venomous fly Prester:
also in case a man be bitten with a mad dog, it is very good to lay salt fish vnto the sore; yea al-
though the wound were not caterfied with a red hot iron, nor the patients body emptied by a
clystire, this cataplasme alone of salt fish is thought sufficient to cure it: the same soaked in vine-
ger ferues also to be laid vnto the place that is hurt with a sea dragon. Of the same operation
and effect is a * square piece or canton of the fish Tuny salted and conditioned. And since I haue
named the sea-Dragon, this would be noted, That himself outwardly applied, is a remedie for
the venom inflicted by the prick or sin of his ridge bone, wherwith his manner is to strike: yea
& his very braines also, if you take nothing els, are as effectual. The decoction of sea frogs sodden
in wine and vinegar, is a fourcaine drink for all poisons, but especially for the venome of the
hedge toad and salamander. As for the frogs of riuers and fresh waters, if a man either eat the
flesh or drink the broth wherein they were sodden, he shall find it very good against the poison
of the sea-hare, or the sting of the serpents aboue named, but more particularly against the prick of
the scorpions they would be boiled in wine. Moreouer, *Democritus* saith, That if a man take out the
tongue of a sea frog aliue, so that no other part thereof stick thereto, & after he hath let the frog
go again into the water, apply the said tongue vnto the left pap of a woman while she sleepest, in
the very place where the heart beatech, she shall answer truly and directly in her sleepest, to any K
interrogation or question that is put vnto her. But the magicians tell more wonders than so
of the frog, which if they be true, certes frogs were more commodious & profitable to a Com-
monwealth, than all the positive written lawes that we haue. For they would make vs beleue,
That if the husband take a frog and spit her (as it were) a length vpon a reed, so as it go in at the
skut or mature behinde, and come forth againe at the mouth, and then pricke the said Reed or
broch in the mensurall blood of his wife, she shall neuer haue minde afterwards to entertaine
any adulterers, but darest and loath that naughty kinde of life. Certaine it is, That if froggs
flesh be put within a net, or that a hooke be baited therewith, Purple fishes aboue all others will
come flocking thither. Moreouer, it is commonly said, That a Frog hath a double liuer, the
which ought to be layd before Ants, and looke how of the two lobes or flaps thereof they L
make vnto, and seeme to gnaw, the same is a most singular antidote against all poysons whatso-
euer.

Some frogs there be that liue only among bushes and in hedges, which thereupon we call in
* Our Toads. Latine by the name of * Rubeta, and the Greeks term them Phrynos: the biggest they are of
all other, with two knubs bearing out in their front like horns, and full of poison they be. They
that write of these toads, strue a vie, who shall write most wonders of them: for some say, that if
one of them be brought into a place of concourse where people are in great number assembled,
they shall be all huffed and not a word among them. They affirme also, that there is one little
bone in their right side, which if it be thrown into a pan of seething water, the vessel will coole
presently, and boile no more until it be taken forth again. Now this bone (say they) is found by
this means: if a man take one of these venomous frogs or toads, and cast it into a nest of Ants,
for to be eaten and deuoured by them, and looke when they haue gnawed away the flesh to the
very bones, each bone one after another is to be put into a kettle seething vpon the fire, and so
it

A it will soon be known which is the bone, by the effect aforesaid. There is another such like bone
(by their saying) in the left side; cast it into the water that hath done seething, it will seeme to
boile and waulme again presently: this bone (forsooth) is called Apocynon: and why so? be-
cause ywis, there is not a thing more powerful to appeale and repress the violence and furie of
curst dogs than it. They report moreouer, that it inciteth vnto wanton loues; and yet nathelesse if
a cup of drinke be spiced therewith, it will breed debate and quarrels among those that drinke
thereof: also, whosoever carrieth it about him, shall be prouoked to fleshly lust: and contrari-
wise, if the bone in the right side be likewise vsed, it will coole as much, and take downe the
pride of flesh and heat of concupiscence. Others there be who are of opinion, that if it bee but
worne about one, either hanging to the necke, or fastened vnto any other part of the body, inso-
B much within a little piece of a new lambs skin, it will cure a quartane ague, or any other feuer be-
sides. The same also represseth the affection of loue. Moreouer, they beare vs in hand, that the
milt of these toads is a counterpoison against their owne venome: but the heart (say they) is
much more effectuall.

There is a certaine kind of serpent or Snake haunting the water, called in Latine Coluber;
the fat and gall of which Serpent, if they haue about them who vse to hunt after Crocodiles, it
is wonderfull (say they) how they be armed and defended against them, for they will not attempt
to turne againe vpon the hunters and giue any assault: and yet of greater effect & force they
shall finde it, in case there be incorporat withall, the pond-weed or water-speeke called Pota-
mogion.

C The riuier Creifishes, if they be taken fresh, stamped and giuen in water to drinke, are four-
raigne against all poisons: so is their ashes also a counterpoison; but more particularly against
the sting or pricke of Scorpions, if it be drunke in asses milke; or for default thereof, in goats
milke, or any other whatsoeuer: but then the patient ought to drinke wine vpon it. And verily,
so aduerse and contrary are they vnto Scorpions, that if they be punned with Basill into a cer-
taine composition, it will kill them, if the same be but laid vpon them. Of the same force they
are against the sting or biting of any other venomous beast besides, and more especially of the
pernicious hardfleshed Seytale, of snakes, sea-hares, and hedge-toads. Many there be who vse to
saue the ashes of Creifishes calcined, as a foueraigne remedy for all such as be in danger to fall
into the symptome of feartulnesse to drinke, incident to those that are bitten by mad-dogs: some
D adde thereto the herbe Gentian, and giue both together in wine to drink: but if the sayd symp-
tome of Hydrophobie haue surprized them already, then the said ashes or powder ought to bee
reduced (by the means of wine) into troches or pills, which they prescribe vnto their patients
for to be swallowed downe. The Magicians proceed farther and affirme, that if a man take ten
Creifishes and tie them all together with a good bunch or handfull of basill, all the Scorpions
that be thereabout, will assemble together to that one place: and they giue order, that if a man
be hurt already with a scorpion, there should be a cataplasme made of them, or at leastwayes of
their ashes mixed with Basill, and so applied to the place affected. The sea-crabs are nothing so
good of operation in all these causes, as the Land-crabs or Creifishes aforesaid, according as
Thrasillus mine Author doth report. Howbeit, hee sayth neuerthelesse, that there are no such
enemies to serpents, as Crabs; and he affirmeth moreouer, That if (wine be stung or hurt by ser-
pents, they helpe and cure themselves by feeding vpon sea-Crabs onely, and seeke for no o-
E ther helpe or remedie. Hee addeeth furthermore and auoucheth, that serpents are ill at ease, yea
and much tormented with paine when the Sunne is in the signe of the crab, called commonly
Cancer.

To come now to the riuier shell-snails: most certaine it is, that their flesh, whether it bee
raw or boyled, is singular good to resist the venome of scorpions inflicted by their pricke or
sting: and some there be, who for to haue them in a readinesse to serue in those cases, keep them
in salt: and they ordaine them to be applied vnto the very fore it seife, occasioned by their fore-
said sting.

F As for the [blacke] fishes named Coracini, they are peculiar and appropriate vnto the riuier
Nitus: howsoeuer my determination and purpose is to deliuer medicines profitable and bene-
ficiall to all parts of the earth in general. Their flesh is good to be applied vnto the sores caused
by scorpions.

The Sea-swine or Porpuis, bath pricky fins vpon his back, and those are counted amongst other venomous things that the sea yeeldeth, putting them to much paine that are wounded or hurt thereby: but what help therfore? surely the very muddy slime that gathereth about the body of the same fish, is the onely remedy.

The Sea-calf, otherwife named a Seale, bath a certaine greace, wherewith it is good to annoint the face or visage of those, who by reason that they are bitten with a mad dog, are afraid to drink and cannot away with water: but it will worke the better, if there be mingled therewith the marrow of an Hyxna, the oile of the Mastic tree and wax, that all may be reduced into a liniment.

As for the biting of a Lamprey, there is not a better thing to heal it than the ashes of a lampreys head. The Puffin likewise or Fork-fish, cureth the wound that himselfe inflicted, namely, if the place be annointed with his own ashes, tempered with vineger, or mixt with the ashes of any other fish. If a man would make meat of this fish, there ought to be taken out of the backe whatsoeuer is there found like to saffron: likewise the head all and whole would be taken away: and yet to maintain and keep the tast thereof, the same must be washed but a little and no more than all shell fishes, for otherwise all the pleasantnesse in the eating would be cleane gone.

The mischieuous venome of the sea-hare, [called otherwife Imbrago] is quenched clean and mortified, by taking the flesh of the sea-Horse any way in drinke.

Against the poison of deadly dwale, the meat of sea-vrchins is souveraine: & whoeuer haue drunk the dangerous juice of * Carpasum, find much ease and help especially by supping their decoction. To conclude, the broth of sea-crabs likewise taken, is thought to be effectual against the foresaid dwale named Dorycnium.

CHAP. VI.

¶ Of oysters and Purple shell-fishes: of Sea-moss, or Reits: and the remedies which they afford.

Moreouer, Oysters haue a speciall vertue to resist the venome of the sea-hare. And albeit I haue written already of oysters, yet me thinks I cannot speak sufficiently of them, seeing that for these many yerres they haue bin held for the principal dish & daintiest meat that can be serued vp to the table. This fish loeth to haue fresh water, & joiet to be in those coasts where most riuers do run into the sea: which is the reason, few of them are found in the deep, called therupon Pelagia; and those thrive not, but are in comparision very small. Howbeit, they breed and ingender other whiles among rocks, & in such holes which want the recourse of sweet waters; as for example, about Grynia and Myrina. They wax big and full according to the encrease of the Moon, as I haue shewed already in my treatise of creatures liuing in waters: but principally about the spring prime, when they be full of a certain humour or moisture like unto milk; and in those shallow places where the sun pearceeth with his beams to the very bottom of the water. And this seemeth to be the reason, that in other coasts and parts of the sea, they be found far lesse: for shade hindreth their growth, and for want of the cheerefull sight of the sunne, they haue lesse appetite to meat & feed not: moreover, this is to be noted, that oysters differ one from another in colour. In Spaine they be reddish, whereas in Sclauonia they be brown and dusky: but about the cape Circeij in Italy, their shell and flesh both, be blacke. In what coast or country soeuer they be found, the best and principall those are held to be, which be massive and compact; not glib and slippery without, with their owne humour and moisture: and rather bee they chosen which are thicke, than broad and flat: such also as bee taken neither in muddy nor yet in sandie places, but vpon the sound and firme ground in the bottome, hauing their white meat trussed vp short and round, and not flaggie as flesh: the same not jagged and fringed about in the edges with small stringes, but lying all close vnit together as it were couched within the belly. They that be more expert and praised in the choice of oysters, adde one marke more to chuse them by, namely, if there be a purple thread or string that compasseth them about the edges: and by this signe they know the oysters of the best kind and race, from others, and call them by a proper name Caliblephara. Oysters delight (as I may so say) to trauell into strange quarters, to be transported from their naturall seat into other vnkown waters. Thus the oysters bred about Brindis, and remoued from thence to the lake Aueruus; and beeing there fed, are suppo-

posed by that means to keep still their own native juice and humidity, and besides to gain nouriture by the moisture of Lucrinus. Thus much as touching the substance and body of Oysters: it remaineth now to speake of those parts and tractes where the best oysters are to be had; to the end that such coasts may not be defrauded of the honour due and appertaining vnto them. But of this point speake I will by the tongue of another, and alledge his speech who is thought to haue written herof with best iudgement of any man in our time. These therefore bee the verie words of Mutianus, which I will put downe as folloes: The oysters (quoth he) of Cyzicum taken about the straights of Callipolis, be the fairest of all other, and bigger than those which are fed or bred in the lake Lucrinus, sweeter than those of Brittain, more pleasant in the mouth than the Edulian, quicker in tast than those of Leptis, fuller than the Lucensian, drier than those of Coryphanta, more tender than the Istrian, and last of all, whiter than the oyster of Circeij: and yet there haue not bin found any oysters either more sweet or tender than these last named. The Historiographers who wrote of Alexanders voiaiges and exploits, haue left in writing, that within the Indian sea there be oysters found a foot long euery way. Moreover, there is among vs a certain Nomenclator or Controller belonging to one of our prodigall and wastfull spendthrifts here at Rome, who haue giuen a proper name to certain oysters, and termed them Tridacna: his desire was by that significant name, to expresse thus much, That they were so big as that they would make three good bits or mouths-full a piece.

Now proceed I will to their medicinable vertues, & before I go any further, in this very place set down how far forth they serue in physick. First and foremost, they be the only meat to comfort and refresh a decayed stomack: they recouer an appetite that was cleane gone. But see the practise of our delicate wantons! to coole oysters forsooth, they must needs whelm & couer them all ouer with snow, which is as much as to bring the tops of mountains and bottom of the Sea together, and make a confused medley of all. This good moreouer do oysters, that they gently loose the belly, and make a body soluble: seech the same with honied wine, they cure the Tifnesse, which is an inordinat and bootlesse desire to the scoole without doing any thing, especially if the riue (which is the place affected) be not exulcerat: oysters likewise so prepared, cleanse and mundifie the vlcers of the bladder: eat them in their shell with their water, as they came closed and shut from the sea, you shall find them wondrous good for any rheumes or distillations. The ashes of an oyster shell calcined, and incorporat with honey, be singular for the paine of the vula, and assuage the inflammation of the tonsils: semblably, they repress the swelling kernels that rise vnder the ears, assuage the biles and botches called Pani, mortifie the hard tumours of womens breasts, and heal the sores or scalls of the head, if they be applied accordingly with water: and in the same order prepared, they rid away wrinkles, and make womens skin to lie smooth and euen. These ashes are a souveraine powder to be cast vpon any place that is raw, by reason of a burne or scalding: and the same is commended for an excellent dentifrice to cleanse & whiten the teeth withall: temper the said ashes with vineger, it killeth the itch, and healeth angrie wheales; the small pocks also and meazils. Oysters punned raw and reduced into a cataplasme, heale the kings euill and kided heels, if they be applied accordingly.

Moreover, the Shell-fishes called Purples, are very good against poison. As for the reits Kilpe, Tangle, & such like sea-weeds, Alexander saith, they are as good as treacle. Sundry sorts there be of these reits, going vnder the name of Alga, as I haue already declared: some are long leaved, some large, others of a reddish colour; and some haue curled and jagged leaves: the best simply of all others, be they of the Island Creta, which grow near the ground vpon rocks; and namely for to dye wooll & woollen cloth; for they set so sure a colour, as neuer will shed or be washed off afterwards. Alexander giueth direction, to take the said treacle in wine

CHAP. VII.

¶ Medicines against the shedding of haire. For to colour the haire of the head. Also against the accidents of the eares, teeth, and visage.

If by occasion of some infirmity the haire be fallen off or grow very thin, the ashes of the fish called the Sea-horfe, mingled with sal-nitre and swines greace, or applied simply with vineger, replenish the bare places with new haire, and cause it to come vp thicke again: and for to apply such medicines for this purpose, the powder of a turtle bone prepareth the skinn well before-

438
 hand. Also the ashes of the sea-Tortoise incorporated with oil of a sea-wrch likewise burnt and G
 calcined flesh and all together as also the gall of a scorpion, be appropriat medicines to reco-
 uer haire that was loft. In like manner take the ashes of 3 frogs burnt together alie in an earthen
 pot, meddle them with honey, it is a good medicine to caule haire to grow: but the operation
 will be the better, in case the same be tempered with liquid pitch or tar. If one bee disposed to
 colour the haire of the head black, let him take horse-leeches which haue putrified and been re-
 solved together in some grosse red wine for the space of 60 daies, he shall find this to be an ex-
 cellent medicine. Others there be who giue order, to put as many horse-leeches as a sextar will
 hold, in two sextars of vineger, and let them putrife within a vessell of lead as many daies toge-
 ther, and when they be reduced into the form of a liniment, to annoint the haire in the sunshine
 for the same purpose. And *Sernatus* attributeth so much power vnto this composition, that vn-
 lesse they that haue the annointing of the haire with it hold oile in their mouths all the while,
 their teeth also (by his saying) who haue the doing of it, wil turn black. The ashes of Butters or
 Purples shels incorporated in hony, serue passing well in a liniment to heale scald heads: and the
 powder of the forehead fish shels (although they be not burnt and calcined) tempered with wa-
 ter, is as good for the head-ach. Of the same operation is *Calothrum*, incorporated with Harflrang
 in oile rosat. The fat or greafe of all fishes whatsoeuer, as well those of the seas riuers, beeing
 diffolved in oile and tempered in honey, is soueraigne for to cleare the eyes: and of the like
 effect is *Calothrum* applied with hony. The gal of the fish *Callionymus*, healeth the cicatrices
 or scars that ouergrow the skin about them: and the same eateth & consumeth the excrescence
 of superfluous flesh in the corners of the eyes. And verily there is not a fish that hath more gall
 than it, as testifieth *Menander* the Poet in his comedies: the same fish is otherwise called **V-*
ranoscopus, by reason of the eyes which he hath in the vppermost part of his head. Semblably
 the gall of the black fish *Coracinus* quickeneth the eie-sight. Also the gall of the reddith sea-
 scorpions, mixt with old wine or the best hony of Athens, serueth to discusse the filmes of the
 eyes like to breed a cataract: and thrice must the eyes be annointed therewith, letting a day goe
 euer betweene. The same cure serueth likewise to take away the pearle in the eie. As for Bar-
 bels, it is commonly said, that if one do feed ordinarily vpon them, hee shall sensibly feele his
 eyes to decay and wax dim thereby. The sea-hare it selfe verily is venomous; but the ashes keep
 the disorderly and hurtfull haire of the eie-lids from growing any more, if they be once plucked
 vp by the roots: and for this purpose, the least of this kind are the best. In like manner, the little
 Scallops kept in salt, and stamp together with the rosin or oile of cedar: the small frogs like-
 wise which usually they call *Diopetes* and *Calamitz*, haue the like effect to hinder the com-
 ming vp of hairs in the eie-lids, after they be once pulled vp: in case their blood be tempered with
 the gum of the vine-tree, and therewith the edges of the said eie-lids be annointed. The swelling
 and rednesse of the eyes is by nothing better delaid and discused, than by a liniment made of a
 cuttle bone puluerized and mixt with womans milke. And in very truth, the said cuttle bone sim-
 ply by it selfe, cureth the asperity and roughnesse of the said eie-lids. But to worke this cure,
 the chirurgeon vseth to turne vp the said eie-lids, and to apply thereto the medicine, which he
 oile rosat, and ouer night laieeth thereto white-bread crumbs [with best milke] for to assuage the
 paine. The selfe same shell or couer of the cuttle-fish beaten to powder and brought into a lini-
 ment with vineger, cureth those who can fee neuer a whit towards night. The ashes of the sayd
 cuttle-bone draw forth the scales or films which grow in the eyes: the same incorporated with ho-
 ny, heale the skars of the eyes; but tempered with salt or brasse-ore, of each one dram, they rid
 away the pin and web growing in the eie: the same help horses of the haw that offendeth their
 eyes. Some say moreover, that the little bones within the cuttle, if they be stamped to powder
 heale the eie-lids of any fore or accident befalling vnto them. The sea-wrchs flesh applied
 with vineger, taketh away the accidents of the eyes called *Epin* & *ides*. The Magicians giue di-
 rection to burne the same with vipers skins and frogs, and to spice the drink with the ashes that
 come thereof, assuring those who vse to drink the same, that they shall haue a very cleare sight.
 [A fish there is named *Ichthyocolla*, which hath a glewish skin, and the very glue that is made
 thereof, is likewise called *Ichthyocolla*. The same glue taketh away the night-foes, commonly
 named in Greek *Epin* & *ides*. Some affirm, That the said glue *Ichthyocolla* is made of the bel-
 ly and not of the skin of the said fish, like as *Buls glue*. This fish glue is thought to be best that

A is brought out of Pontus : the same also is white without any veines, firings, or scales; and verie quickly melteth and refolueth. Now the same ought first to be cut or shred small, and then to be finely infused or in steepa whole day and a night in water or vineger, which done, to be pummed and beaten with the pebbles found about the sea-shore, that the same may the sooner melt and dissolve. This glue thus ordered, is held to be foueraigne for the head achand a good thing to enter into those medicines or compositions which are deuised to smoothe the skin & rid away the wrinkles. Take the right eie of a frog, lap it within a piece of selfe rustler cloth (such as is made of black wooll as it came in the fleece from the heep) and hang it about the neck, it cureth the right eie, if it be inflamed or bleared. And if the left eie be affected, do the like by the contrary eie of the said frog, &c. Now, if it were possible to pluck out these eies as the frog is ingendering, it would heale also the white cicatrices or fears in the eie, if it were hung about the necke of the patient in like sort within an egge-shel. The rest of the frogs flesh applied to the eie, sucketh out and consumeth the bloud that is congealed vnder the tunicles of the eie, and lies there black and blew. They affirme moreover, That the eies of a crab or craiftish being hanged about the neck, are a foueraigne remedy for bleared eies.

A little frog there is, delighting to liue most among graffe & in * reed plots : mute the same is and neuer croaketh, green also of colour: if Rite or oxenitchance to fwallow one of them down with their croaketh, it catcheth them to fwell in the belly, as if they were dew blown. And yet (they say) that if the slime or moiſture wherewith their bodies be charged outwardly, be ſcraped off with the edge of ſome penknife, it cleareth the fight, if the eyes be annoiued therewith. As for the fiſh it ſelfe, they lay it vpon the eyes for to mitigate their pain. Furthermore, ſome there are who take 15 frogs, pricketh them with a riſh, & draw the ſame through them, that they may hang therewith, which done, they put them in a new earthen pot: and the humour or moiſture that paſſeth from them in this manner, they temper with the iuice or liquor which in manner of a gum iſſueth out of the white wine Brionie, wherewith they keep the ciclids from hauing any haireſ growing vpon them. But firſt they pluck vp thoſe diſorderly haireſ which grew there to offend and hurt the eyes: & with a fine needle point drop the foreſaid liquor into the very places where the haireſ were fetched out by the roots. *Mages* the Chyrurgian deuifed another depulſatory for to hinder the growing of haireſ, made of frogs which he killed in vinegar, and permitted them therein to putrifie and reſolue into moiſture: and for this purpoſe his manner was to take many ſuch frogs, euen as they were ingendred in any rain that fel during the Autumne. The ſame depulſatory effect, the aſhes of Horſe-leeches are ſuppoſed to haue, if they be reduced into a liniment with vinegar, and vſed accordingly: now muſt they be burnt and calcined in a new earthen veſſel that neuer before was occupied. And of the like operation is the liuer of the ſea-fiſh *Tania*, if the ſame be dried, and thereof the weight of foure deniers *Romane* incorporate in oile of Cedar to the forme of a liniment, for to annoiue the haireſ of the cic-lids by the ſpace of nine moneths together.

The fresh gall of a Kay or Skeat, yea, and the same preferred and kept long in old wine, is an excellent medicine for the eares: so is the gal likewise of the fish *Bancus, which some call Myxonalfo of Callionymus the fish aforesaid, if it be drop into the eares with oile of rofat: semblably Castoreum with the juice of Poppie. There be also in the sea certaine creepers ingendred, called Pedunculif, sea-lice, which being stamped and tempered with vineger, they giue counsell to drop into the eares. Also a lock of wooll died in the blood of the purple shell-fish Conchylium, of it selfe alone is a very good thing to be applied to the eares: howbeit, some doe wet the same in vineger and saliniter mixed together. But the soueraigne remedy in the opinion of most Physitians for any grievance and infirmity of the eares, is this, namely, *Recipe* of the best sauce or pickle called Garum Sociorum that may be gotten, one cyath, of hony one cyath and an halfe, of vineger one cyath, seeth them all together gently ouer a soft fire in a new pot, effion skimming it in the boiling with a feather; and when it hath left casting up a foam and is sufficiently purified, take it from the fire: and of this decoction warm drop into the pained eares. If the eares be swelld with itall, they ordain and prescribe to mitigate & assuage the same first, with the juice of Coriander. The fat of frogs drop into the eares, alaieth their paine presently. The juice or decoction of crabshees incorporat with fine Barly meale, is a singular and most effectuall saue to heale the wounds of the eares. As for swellings and inflammations rising behind the eares, there is not a better thing to cure them, than to apply thereto the ashes of Burrets shels tempered with

hony.

hony, or of the Purples Conchylia, with honied wine.

If the teeth ake, the ready means to assuage them, is to scarifie the gums and let them bloud with the sharp bones of the sea-dragon: and withall, to make a collution with the brains of the sea dogfish boiled in oile and faued for the purpose, to wash the mouth and teeth therewith once in a yere. Likewise in the pain of the teeth, found it is most souveraigne to scarifie the gums with the prickly bone or fin of the Puffin or Forkfish, untill they bleed againe. The same also being puluerized, brought into a liniment with white Ellebore, and applied to the teeth, causeth them to fall out of the head without any great paine. Moreover, the ashes of salt fish burnt in a new earthen vessell, and mixt with the powder of the marble stone, is reckoned among the remedies for the teeth. In like manner the quadrants or square cantons of the old Tuny fish, burnt to a cole in a new earthen pan, and after beaten to powder, are thought to be good for the tooth-ach. II

Of the like operation and effect (they say) be the prickles and fins of all kindes of salt fish, if they be first burnt to a coale, then puluerized, and therewith the teeth well rubbed. Furthermore, to make a collution to wash the teeth withall, and to hold the liquor in the mouth, some teeth frogs in vineger, with this proportion, that to euery frog they take one hemine of vineger. But because many a mans stomack lothed & abhorred such a medicin, *Salustius Dionysius* found the means to hang many of them by the hinder legs ouer the vessell or pan of seething vineger, that out of their mouth there might fall the humor within their bodies into the said vineger. But to those who had good stomacks & were of stronger complexions, he prescribed to eat the very frogs broth & all wherein they were sodden. And in very truth, many are of this opinion, that if the grinders and great jaw teeth do ake, this is a speciall medicine for them, but in case they be loose in the head, then the best way to confirm and set them fast, is a collution with the vineger aforesaid. And for this purpose some there be, who after they haue cut off the feet of 2 frogs, lay their bodies to infuse and steep in one hemine of wine, and so aduise their patients to wash their vnsteedy teeth with the said infusion. Others apply them whole as they be, legs and al outwardly to the chawes, and keep them fast thereto. Whereas some againe seeth ten of them in 3 sextars of vineger, untill a third part of the liquor be consumed, and with this decoction thinke to fasten the teeth sure that shake in their sockets. Moreover, others you shall haue who take the hearts of 36 frogs, and bake or boile them in one sextar of old oile vnder a pan or ouen of brasse; the graue or liquor whereof they poured into the eare of that side where the cheek or jaw doth ake: whereas many others besides seeth the liuer of a frog, and when they haue stamped and incorpore it with honny, put it into the hollow teeth, or apply it thereto. But all these medicines abovesayd you must thinke to be more effectuall, if they be made of sea-frogs. Now if the teeth bee worne euen and sinke withall, they giue order to dry a hundred of them in an ouen all night long: afterwards to put vnto them as much salt in proportion as they come to in weight, and therewith to rub the said faulty teeth. There is a kind of serpent or water-snake called in Latine Coluber, and of the Greeks Enhydrys: diuers there be, who with foure of the vpper teeth of this serpent, scarifie the gums of the vpper chaw, in case the teeth therein do ake: and feably with foure of the nether teeth, if the other bee in paine: and yet some there be who content themselves with the eye-tooth onely. They vse also the ashes of Sea-crabs, and no maruell: for the ashes of Burrets is a dentifrice well knowne for to keepe the teeth cleane, and make them neat and white.

The fat of a sea-Calse or Seale taketh away the foule terrors called Lichenes, and the filthy leprosie: so do the ashes of Lampreys, if the same be incorporat with honny to the weight of 3 oboli. The liuer also of the Puffin boiled in oile. Finally, the ashes of a sea Horse and a Dolphin mixt with water, so that the part affected be well rubbed withall untill it blister. Now, when it is thus exulcerat, it must be followed with that manner of cure which is appropriat thereto, and namely, untill it be healed and skinned againe. Some take the liuer of a Dolphin, and fry or torrefie it in an earthen pan, untill there come from it a kind of greafe in manner of oile, & therewith anoint the patients in the cases abovesaid.

If women desire to be rid of the foule freckles, spots, and morpew that do injury vnto their beauty, if they would looke young, and haue their skin plump and void of all riuels, let them take the ashes of Burrets and purple shels calcined, incorporat the same with honny into the form of a liniment: within one weeks space if they ply it with anointing, they shall see the effect thereof; namely, the skin cleare and neat, euen and smooth without wrinkles, & the cheekes

not

not hollow, but faire and full. Mary vpon the 8 day they must not forget to foment and bath the place with the white of an egge well beaten. Among the kinds of Burrets called Murres, are to be ranged those shell-fishes which the Greeks some call Colycia, others Corythia, shaped in the shell like to the rest in manner of a turbant, but that they be far lesse, howbeit more effectual: for that besides the other properties abouenamed, this speciall gift they haue, to maintaine a sweet breath. As for the fish or glue called Ichthyocolia, it hath vertue to lay the skin euen without riuels, and to make it rise and appear firm, but then it ought to boile in water the space of 4 houres, afterwards to be stamped, strained, and wrought to the liquid consistence of honny, and no more. Thus prepared, it must be put vnto into a new vessell neuer occupied, & there kept: When time serues to vse it, to euery 4 drams weight thereof proportion two of brimstone, of Orchanet as much, of litharge of siluer 8 drams: put them all together, and stampe them, with some sprinkling of water among. Herewith let the face bee annointed, and after foure houres wash it off againe. For the spots and pimples in the face, called Lentils, as also for all other deformities, the albes of Curtill bones are thought singular, if the skin be rubbed therewith: and the same consume the excrecence of proud and rank flesh, like as they dry vp any moist and rheumaticke vicers.

CHAP. VIII.

¶ Diuers receipts, set downe disorderly one with another for sundry maladies.

One Frog boiled in five hemines of sea-water, is singular to cause the scurfe of the mange or white scab to fall off: but sodden so long it must be, untill the decoction bee risen to the height of honny.

There is ingendred in the sea also that which is called Halcyoneum, made as some thinke of the nests of the birds Halcyones and Ceyces: but as others suppose, of the filthy some of the sea thickened and indurated according to the opinion of some, it proceedeth from the muddie slime or a certaine hoary dry scum or froth of the sea. Foure kinds there bee of it. The first of an ash colour, thick and massie, of a quick and hot smell. The second is soft and more mild, flourishing in manner like to sea weeds. The third resembleth the whiter kinde of chequer worke in marquetry. The fourth is more hollow and fuller of holes in maner of a pumish stone, & in that respect resembleth a rotten sponge, inclining much to the colour of purple: and this is simply the best, called also by the name of Halcyoneum Milesum, yet in this kind the whiter that it is the worse it is to be liked. The property of them all in generality, is to exulcerat and mundifie. Vied they are being torrefied, euen without any oile. Wonderful is their operation, if they be tempered with Lupines, and the weight of two oboli in sulphur, for to take away the wilde scab or leprosie, the foule terrors Lichenes, and the pimples or spots of the skin called Lentils. Halcyoneum also is commonly employed about the scars or thick slimes appearing in the eyes. Andreas the Physitian vsed much the ashes of a sea-crab incorporat with oile in curing the leprosie. Attalus occupied as vually the fat of a fresh Tuny, new taken, for the healing of vicers. The pickle of Lampreys, together with the ashes of their heads calcined, and brought into a liniment with honny, healeth the kings euill. And many are of opinion, that to prick the wennes named the Kings euill aforesaid, with the small bone or pricke that sticketh in the tail of that sea fish which is called Rana marina, with this gage and rule of the hand that it wound not deep, is very good for that disease: but the same must be done euery day untill they bee thoroughly cured and whole. Of the same operation is the sharp pricke in a Puffin: of the sea-hare also applied to them, so as neither the one nor the other be suffered to lie long to the place, but bee soone renewed. Also the shelly skin of the sea-Vrchin stamped to powder, and brought into a liniment with vineger, as also the ashes of the sea Scolopendre incorporat with honny: and the therier crai-fish either puluerized or calcined, and the dust or ashes thereof likewise tempered with honny, are good to be applied to the same disease. Wonderful effectuall be the bones also of the curtill fish beaten to powder, and with old swines greafe brought into the form of a liniment: and in this manner they apply this medicine to the tumors behind the eares like as the liuers of the sea fish Scarus. Moreover, the heads of such earthen vessels wherein salt fish was powdered & kept, beaten to powder, & tempered with old swines greafe: the ashes also of Burrets shels incorporat in oile, serue in right good stead for the swellings behinde the eares, and the tumors or wennes

called

*Euseb, not
Rana, accord-
ing to Galen.

*Halec, scabrous

*The French-
men terme it
Diable de mer,
i. the diuell of
the sea.

* Some take it for the Sturgeon, but really

1

Any vfe to fuffocate and kill in wine a fea Scorpion, and to drinke thereof for the paine of the liver. For the fame purpofe many are wont to take in honied wine and water of each like quantity, the flefh of the long mufcles or fhell fifhes: or if they have a fever, in hot-water. In cafe of pleurifie or paine of the fides, the flefh of the fea horfe (rofted, eates the fame): the fifh Tethea, which relembeth an Oyfter, taken as meat. I he pickle of the fifh Silurus edes by way of clyftire alieath the paine of the featica. To the like effe& there are given mixed together, Cockles, or Mufcles, to the weight of 3 oboli infufed in two sextars of L. The broth of Silurus fofteneth the belly : like as the crampefifh Torpedo, eaten as meat. The fea-wort is like to that of the garden, hurtful to the ftomack, but moft eafily it purges the fife-wort is like to that of the garden, hurtful to the ftomack, but moft eafily it purges the fife-wort is like to that of the garden, hurtful to the ftomack, but moft eafily it purges the
In regard of the acrimony that it hath, they vfe to feeth it with fome faw flefh. The broth
The fifh whatloever is laxative: the fame provokes urine, efpecially if it be madeed of wine. The
The fifh broth comes from the Sea Scorpions, and thofe which they call Iulides: of ftonie fifhes
that keep about rocks, and have no rank or ftrong tafte ; and fuch muft be foddened with dill,
that coriander, and leeks, putting therto oile and falt. The fquares alfo or cantons of the Tu-
that have bin old kept are purgative, for particularly they evacuate crude and waterifh hu-
besides flegme and choler. The fhel-fifhes alfo named Myaces, have a quality purgative:
much whole nature I purpofe to write fully in this very place. They gather together by l-
after the manner of Butrets; they live in places given to breed reits and fea moofe ; moft
eat and pleafant meat they be in Autumne, & efpecially in thofe coafte where good ftore of
water is intermingled in the fea, which is the reafon that thofe of Egypt bee moft com-
table: as winter grows on, they begin to gather a kind of bitterneffe, & a red colour becom-
The

^a*Otus marinus*:
haply he mea-
neth *Griffa*
marina, i. *ot-*
stuscula, yet it is
nothing like to
our *Colaptes*

* *Potius*, rather
illitus,¹ or is
 brought in o
 liniment, & c
 vied outward-
 ly.
 * *Salem*. Some
 read *Scila*.
 i. sea Onion or
 Squilla.
 ... Muskles;
 * Haply Coc-
 kles.

* Таблица 2 *

of:

necke or tied to his arme, surely it will diminish and shorten the cold fit of an ague: like as the oil will do no lesse, wherein the entrails of the said frog were boiled, in case he be annointed therewith. But about all, either frog or toad (the nailes wherof haue been clipped) hanged about one that is sicke of a quartan ague, riddeth away the disease for eueral: also, whoeuer haue about him hanging to any part of his body the heart of a toad, infolded within a piece of cloth of a white russet colour, he shall be deliuered from the quartan ague. Stampe ruer crabs or creifishes, conporat them with oil and water, and herewith annoint the patient all ouer before the fit of any ague, you shall find it to do very much good, but some put pepper thereto: other for the quartan particularly, boile the same in wine vntill a fourth part be foddren away, & then for the giue counsell vnto the sicke parties to drinke of that broth. presently after they be come out of the baine. You shall haue some aduise, for to swallow downe whole, the left eie of a creifish in this case. Moreover, the Magitians seem to asse vs, that whoeuer be sicke of a tertian ague, shall be rid of it, in case the eies of the said creifishes be tied or hanged about them one morning before the Sun be vp; so as withall, they that haue the doing hereof, let them go againe blinde as they are, into the water: and they would beare vs in hand, That if the said eies plucked out of the head of a creifish, be wrapped together with the flesh of a Nightingale, within a piece of a stags skin, and so worne either about the neck, or otherwise tied fast to some part of the bodie, they will cause him or her that weareth them, to be watchfull & not inclined one whit to sleep. They vse likewise the renner of a Whale or els of a Seale, giuing it vnto those that be growing into a lethargie, for to smell vnto: and some of them annoint those that be already in a lethargie, with the blood of tortoisies. The fish likewise called Spondylus, is said to rid away the tertian ague, in case the patient weare one of them without any thing else, about the necke: like as the ruer (shell-snails) eaten fresh and new gathered, cure the quartan: howbeit, some there be, who for that purpose keep them condite in salt, and giue them after they be punned for to drink. The wilks also or wrinkles called Strombi, suffered to lie and putrifie in vinegar, do with their very smell awaken and raise those that lie in a lethargie. The same are good likewise for such as be ready to faint and fall into cold sweats, through feebleness of the heart and stomacke. The fishes named Tethes, eaten with rue and hony, are soueraigne for to restore them whose flesh is fallen away in a consumption. The fat of a dolphin melted and drunk in wine, cureth such as be in a dropsie. In case the head be heauie and ready euermore to fall asleepe, there is not a better thing than to rub the nostrils with some convenient ointment, or to hold thereto some perfume, or els to stop the same any way it makes no matter how. Also, the meat of the foresaid wilks or wrinkles, stamp & giuen in 3 hemines of bonied wine, with as much water, or in mead or bonied water if the patient haue a feuer withal, is singular good against the said drowinesse: likewise the iuice or decoction of creifishes with honey. Moreover, water-frogses boiled in old wine with the red wheate Far, and eaten as meat, so as the patient drinke also of the broth out of the same vessell where they were foddren, are thought to be soueraigne for such sleepe diseases: or else take a tortoise, cut away his head, feet, and taile, plucke out his gurs and garbage, the rest of the flesh condite, so as it may be taken without any loathing or rising of the stomack, for this is held to be singular in this malady. Moreover, fresh-water creifishes eaten with their broth, haue the name to restore such as be in a pthysicke or consumption of the lungs. The ashes either of a sea-crab or ruer creifish, be excellent either for burne or scald, and this manner of cure also serueth for to restore haire againe, but then they hold opinion, that together with the ashes of the ruer creifishes, there be waxe vied & beares grease. Also the ashes of frogs gal is thought good for a feuer. As for Shingles and S. Anthomes fire, the bellies of liue frogs applied to the place, doe extinguish and quench the extremitie of their heat: but in any case order is giuen, that they be tied by the hinder leggs with their mouths bending forward: to the end, that their often breathing also upon the place, may coole and do good. Furthermore, many there be who vse for that purpose, the ashes of the heads of the fishes called Silurus: as also of saltfish with vinegar, and apply the same to such wildfires and inflammations. The liuer of a Puffen or Forkefish foddren in oile, being outwardly applied, killeth not onely the itch and scab of men, but also the scurfe and mange of four-footed beasts, most effectually. The callositie or thick skin where with Purple fishes couer their heads and hollow concauitie, if it bee punned and applied vnto the wounded sinews, doth consolida and fowder them againe though they were cut aunder. The renner of a Seale or Sea-calf taken in wine to the weight of one obolus, helpeth those that lie

* Gracilis
poris.

A in a lethargie: so doth fish-glew Ichthyocolle. Such as are giuen to the shaking and trembling of their lims, find much benefit by Castoreum, if they bee rubbed and annointed with it and as much feeding upon fish * caught bleeding, for the same may be slanced with the poule or, poured out, that of himselfe he yeeldeth a certain salt pickle, and therefore there should be no salt: put into the liquor while he is seething: *Item*, that it ought to be sliced and cut with an edged reed; for with an yron knife it will take infection, and the nature of it is such as to keep and retain it still. For the slancing of blood, they vse also the ashes of frogs, or els their blood dried: to be applied accordingly. But some would haue the ashes to be made of that kind of frog, which the Greeks name Calamites, because it lieth among reeds, bushes, and shrubs, & of all others is the least and greenest: and yet many do ordain, if the flux of blood be from the nostrils, to take the ashes of young frogs breeding in the water, whiles they be tadpoles, and haue little wriggling tailes, (and those must be calcined for that purpose in a new earthen vessell) & to put vp the said ashes into the nose. On the contrary side, the horseleeches which we call in Latine Sanguilugas, [i. Bloodsuckers] are vied for to draw blood. And verily it is iudged that there is the same reason of them, as of ventoses and cupping-glasses vied in physicke, for to ease and discharge the body of blood, and to open the pores of the skin. But here is all the barme and commoditie of these horseleeches, That if they be once set too far to draw blood, the body will looke for the same physick againe euery yere after, about the same time, & be ill at ease for want thereof. Many physicians haue thought it good to vse them for the gout of the feet also. Well satisfied, euen with the very weight of the blood which pulleth them downe, or els by strewing some salt about the place where they sticke too: and otherwhiles it falleth out, that they leaue their heads behind them fast fixed in the place where they settled, and by that means, make the wound incurable and mortall, which hath cost many a man his life: as it happened to *Messalinus* upon hauing set them to his knee: whereby we may see, that oftentimes they bring a mischief for a remedy: and the red ones are they that in this respect ought to be feared. To prevent therefore this dangerous inconuenience, they vse with a paire of fizers to clip them at the very mouth as they be sucking; and then shall you see the blood spring out, as it were at the cocke of a conduit, and so by little and little as they die, they will gather in their heads, and the same will fall off, and not tarrie behind to do hurt. These horseleeches naturally are enemies to Punaises, in so much as their perfume killeth them. Furthermore, the ashes of Beuers skins burnt and calcined together with tar, slancheth blood gushing out of the nose, if the same be tempered & mingled wel with the iuice of porret. The shells of cuttles applied to the body with water, draw forth arrow-heads, prickles, or spils, that sticke deepe within the flesh: so doth any saltfish if the fleshe side be laid thereto; yea, and fresh-water creifishes haue the same effect: likewise the flesh of the fresh water Silurus (for this fish breedeth in other riuers besides Nilus) applied to the place, either fresh or salted it makes no matter, worke with the same successe. The ashes of the same fish, and the fat, be of the same operation, and very attractive. As for the ashes of their ridge-bone, and prickie finnes, they are taken to be as good as Spodium, and are vied in stead thereof. As touching those vicers which be corrosiue, as also the excrescence of proud flesh growing in such sores, there is not a better thing to repress and keepe them downe, than the ashes of Cackerles or the fish Silurus aforesaid. The heads of salted Perches be singular good for cancerous vicers: and the more effectually they will work, in case there be salt mingled with their ashes, and together with knopped Majoram or Saurie and oile, be incorporat into a liniment for this purpose, sufficient it were to take the ashes only of the ruer creifish, medled with hony and lint: but some chuse rather to mingle alume and hony with the said ashes. As for the eating fores called in Greeke Phagedaena, they may be healed well with the fish Silurus, kept vntill it be dried, and so together with red ornament, reduced into a pouder. Likewise mortalls, and other consuming cankers, and those sores which be filthy and growing to putrefaction, are commonly healed with the old squares of the Tunic fish. Now if there chance to be wormes and vermine breed in the said vicers, the only means to cleanse them is with the gall of frogs.

A Barble drowned in wine, or the fish called a Rocher, or also two Eeles, likewise the fish named the Sea-grape purrified in wine, do infuse this vertue into the foresaid wine. That who neuer drinke thereof, shall have no mind afterwards to any wine besides, but fall into a dislike and loathing thereof.

The stay-ship Echeneis, the skin of a Sea-horse forehead, especially toward the left side, wrapped within a little linnen cloth, and so hanged about one, or the gall of a liue Crampe-fish, applied vnto the genital members in manner of a liniment, be all means to coole the wanton lust of the fleshe contrariwise, the flesh of riuier Crefishes powdered and kept in salt, giuen in wine to drinke, do stir and prouoke the appetite vnto venerie. Moreover, to feed vpon the fishes called Erythrines ordinarily at the table: to hang about the necke the liuer of the frog called Diopetes or Calamita, within a little piece of a cranes skin, or the jaw tooth of a Crocodile fastened to any arme, either els the Sea-horse, or the sinewes of a Toad, bound to the right arme, incite greatly to wantonnesse and lecherie. Put a toad within a piece of a sheeps skin newly slaid, and let one weare it tied fast about him, he shall forget all loue and amitie for euer.

The broth of frogs boiled in water, do extenuat the scurvie thicke rouse in the farcins or mange of horses, and make way that they may be bathed and anointed: and verily it is credibly affirmed, that if they be cured after this manner, the scab will neuer returne againe. The expert midwife Salpeasfithem for certain, That doggs will not barke, if there be giuen vnto them in a morcell of bread or gobbet of fleshe, a liue frog.

In this discourse of Water, and the things concerning it, somewhat ought to be said as touching Calamochus, which otherwise in Latine is named Adarca: it groweth about small canes or reeds, and is engendered of the froth of sea water and fresh water together, where they both meet and are intermingled: a causticke qualitie it hath; in regard whereof, it entrench into the compositions called Acopa, which serue for lasitude, and those that are benumbed with cold. It is employed also in taking away the pimples or spots in womens faces like to lentils.

As for Reeds and Canes, this is their very proper place also, wherein they should be treated of. And to begin with that reed or cane called Phragmitis, which is so good for mounds & hedges; the root thereof Greene gathered and punned, is singular for dislocations, and the paine of the backebone, if the place affected be annointed with it, incorporat in vinegre. But the rind of the Cyprian cane, which also is named Donax, burnt into ashes, is singular for to recover haire againe where it was shed by occasion of sicknesse, and to heale old vlcers. The leaves also serue very well to draw forth any spills, prickes, or arrow heads that stick within the fleshe, yea and to extinguish S. Antonies fire. As for the floure or downe of their catkins, if it chance to enter into the eares, it causeth deafenesse. The blacke liquor resembling inke, which is found in the cuttle-fish, is of that force, that if it be put to the oile of a lamp burning (Anaxilaua saith) it will drown and put out the former cleare light, and make all those in the room to looke like blackamores or Ethiopians. The hedge frog, otherwise called a toad, boiled in water and giuen to swine among other drasse to drinke, cureth all their diseases and of the same effect are the ashes of any other frogs besides. Rub a piece of wood with the fish called Pulmo Marinus, it will seem as though it were on a light fire; in so much as a staffe so rubbed or besmeared with it, may serue in stead of a torch to giue light before one.

CHAP. XI.

¶ That there be of fishes and other creatures living in the Sea, one hundred seuentie and six severall and distinct kinds.

HAuing thus treated before sufficiently of the natures and properties of Fishes, and such creatures as the water doth yeeld; it remaineth now for a small conclusion, to present vnder one view, all those fishes name by name, which are engendered and nourished not only in those mediterranean and inland arms of the sea, which for many a mile take vp a great part of the continent and firme land, but also in that vast and wide ocean without the main, bounded as it were limited onely by the compasse and circumference of the heauen: and those, namely as many as be knowne, may be reduced all into 176 kinds: a thing which cannot be done either in the beasts of the land or foules of the aire. For how is it possible to decipher & particularize the wild beasts and foules of India & Ethiopia, of the deserts, and of Seythia, which we are not come

A come to the knowledge of, seeing we haue found so many different sorts in men, of whom wee haue some notice and intelligence: to say nothing of Ta probane, and other Islands lying within the Ocean, whereof so many fabulous reports are deliuered: certes, there is no man but hee must needs confesse and agree to this, that it was not possible in this historie of Nature to comprise all sorts of creatures which the earth & aire do yeeld. Howbeit, those that are bred in the Ocean, as huge and vast as it is, may be comprehended vnder a certaine number: a wonderfull and hidden them in the deepe gulfes of the maine sea!

To begin then with the greatest monsters and beasts that this vnruly Element of the water doth breed: we find therein the sea-Trees, Whirlepoles, greater Whales, Priests, Tritons [i. sea Pipes, Rams, and smaller Whales accompanying the bigger. Besides, other Rams that resemble the ordinary shape of fishes; Dolphins, and the sea Calues or Seales, whereof the Poët Homer writeth so much. Furthermore, the sea Tortoises, which serue for troior, wantonnesse, and a kind of Beuers they are, yet because I neuer heard that they came into the salt water, I make no great reckoning of them; for my purpose is to rehearse those only which inhabit or haunt the sea: moreover, the sea Dogs: the Curriers, Posts, or Lacques of the sea: the horned fishes: the Swordfish, or Emperour of the sea, and the Sawfish.ouer and besides, those which liue indifferently in the sea, the land, & the riuier, to wit, the Quier Horles and the Crocodiles: others againe that ordinarily keepe in the sea, and yet come vp into the riuers, but neuer land, to wit, the blacke Coracini, and Perches. As touching those that neuer came forth of the sea, the Siluri, the on, the Guilthead, the cod, the Acare, Aphyia, Alopecias, the Yecles, and Araneus. The billowing fish Box, Baris, Banchus, Barrachus, and Belore, with all the kind of those which wee call Needle fishes, and also Balanus. The sea Raven Corvus, and Cytharus: all the sorts of the Chrombi: the Carpe, Chalcis, and Cobio: Callarius of the Codds kind, but that it is lesse: Coracina, a fish resembling Lizards: of which and of the young Tunie Pelamis (both bred in Mæotis) being chopped and cut into pieces & so salted, are made those Quadrants or Square rands, called Cybia. For this you must vnderstand, that the Tunie is called Pelamis, when after 40 daies he returneth out of Pontus or the Euxine sea into Mæotis: whereas the said smal Pelamis taketh the name of Cordyla, when it goes first forth of the said great lough or lake Mæotis, and enters into the sea before named. Moreover, in the said lake Mæotis be these fishes be the only fishes that be all ouer yellow; Cnide, which we in Latin call Vtricia, the Nettle, all the sorts of Crabs, the gaping smail Cockles and Muskles, whether they be the rough Chamæ-trachæ, the smooth Chamæ-leo, or the Chamæ-peloides: which be of diuers kinds distinct one from another, both in forme of roundnesse, and variety of colours: as also the Cockles named Chamæ-glycimerides, which be bigger than the former Peloides, together with those that the Greeks call Colycia or Corophya. Moreover, sundry sorts of other shell fish, and among them those that engender and beare pearles, and thereof be called Mother-pearls. The wilkes also and the prickly Echinophore, whose shells serue to found or wind withal, ouer & besides these shell furthermore, the sea Cucumber and Cynopus, the sea Craiffish Cammarus, Cynoflexia, and the sea Dragon. As for that which is named Dracunculus, some are of opinion, That it differeth from the foresaid Draco, and like it is to the Chough-fish Graculus, sharp prickles it hath in the gills, and those pointing toward the taile: like as the sea Scorpion, which thereby woundeth and burtheth those that would seem to take it vp in their hands. There is besides the Erythrinus, the Lizards, hauing foure feet, and those clouen & two-forked; besides two arms with two joints apiece, and each of them armed with a little forked clew, and closing in manner of teeth. Then haue you the fish called Faber or Zeus, that is, the Goldfish or Doree. All the sorts of Glaucif, eus, the Glanis, the Gonger, or Conger, the Hearing or Pilchard Gerries, Galeos, and Garus, which some

Also the coast Crabfish called Hipeus, or Sea-horseman Hippurus; the sea Swallow fish, Ha-
 C leupemon, or Pulmo Marinus; the sea-lights, heart-fish, the liver of the sea, and Helacathenes.
 All the sorts of the sea-Lizards: the flying Calamari: the Locusts and Lanterns of the sea, Ly-
 paris, Lamiyus, the sea Hare and sea Lions, which have elies or armes in manner of Crabfishes,
 but in other respects resembling Locusts. The Barble, the Merling or Whiring (among stone-
 fishes well esteemed) and the Mullet: the blacke taile Perch [which some take for a Ruffe, others
 for a sea Bream:] the Cackerell, the Meryx, the Lamprey, the little Muske, the Limpin, the
 Myfcus, and the Burret. The feuen-eye Oculata, the Ele-pout Ophidion, the Oistre, the * eares
 of the sea called Oria, & Orcynus. This fish of the Tunic kind named Pelamides is the biggest,
 and neuer returneth again into Mæotis, like vnto a Triton; & the meat thereof is the better for
 age. The Lompe, Paddle, or sea Owle, and the grunting Molchout: moreover, the fish Phager, the
 Mole or Lepo counted among stonefishes, and the Pelamis, the greatest of which kind is called
 Apolecus, and harder it is than the Triton, also the sea-god Phorcus, and Phritarus: the Plaice
 or Hallibut, & the Puffin: all the kinds of Pulpes or Poutcittils. The greatest Scallops also, and
 those which during Summer be blackest, whereof the best sort be those which are taken about
 Mytelene, Tyndaris, Salona, Altinum, Antium, and the Island Pharos neere to Alexandria in
 Ægypt. Also the little Scallops, the Purples, & the sea Perches, named Percides: the Nacres and
 their hunters, called Pinnotheræ.ouer and besides, the fish called Skate, which some will haue
 to be Rhina in Greek, & named by vs in Latine, Squatus, and the birt or Turbot: the Guilthead
 Scarus, which at this day is thought to be a principal fish: the Sole, the Sargus, the Shrimpe,
 and the Sarda, for so they call the long Pelamis when he comes out of the Ocean. The Maquerel
 or Scomber, the Stockfish, the Sparus, Scorpena, Scorpius, Sciæus, Sciaena, the Scolopendra,
 the serpent fish Smyrus, the Scepines; the shel-fish pointed like a Turbant, Strombus: & Solen,
 otherwise called Aulus, Donax, Onyx, or Dactylus, all shell-fishes made like kniues: the asse-
 houfe oyster Spondilus, and the shel-fish Smarides, the Star, and the Spunge. Then follow the
 noble stonefish Turdus, and the Thomas Thurius, sold in pieces or rands cut forth, which fish
 some call Xiphia, or the Sword-fish. The Thessa, Torpedo or Crampfish, and Tethea. Tritonal-
 so, which is reckoned among the greater kind of the Pelamides, whereof are made those square
 taile-pieces of the Tunic, called Vra Cybia. Last of all, the Vrenæ, the sea Grape or the Empe-
 rour with a sword, called Xiphias. And here I thinke it not amisse to annex the names of diuerse
 fishes let downe by the Poët Ouid, which are not to be found in any other Authour: But haply
 those breed in the great sea of Pontus, in which realme he began that booke *De Ponto*, in his la-
 ter daies. In the first place he nameth * Bopgyrus, which liueth among the rocks: the red Or-
 plus, and the blacke Rhacinus, the painted and streaked Mormyræ, and the golden coloured
 Chryfos. Moreover, the little Teragus, and Labrus with the faire & pleasant taile. Likewise the
 Epodes, which are of the broad or flat kind, named Lati. All these be notable fishes: but ouer
 and besides, he reports the speciall properties and nature of some: as namely that the Chaune
 doth conceiue of it selfe without a mile: that the Glaucus neuer is to be scene in Summer: that
 Pompilus alwaies accompanieth the ships vnder sailer: and Chronius buildeth a nest in the
 very water. He faith moreover, that Helopus is a stranger to vs in this part of the world, and
 not known in our seas: whereby it is euident that they be deceiued who take it for the Sturgeon
 Acipenser; and yet many reckon this Elaps to haue the daintiest tast, and to be the most delicate
 meat of all fishes. There are ouer and besides other fishes, named as yet by no writer, to wit,
 that which in Latine we call Sudis, the Greekes Sphyræna, which (as it should seeme by the
 name) hath a snout or muffle resembling a sharpe stake or spit, and may for quantitie be counted
 among the biggest: a rare fish, but of no base and basard kind. There be also of the Nacres
 those which are called Pernæ, taken and gathered in exceeding great plenty about the Islands
 of Pontus: their manner is to stand or sticke fast planted vpon the sea sand; and made they are
 in fashion of the long shanke of a swine; they gape alwaies toward the coast which is cleare;
 and neuer doe they hunt for their food, but they yawne at least a foot wide. Teeth there be
 growing round about the edges of a shell, and those stand thicke together, and when they
 shut or close their shels, the foresaid teeth run one betwene another in manner of a combe.
 In stead of a callositie within, they haue a great lump of flesh. As for the fish Hyæna, I my selfe
 haue seen one of them taken in the Island Ænaria, which vsed to put forth and draw in his head
 at his pleasure.

Thus

A Thus much of Fishes worth the naming. For besides these, I am not ignorant that there be
 other base excrements that the sea voideth and purgeth, which I hold to be very vnfit and not
 worthy to be ranged among Fishes and liuing creatures, but rather to be reckoned as Kilpes,
 Reike, and other sea weeds.



THE XXXIII. BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIVS SECVNDVS.

Of Mettals and Minerals, and their natures:

The Proem.

Now is it time to enter into the discourse of the Mettals and Minerals, the very
 riches and precious treasure of the World, which men so curiously and carefully seeke
 after, as that they sticke not to search into the very bowels of the earth by all the
 meanes they can deuise: for some you shall haue (to enrich themselves) for to dig
 into the ground for mines of gold and silver, base metall Electrum, Copper and
 Brasse: others againe vpon a desire of daintie delights and brauerie, to lay for gems
 and precious stones, for such Minerals (I say) which may serue partly to adorne
 their fingers, and partly to set out the walls of sumptuous buildings with costly co-
 lours, rich marble, and porphyries. Lastly, there bee many, who maintaine rash quarrels, and audacious
 bloudie warblers. In summe there is not a vaine in the whole earth but wee prie and search into it: we
 follow it also so farre as it goeth. Thus hauing undermined the poore ground, wee line and goe aloft
 whiles she cleaueth asunder into wide and gaping chinkes, or else trembleth and quaketh againe: and wee
 will not see how these be apparant signes of the wrath of this our blessed mother, which we bring and force
 from her, to expresse the indignation that she taketh for this wrong and misusage. We descend into her in-
 treasure: as if she earth were not fruitfull enough and benefical vnto vs in the upper parts thereof, where
 she permitteth vs to walke and tread vpon her. Howbeit, in all this paines that wee take to ranke the
 mines thereof, the least matter of all other is to seeke for any thing that concerneth Physick and the regimen
 of our health: For among so many masters as there be of mines, where is there one that would be at such
 expence of digging, in regard of any medicines. And yet I must needs say, that as the earth otherwise is
 no niggard, but bounteous and liberal, readie also and easily entreated to bring forth all things good and
 profitable for vs: so in this behaife she hath furnished vs sufficiently with whole some drugges and medici-
 nable simples growing about and fit for our hand, without need of digging deepe for the matter. But the
 things that she hath hidden and plunged (as it were) into the bottome, those be they that presse vs downe,
 those drine and send vs to the dwell in hell: even those dead creatures (I say) which haue no life nor doe
 grow at all. In such sort, as to consider the thing aright, and not to captivate our spirits to such base mat-
 ters, How farre I thinke we will conuincid men pierce and enter into earth? or when will they make

at

an end of these mines, following the ground as they doe in all ages from time to time, and making it void G
and empire? Oh how innocent a life, how happy and blessed, nay, how pleasant a life might we lead, if we
conetted nothing else but that which is about the ground: and in one word, if we stood contented with that
which is ready at hand and euen about vs. But now, not sufficed with the gold which we fetch out of the
mines, we must seeke for the Greene earth Borras also, which lieth hard by, yea, and giue it a name respectiue
vnto gold, whereby it might be thought more deare and pretious. For why? we thought not the inuentiue
and finding out of gold alone to be enough for to infect and corrupt our hearts, vnlesse we made great ac-
count also of that vile and base mineral, which is the very ordure of gold and no better. Men vpon a con-
tuous mind would needs seeke for silver, and not satisfied therewith, thought good withall to find out Mine-
rall vermilion, desiring means how to vse that kind of red earth. Oh the monstrous inuentiue of mans
wit! What a number of waies haue we found to enhance the price and value of euery thing! For painters H
of the one side with their artificial painting and enameling: the grauers on the other side with their cu-
rious cutting and chafing, haue made both gold and silver the dearer by their workmanship: such is the
riddle cutting and chafing, haue made both gold and silver the dearer by their workmanship: such is the
And wherein is the art and cunning of these artificers so much scene, as in the workmanship
of such pourtraires vpon their gold and silver plate, which might incite and prouoke men to all kind of vi-
ces: for in proceffe of time we tooke pleasure to haue our drinking boles and goblets engrauen all ouer with
those workes which represent lust and wantonnesse: and our delight was to drinke out of such beasty cups
which might put vs in mind of sinfull and filthy lecherie: but afterwards these cups also were cast aside
and laid away, men began to make but bare account of these: gold and silver was so plentiful and common,
that we had too much thereof. What did we then: For sooth we digged into the same earth for Cassidine I
and Crystall, and we lusted to haue our cups and other vessels of such brittle minerals; and the more preci-
ous we held them, as they were more subject to breaking: so as now adades hee is thought to haue his house
most richly furnished, who hath his cupboards best stored with this ticklish ware: and the most glorious
show that we can make of excess and superfluitie, is this. To haue that which the least knocke may brake,
and being once broken, the pieces thereof might be worth nothing. Neither is this all, for stay we cannot
here, we are not yet at cost enough, vnlesse we may drinke out of a deale of precious stones. Our cups other
wise chased, enroued, and embossed in gold, must be set out with hemeraulds besides: to maintaine drun-
kenesse, to make a quarrell to carouse and quaffe, we must hold in our hand and set to our mouth the riches
of India. So as, to conclude, our golden plate comes behind precious stones and pearles, and we count it but
an accessarie and dependant, which may be spared.

CHAP. I.

¶ When mines of gold grew first into request. The beginning of gold rings. The quantitie
of gold in treasure among our ancestors in old time. Of the Cavallerie and
Gentrie of the Romanes. The priuiledge of wearing
golden Rings.



H that the vse of gold were cleane gone: Would God it could possibly
be quite abolished among men, setting them as it doth into such a cursed
and excessiue thirst after it, if I may vse the words of most renowned writ-
ters: a thing that the best men haue alwaies reproched and railed at, and the
only meanes found out for the ruine and overthrow of mankind. What
a blessed world was that, and much more happier than this wherein we
live, at what time as in all the dealings betweene men, there was no coine
handled, but their whole trafficke stood vpon bartering and exchanging

* It is thought
that thereby are
meant certaine
pieces of silver
coine, stamped
with the por-
traiture of a
bull or ox, cal-
led *didrachma*
& were worth
two drams or
dier. Ro. 13.
The same was
used in the time
of Iudas.

ware for ware, and one commoditie for another, according as the practise was in the time of the
Trojane war, as Homer (a writer of good credit) doth testifie. And in that manner (as I take it)
haue first the commerce of negotiation among men for the maintenance of their society and
liuing together: for so he reporteth, That some bought that which they stood in need of, for
Bœufes hides, others, for yron or such commodities as they had gotten in bootie from their e-
nemies. And yet I must needs say, that euen Homer himself esteemed gold of great price, as may
appear by the æstima that he made thereof in comparison of brasse, when he saith, That Glauc-
cus exchanged his golden armour, worth 100 * oxen, for the [brazen] harness of Diomedes, which

A which was valued but at nine Bœufes: according to which manner praîsed in those daies, euen
at Rome also (as may appeare by the old records) there were no other penalties and fines impo-
sed vpon those that transgressed the lawes, but such as consisted in Bœufes and Muttons, and
dents gaue he vnto the world, who first deuised to wear rings vpon the fingers: but who he was
that did this harm vnto mankind, it appeareth not for certaine vpon any record. For as touching
pictures and portraitures of him, he is to be seen by a generall consent of antiquity, with a ring
of yron: howbeit, I suppose that they represented thereby his bonds and his imprisonment, rat-
her than any custome that he had to wear a ring as an ornament vpon his finger. And verily
B concerning the ring of K. * Midas, which if the collet were turned about toward the palm of the
hand, caused them to go inuible that so wore it: is there any man (thinke you) that judgeth it
not more fabulous than the other of *Prometheus*? But to come more particularly vnto gold, the
greatest credit and authority that it got, was by wearing it in rings vpon the fingers, and those
only and altogether vpon the left hand. And yet this was no fashion at first among the Romanes,
whose manner was to vse no other but of yron, to shew that they were good souldiers, skillfull
and expert in fearts of arms. Whether the antient kings of Rome were wont to haue gold rings
vpon their fingers, I am not able to say for certaine. Sure it is, that the statue of king *Romulus* in
the Capitoll hath none. Neither is there any to be seen in the other statues of the Roman kings,
saue only of *Numa* and *Servius Tullius*; no nor in that of *Lucius Brutus*: Whereat I marvel much,
C and especially at the two *Tarquines* kings of Rome, considering that they were descended of the
Greeks, from whence came vp the first vfrage of these gold rings, howsoever yet at this day in
Lacedæmon there be none worne but of yron. Howbeit, this is recorded and known for a truth,
that *Tarquinius Priscus*, the first of all the *Tarquins*, honoured a sonne of his with a brooch or ta-
blet of gold pendant at his neck, for that whilst he was vnder 16 yeares of age, and as yet in his
Prætexta, hee had killed an enemy in plain fight. And thereupon was taken vp the manner first,
sonnes who were men at armes and serued in the wars on horse-backe, in token of knighthood
and cheualrie: whereas other mens sonnes were a riband onely. And therefore great maruell I
D ring on his finger. And yet besides all this, I reade, that there hath been some variance and diffe-
rence in old time about the naming of rings: The Greekes imposed a name deriued from the
finger, and called it *Dactylus*. The Latines here with vs in old time named it *Vngulus*: but af-
terwards, as well we as the Greekes termed it *Symbolum*. Certes, long it was first (as appeareth
evidently by the Chronicles) ere the very Senators of Rome had rings of gold. For plain it is,
that the State allowed and gaue rings only to certain especial lieutenants when they were to go
in embassage to foreign nations: and in mine opinion, it was for their credit and countenance,
that ornament. And verily, no person (of what degree soeuer) was wont to wear rings, but such
as had receiued them first from the common wealth vpon that occasion: & so it serued them or-
E dinarily in triumph, as a token and testimoniall of their vertue and valour. For otherwise, he that
triumphed in Rome, although there was a Tuscan coronet al decked with spangles of gold, born
vp behind and held ouer his head, had no better than a ring of yron vpon his finger, no more than
the slave at his back, who haply carried the said Tuscan chaplet. For certainly in that manner tri-
umphed C. *Marcius* ouer K. *Ingurtha*: and as the Chronicles do shew, receiued not a golden ring,
State had golden rings giuen them, in regard of embassage afore said, neuer used them but when
they came abroad into open place, for within dores they might wear none but of yron: which is
the reason, that euen at this day the wedding ring which the bridegroom sendeth as a token * of
F fide by reading, were there any golden rings in vse and request about the time of the Trojane
war, for sure I am, that the Poet Homer maketh no mention of them at all, who otherwise spea-
keth of the brauery and rich attire of those times. And when he talketh of writing tablets, spea-
keth ordinarily in stead of letters misseuse, when he writeth of cloths and apparels bestowed in chifts
and coffers; when he telleth vs of vessels, as well gold as silver plate, he saith they were all bound
and

* Geyer rather
asapparet
by Platoes
Cicero.

* Called *Bulla*,
which was in
forme of the
heart: & after
they were
growne to bec-
me, at 17
yeares of age
they off red it
vp to the La-
res: like as
young maidens
marriageable
presented *Pu-
na* with young
babes to clout-
such as they
were wont to
make and play
withall, ar-
riving now deli-
cious to haue
babes indeed
of their owne
bodies. *Alex.
de Alex. lib. 4.
cap. 25. & lib. 5.
cap. 18.*

* It was called
Promus *Alex.
de Alex. lib. 4.
cap. 25. & lib. 5.
cap. 18.*

and trussed fast with some sure knot, and not sealed vp with any mark of a ring as the order is in these daies. Moreouer, when he reporteth of any challenge made by the enemy to single fight, and sheweth how the captains set to cast their feuerall lots for the choise of them which should performe the combat, this was neuer done by the signet of rings, but by some other especiall marks that euery one made. Also, when he taketh occasion to speak of the workmanship of the gods, he rehearseth buckles, clasps, and buttons of gold, other jewels and ornaments also belonging to the attire of women, as eare-rings and such like of their making, which at the beginning were commonly made, but he speaketh not one word of golden rings. And verily in my conceit whosoever began first to wear these rings, did it covertly by little and little, putting them vpon the fingers of the left hand, the better to hide them, as if they were ashamed to haue them openly seene: whereas if they might haue auowed the honouring of their fingers by that ornament, they should haue shewed them at the first vpon the right hand. Now if any man object and say, that the wearing them on the right hand might be some impeachment to a soldier for vsing his offensive weapon which he beareth in that hand; I alledge again, that the hindrance was more in the left hand, which serueth to hold and manage the targuet or buckler defense. I read in the same Poet *Homer* aforesaid, that men vsed to plait & bind vp the tresses of their haire with gold: and therefore I wot not well whether men or women first began the manner of such braiding the locks of the haire.

As touching gold laid vp for treasure, little was there of it at Rome for a long time; for surely, when the city was taken & sacked by the Gauls, and that the Romans were to buy & redeem their peace for a sum of money, there could not be made in all Rome about one thousand pound weight of gold. Neither am I ignorant, that in the third Consulship of *Cn. Pompeius* there was embezled and stolne 2000 pound weight of gold out of the throne or shrine of *Iupiter* within the Capitoll, which had bin there bestowed and laid vp by **Camillus*: whereupon many men haue thought, that there was 2000 pound weight of gold gathered for the ransom of the city. But surely looke what ouerplus and firecraze there was about the foresaid weight of one thousand pound, it was of the very booty and pillage of the French, and taken out of the temples and chappels in that part of the city whereof they were masters. Moreouer, that the Gauls themselves were wont to goe to the wars brauely set out and enriched with gold, it appeareth by this one example of *Torquatus*, who slew a Gaul in combat, and tooke from him a masse collar of gold. Apparant it is therefore, that all the gold, as well that of the Gauls, as that which came from the temples aboutefaid, amounted to the said sum, and no higher: to the light and knowledge whereof we come by meanes of reuelation from Augurie, which gaue vs to vnderstand, that *Iupiter Capitolinus* had rendered againe the foresaid sum in duple proportions. And here by the way there cometh to my remembrance another thing, not impertinent to this place: considering I am to treat againe of rings: when the sexton or keeper of this cell was apprehended, and the question demanded, What was become of the treasure aforesaid of 2000 pound which *Iupiter* had in custody, and which now was out of the way and gone? He tooke the stone that was in the collar of his ring which he ware, crackt it between his teeth, and presently dyed thereupon: whereby the truth was not bewraied and reuealed, as touching the theefe that robbed the said treasure. Wel, reckon the most that can be, surely there was not about 2000 pound weight of gold to be had in Rome, when the city was lost, which was in the 364 yere after the first foundation thereof, at what time (as appeareth by the rolls of the Subsidie booke) there were in Rome to the number of 152580 free citizens. And what was 2000 pound in proportion to such a multitude of people. Three hundred and seuen yeres after, when the temple of the Capitoll was on fire, all the gold to be found therein, as also in all the other chappels and shrines arose to thirteen thousand pound weight, which *C. Marius* the yonger seized vpon and conueied away to the city Præneste. And all the same was recouered againe and brought backe againe by *Sylla* his enemy, who vnder that title carried it in triumph, besides seuen thousand pound weight of siluer, which he raised out of the spoile of *Marius*. And yet neuertheless, the day before hee had caused to be carried in a pompe of triumph fifteen thousand pound weight of gold, and one hundred and fifteen thousand pound of siluer, which came of the rest of the pillage gotten by that victorie of his.

But to returne againe vnto our discourse of gold rings: I doe not read that they were ordinarily vsed, before the daies of *Cn. Flavius* the sonne of *Annus*: This *Flavius* beeing otherwise a

A man of mean and base parentage, as whose grandfathers by the fathers side had bin no better than a slave enfranchised: howbeit hauing a pregnant wit of his own, he brought vp daily vnder a good schoolmaster *Appius Claudius* surnamed the Blind (whom he serued as his Scribe, Clerke, or Secretary) he grew into inward credit and fauor with his master, that for his better aduancement he opened vnto him the whole course of dayes pleadable and not pleadable, exhorting and persuading him withal, to publish that secret and mysterie to the view & knowledge of the whole city: which the said *Flavius* (after much conference and consultation had with *Appius*) did, and effected accordingly; whereupon he became fo gracious with the whole body of the people (who were alwaies before wont to hang euery day vpon the lips of some few of the chief & principal Senators, for to haue the information and knowledge of the said daies) that in the end a bill promulged by him, passed by generall assent of them all, for to be created *Edile Curule* together with *Q. Annicius* of Præneste (who not many years before had bin a professed enemy, and born armes against the Romans) without any regard had in this election, either of *C. Petilius*, or *Domitius*, who were nobly born, & had two Colls. to their fathers, who notwithstanding stood for the said dignitie and honorable place. Nay more, This *Flavius* had a speciall grace besides granted, To be at the same time one of the Tribunes also or Prouosts of the Communitie. At which indignitie the Senat took such disdaine, and chafed fo for despite and anger, that as we read in the ancient Annals and Chronicles of our city, there was not one Senator of them all but laid away his golden rings and gaue vp his place. Many are of opinion (although they be farre deceived) that the knights and men of arms also did the semblable, and left off their rings the same time.

C And this likewise goeth currant and is generally receiued, That they cast aside the caparisons and trappings of their hard horses; for these be the two badges or marks which cause them to be called Equites, as one would say, knights, men of arms, or horsemen. True it is besides, that in some annals we find it recorded, that it was the nobility only of Rome that gaue out their gold rings, and not generally the whole body of the Senat. Vel, howsoeuer it was, this hapned when *P. Sempronius Longus* and *L. Sulpicius* were Consuls. But *Flavius* aboutefaid, seeing what trouble and discontentment was risen hereupon throughout the city, vowed to erect and build a temple in the honor of *Concordia*, if he could reconcile the estate of the Senat, and the order of the gentlemen again to the common people. And seeing that he could not be furnished with money out of the common treasure of the city, for defaying of charges requisite to this piece of work, he made means to haue certaine extreme vsurers condemned to pay good round sums of money: & with these fines a little chappell he caused to be made all of brasse, and reared it in the place appointed for Embassadors out of strange countries to wait and giue attendance in, called *Græco-stasis*, the which was at the head of the publique grand place or hal of assemblies called *Comitium*: where in a table of brasse he tooke order there should be cut and engrauen the verities of the dedication of the said temple, which was 104 yeres after the temple in the Capitoll was dedicated, and in the 448 yere from the foundation of the city. This is the first and most ancient euidence that may be collected out of all the antiquities of Rome now extant, as touching the vsage and wearing of Rings. Another testimonie we haue thereof in the second Pannicke War: which implieth, that rings in those daies were more ordinarily, as well by common as gentlemen and Nobles; for otherwise, if they had not bin so vially worn as well by one as another, *Annibal* could neuer haue sent to Carthage those three Modij of rings, which were pluckt from the fingers of those Romans who were slain in the battell of Cannæ. Moreouer, the Chronicles beare witness, that the great quarrell betwene *Cæpio* and *Drusus* (from which arose the sociall war of the Marfians, and the ruin of the state) grew by occasion of a ring fold in portafelle, which both of them would haue had, the one as well as the other. Neither at that time verily did all Senators weare gold rings; for known it hath bin within the remembrance of our grandfathers, that many of them (and such as beare the Pretorship) in their old age, and to their very dying day, neuer wore any other rings but of iron. The same doth *Fenestella* report of *Calpurnius*; and of *Manilius* also, who was Lieutenant vnder *Caius Marius* in the war against King *Tugurtha*.

F Many other historians affirme the like of *L. Fufidius*, him I meane vnto whom *Scæurus* dedicated that Booke which he compiled of his Life. There is a whole house or family at Rome of *Quintij*, wherein (by ancient custome and order) there was neuer any known, so much as the very women, to weare any gold about them. And euen at this day, the greater part of those nations and people who liue vnder the empire of Rome, know not what these rings meane. All the countries

tries of the East throughout Egypt generally, at this time content themselves with simple G writings and bare scripts, without any seale or signe manuel set vnto them. But so far off are we in these daies from keeping vs to the plain hoop rings of our ancestors, that as in all things else, so in them also we loue to change and alter every day, so giuen we are to excede and superfluitie: for now, many must haue curiously set in their rings, pretious stones of excellent beautie and most exquisit brightnesse; and wlesse their fingers be charged and laden again with the riches and reuenues of a good lordship, they are not adorned and decked to their mind. But I purpose more fully to speake hereof in my treatise of gems and pretious stones. Others again will haue in their rings and stones sundry figures and portraictures as they list themselves engrauen, that as there be some rings costly for the matter, so others again should be as pretious for the workmanship. Yee shall haue many of these wantons and delicate persons make conscience (forsooth) to cut and engrauel some of their pretious stones, for hurting them; and so shew that their rings serue for somewhat else than to seale and signe withall) doe set the said stones whole and entire as they be. And diuers there are who will not enclose the stone with gold on the inside of the colet which is hidden with the finger, to the end (forsooth) that it may touch the naked skin and be seene through. And such an opinion they haue of these stones, that gold is worth nothing in comparison of many thousands of them now in vse and request. Contrariwise, many there are who will haue no stone at all in their rings, but make them all of massiue gold, and therewith do seale: a deuise that came vp in the time of *Claudius Caesar* the Emperor. Furthermore, in these our daies some slaues set iron within a collar of gold, in stead of a stone; and others again hauing their rings of iron, yet they adorn and set them out with the most pure and fine gold that may be had. This licence (no doubt) and libertie of wearing rings in this order, began first in Samothrace, as may appeare by the name of such rings, which therefore are called Samothracia. Now to come again to our golden rings: The manner was in old time to wear rings but vpon one finger onely, and namely that which is the fourth or next to the little finger, as we may see in the statues of *Numa* and *Seruius Tullius*, Kings of Rome: but afterward they began to honour the fore-finger which is next vnto the thumbe, with a ring, according to the manner which we see in the images of the gods: and in processe of time they took pleasure to wear them vpon the least finger of all: and it is said, that in France and Brittain they vsed them vpon the middle finger. But this finger now adayes is excepted onely and spared, whereas all the rest be sped and charged with them, yea and every joint by themselves must haue some lesser rings and gemmalls to fit them. Some will haue the little finger laden with 3 rings; others content themselves with one and no more vpon it, wherewith they vse to seale vpon the finger that is to signe ordinarily; for this signe manuel (I may tell you) the manner was to lay vp safe among other rare and pretious things: this might not come abroad euery day, as beeing a jewell that deferred not to be mistified by handling commonly, but to be taken forth out of the cabinet or secreet closet neuer but when need required: so that whosoever weareth one ring and no more vpon the least finger, hee giueth the world to vnderstand, that he hath a secret cabinet at home stored with some specciall things more costly and pretious than ordinarie. Now, as some there be that take a pride and pleasure to haue heauy rings vpon their fingers, and to make a shew how massiue and weighty they are, so others againe are so fine and delicate, as they like it a paine to weare more than one. Some hold it good, for sauing of the stone or colet (if the Ring should chance to fall) to haue the round hoope or compass thereof wrought hollow or enchaufed within, yea and the same filled vp with some lighter matter than is gold, that it may fall the softer. You shall haue many that vse to carry poyson hidden within the colet vnder the stone, like as *Demosthenes* did, that renowned Prince of Greeke Orators; so as their rings serue for no other vse or purpose but to carry their owne death about them. Finally, the greatest mischiefs that are practised by our mighty men in these daies, are for the most part performed by the meanes of rings and signets. O the innocence of the old world! what a heauenly life led men in those daies, when as there was no vse at all of seale and signet? But now we are faine to seale vp our ambries and hogstheads with our signets, for feare we be robbed and beguiled of our meat and drinke. This is the good that cometh of our legions and troupes of slaues, which we must haue waiting and following at our heeles: this commoditie we haue by our traine and retinue of strangers that wee keepe in our houses: inso much as wee are driuen to haue our Controuerses and Remembrancers to tell vs the names of our Seruants and people

*Nomenclatores.

A people about vs, they are so many. It was otherwise ywis by our ancestors and fore-fathers daies, who had no more but one yeoman or groom apiece, and those of the lineage and name of their Lords and Masters: as may appeare by the ordinary names of *Marci-pores*, and *Luci-pores*: and they had all their viduals and diet ordinarily at their masters bound. And therefore there was no great need to keep safely any thing vnder lock and key from such household seruitors: whereas now adayes the cater goeth to the market to provide eates and viands for to be stolen and carried away as soon as they come home, and no remedy there is against it: for no seale will serue to make sure either such lurchers themselves for filching, or keep the very locks and keyes safe and whole that lead to the prouision. And why? an easie matter it is to plucke the rings from their lord and masters fingers that are oppressed with dead sleep, or when they lie adying. And verily we hold in these daies a seale to be the best assurance in contracts that may be: but I wot not how long it is since that custom first came vp. And yet if we consider the fashions and manners of strange Nations, we may peradventure find how these signets came into such credit and authoritie: and namely by the History of *Polycrates* the Tyrant or King of the Isle Samos: who hauing cast into the sea a ring which he loued and esteemed aboue all other jewels, met with the same againe by meanes of a fish which was taken, in the belly whereof the said ring was found. Now this king was put to death, about the two hundred and thirtieth yeare after the foundation of our citie. Howbeit, the ordinarie vse of these signets (as I suppose by all reason and likelihood) began together with vsurie: for prooue whereof, marke how still at this day, vpon any stipulation and bargain paroll made, off goes the ring presently to confirme and seale the same. The which custome no doubt came from old time, when there was no earnest nor gods-pennie more ready at hand than a signet. So as we may conclude assuredly and affirme, That amongst vs here at Rome, when the vse of money and coyne was taken vp, sooner after came the wearing of rings in place. But as touching the deuise and inuention of mony, I will write anon more at large.

And now to return againe to my discourse of rings: after they began once to bee in any request, there were none at Rome vnder the degree of a knight or gentleman that carried rings on their fingers, inso much, as a man might know a gentleman from a commoner by his ring, like as a Senator was distinguished from the Gentlemen, wearing rings, by his coat embroidered with broad gards and studs of purple. Howbeit, long it was before this distinction was obserued: for I find that the publicke criers wore ordinarily such coats likewise embroidered, as Senators do: as appeareth by the father of *L. Elius Stilo*, surnamed vpon that occasion *Praconinus*, because his father had bin a publicke Crier. Certes, these rings certified the middle degree, inserted between the Commons and the Nobles: and that name which in times past horses of seruice gaue to men of armes and gentlemen of Rome, the same now adays sheweth men of worth, and those who are of such and such reuenues. But long it is not since this disorder and confusion on our side begun. For when as *Augustus Caesar* late Emperour of happy memory, ordained decuries of Iudges in criminal matters, the greater part of them consisted of those who wore no other rings but of yron: and those were simply called Iudges, and not Knights or Men of armes: for this name continued still appropriat to the troupes of those gentlemen, who serued vpon horses allowed by the Senat. Moreover, at the first there were no more but foure decuries of Iudges, and hardly might there be found in each of those decuries, a bare thousand: for as yet those of our prouinces might not be admitted to this estate to sit and iudge vpon criminall causes: and euen at this day precisely obserued it hath bin, That none but ancient citizens might be Iudges: for neuer any that came newly to their free burgeoisie, were taken into this order and degree.

CHAP. II.

¶ Of the Decuries or Chamber of Iudges vpon record at Rome. How often the name and title of the Romane Cavallerie changed. The gifts and rewards represented vnto valiant souldiers for their braue service. And at what time Coronets of gold were seene.

THE chamber of the foresaid judges consisted of diuers estates and degrees, distinguished all by severall names: for first and foremost, there were of them called *Tribuni aëris*, as it were

*the pages or groomes of *Marcius Lucius*.* who through on we called *Equires*.

Generall receiuers or Treasurers : secondly, Sele&i, chosen from among the Senators : and last of all, those who simply were named Iudices or Iudges, taken from among the knights or men of armes.ouer and besides these, they had others called Nongenti, choice men selected from out of all the estates, who had the keeping of those chests or caskets wherein were put the voices of the people in their solemne elections. And by reason of a proud humor in men, chusing themselves names to their owne liking, great diuisions and factions arose in this house and chamber of the foresaid Iudges; whiles one would needs be called Nongentus ; another Sele&us, and a third gloried in the title of Tribune or Receiuer. But at length, in the ninth yere of the reigne of the Emperor *Tiberius Caesar*, the whole estate of the gentrie or caualerie of Rome, was reduced to an vniformitie ; and an order was set downe whereby it was knowne who might wear rings, and who might not ; which fell out to be in that year when *C. Asinius Pollio*, and *C. Antistius Vetus* were Consuls together, and in the 775 yere after the foundation of Rome city. And verily this vniforme regularity was occasioned by a trifling cause to speak of, and whereat we may well maruell : and thus stood the case : *C. Sulpitius Galba* desirous in his youth to win some credit with the foresaid Emperor *Tiberius*; and namely, by deuising meanes how to bring *Tacuer*n, Cooks shops, and victualing houses in danger of the law, and to forfeit penalties; pleaded against *Tacuer*n, and complained before the Senat, That those who were the vnderakers and Tenants : were of the foresaid *Tauerns*, &c. and made their gaine thereby, had no other meanes to beate themselves out, nor plea to defend their faults and disorders, but their rings. The Senat taking knowledge hereof, ordained an act, That none from that time forward might bee allowed to wear the said rings, vnlesse he were free borne, and that both himselfe, his father, and grandfire by the fathers side were affixed in the Censors booke 400000 sesterces; and by vertue of the law *Iulia* as touching the publicke Theatre, had right to sit and behold the plaies in the first and foremost 14 ranks or seats for knights appointed. Howbeit afterwards, euery man labored and made means one with another, to be allowed to wear this ornament of a ring. Now in regard of these disorders and variances aboue rehearsed, prince *Caius Caligula* the Emperor, adjoynd to the former foure, a fifth Decurie. And shortly after, men grew to that height and pride in this behalfe of wearing rings, and the company so increased, that whereas in *Augustus Caesars* dayes there could not be found knights and Gentlemen sufficient throughout all Rome to furnish those Decuries, by this time they could not be contained all within the Chamber of Iudges or Decuries abouesaid : inso much as now adaiies, no sooner are there any slaues manumised and enfranchised, but presently (by their good will) they must be at their rings. A thing that neuer before was knowne in Rome : for aforesaid when a man spake of the iron ring, he was vnderstood presently to point at the Gentlemen and Iudges before named : but the said ornament or badge became so commonly to be taken vp by one as well as another, that a gentleman of Rome (*Flavius Proculus* by name) indited 400 at once before *Clauidius Caesar* Censor for the time being, and declared against them for this abuse and offence. See what inconuenience ensued vpon the ad of rings; for whiles thereby a distinction was made between that degree & other free-born citizens, straight waies base slaues leapt in, and were so bold as to take that ornament vpon them. And hereby the way, it is to be noted, that the two *Gracchi*, *Tiberius*, and *Caius*, brethren, vpon a certain desire and inbred affection that they had to maintaine and nuzzle the people in sedition, and to beare a side alwaies against the Senat, for to currie fauour with the Commons and to do them a pleasure, deuided first to haue all them called Iudges, who by vertue of the foresaid statute or edict, might wear rings : and this he did to croffe and beare the * Senat. But after the fire of this sedition was quenched, and the popular authors thereof who stirred & blew the coles were murdered, the denomination of these criminal Iudges (after diuers troubles and seditions with variable and alternative fortune) fell in the end to the Publicans and Farmers of the reuenues of the State; and being thus deuolued vpon them, there continued : inso much as for a good while the said Publicans made vp the third degree betweene the Senators and the Commons. Howbeit, *M. Cicero* when he was Consul re-established the Knighthood & Caualerie of Rome in their former estate and place; and so far preuailed, that hee reconciled them a gaine vnto the Senat : giuing out openly, that he himselfe was come of that degree, and by that means by a certain popularity, sought to draw them all to side with him. From this time forward, the men of armes were installed as it were in the third estate of Rome; inso much as all edicts and publick acts passed in the name of the Senat, People, and Caualerie of the citie. And for that

* Who onely indeed were to judge causes.

that these knights or gentlemen were last incorporated into the body of the Common-wealth, this is the only reason that euen now also they are written in all publicke Instruments, after the People.

As touching the name or title attributed to this third estate or degree of Horsemen or men of Arms, it hath bin changed and altered oftentimes: for in the daies of *Romulus* and other KK. of Rome, they were called *Celeres*, afterwards *Flexumines*, and in proceesse of time *Trofuli*, by occasion that these horsemen without any aid at all of the Infanterie, had woon a towne in *Tuscane* nine miles on this side *Volturni*, called *Trofuli*: which name continued in the Caualerie of Rome, vntill the time of *C. Gracchus* and afterward. And verily *Iminius* (who vpon the great amitie betweene *Gracchus* and him, was surnamed *Gracchanus*) hath left these words in writing as touching this matter : concerning the degree of knights (quoth hee) those who now are called Equites, [i. Horsemen] beforetime had to name *Trofuli*: the change of which name arose vpon this; that many of these Gentlemen, ignorant in the originall and first occasion of the foresaid name *Trofuli*, and what the meaning thereof was, were ashamed so to be called. He alledged moreover the cause of the said name: and yet notwithstanding (quoth hee) they cannot away with the name at this day, but are so called against their wills.

To come again vnto our former discourse of gold. There be yet some other points besides to be considered therein, which cause distinction in diuers conditions of men : for our ancestors, willing at all times to honour those souldiers who had borne themselves valiantly in wars, were wont to bestow chains of gold vpon strangers and auxiliaries, such I meane as came to ayd and succour the Romans : but vnto their owne naturall citizens they gaue none other but of siluer : and true it is, that Roman citizens had bracelets giuen them ouer and aboue, which foreigners had not. They were wont also (a thing to be maruelled at) to giue vnto citizens, coronets of gold: but who he was whom they honored first with this reward, I could neuer find in any Chronicle ; and yet *L. Prius* hath set downe in his Annals, the first giuer thereof : for *A. Posthumus L. Dictator* (quoth he) vpon the winning of the fortified campe of the Latines neare the Lake *Regillus*, was the first that bestowed vpon that souldier, by whose valorous seruice principally the said bold was forced, a coronet of gold, which he caused to be made of the pillage taken from the enimie. *L. Lentulus* in like manner, being Consul, gaue a crowne of gold vnto *Sergius Cornelius Merenda*, at the winning of a certaine towne within the Samnites cuntry. Semblably *Piso* surnamed *Frugi*, bestowed vpon his owne sonne a Coronet of gold weighing five pound, which hee caused to be made of his owne private money : and yet amongst other Legacies in his last Will and Testament, the said Coronet hee bequeathed to the State and Common-wealth of Rome.

CHAP. III.

Whether vses besides of gold, as well in men as women. Of Gold in money. When Brasse, Siluer, and Gold, were first stamped and coined. Before Brasse was conuerred into stamped money, how they used it in old time. At what rate and proportion of money were assessed the best houses of Rome, at the first leuying of Subsidies. And at what time gold came into credit and request.

All the gold imployed in sacrifices to the honor of gods, was in goulding the horns of such beasts as were to be killed, and those onely of the greater sort. But in warfare among souldiers, the vse of gold grew so excessive, that the field and campe shone againe withall, inso much as at the voiage of Macedonia, where the Marshalls of the field and colonels bare Armour set out with rich buckles and clasps of gold, *M. Brutus* was offended and stormed mightily at it, as appeareth by his letters found in the plaines about Philippi. Well done of thee, O *M. Brutus*, to find fault with such wastfull superfluities : but why saidst thou nothing of the gold that the Roman dames in thy time wore in their hooes ? And verily this enormity and abuse, I must needs impute vnto him (whosoever he was) that first deuised rings, and by that means caused gold to be esteemed a metall of much worth : which cuill precedent brought in another mischief as bad as it, which hath continued a long time; namely, that men also should weare about their arms, bracelets of gold next to their bare skin; which deuise and ornament of the arm

is called Dardanium, because the invention came from the Dardanians: like as the fine golden carkanets Viriæ, we terme Celticæ; and the necke-laces of gold Viriolæ. Celtibericæ. Oh the monstrous disorders that are crept into the world! But say that women may be allowed to weare as much gold as they will, in bracelets, in rings on euery finger and joynt, in carkanets about their necks, in earrings pendant at their ears, in staies, wreaths, & chinbands; let them haue their chains of gold as large as they list vnder their arms or crosse ouer their sides, scarce-wife, be gentlewomen and mistresses at their collars of gold, beset thicke and garnished with masse pearls pendant from their necke, beneath their waist; that in their beds also when they should sleepe they may remember what a weight of gold they carried about them: must they therefore weare gold vpon their feet, as it were to establish a third estate of women answerable to the order of knights, betwene the matrons or dames of honour in their side robes, and the wives of meane commoners? Yet me thinkes, we men haue more reason and regard of decency, thus to adorne with brooches and tablets of gold, our youths and yong boies, and a fairer sight it is to see great men attended vpon to the baines by beautiful pages thus richly decked and set out, that all mens eyes may turne to behold them. But what meane I thus bitterly to inueigh against poore women; are not men also growne to that outrageous excess in this kind, that they begin to weare vpon their fingers either Harpocrates, or other images of the Egyptian gods engrauen vpon some fine stone? But in the daies of the Emperour *Claudius* there was another difference and respect had, That none might carrie the pourtraiture of that prince engrauen in his signet of gold, without expresse licence giuen them by those gracious enfranchised slaues who were in place to admit vnto their lord the Emperour, whom it pleased them: which was the occasion and means of bringing many a man into danger, by criminal imputations. But all these enormities were happily cut off as soon as the Emperour *Vespasian* (to the comfort and joy of vs all) came once to the crowne: for by an expresse edit, he ordained, That it might be lawfull for any person whatsoever to haue the image of the Emperour in ring, brooch, or otherwise without respect. Thus much may suffice concerning rings of gold, and their vlage.

To come now to the next mischiefe that is crept into the world; I hold that it proceedeth from him who first caused a denier of gold to be stamped: although, to say a truth, I know not certainly who he was that deuised this coine. As for the people of Rome, sure I am that before king *Pyrrhus* of Epirus was by them vanquished, they had not so much as siluer mony stamped and currant. Well I wot also, that in old time the manner was to weigh our brasse by the Asse, which was a pound weight, and thereupon called As Libralis, and yet at this day, Libella: like as the weight in brasse of two pound, they named Dipondius [As.] And hereupon came the custome of adjudging any fine or penaltie vnder the teame of [Xris grauis] that is to say, of brasse Bullion or in Masse. From hence it is also, that still in reckonings and accounts whatsoever hath bin laid out or deliuered, goeth vnder the name of Expensa [id est, Expenses] as a man would say, weighed forth, because in times past all payments passed by weight. The Latines likewise vse the nowne Impendia, for cost bestowed, or the charges of interest in vlturie about the principall; euen as the verbe Dependere, betokeneth (to pay) because payments ordinarily were performed by poise. Moreover, the vnder treasurers of war, or paymasters in the campe, were in ancient time named Libripendes, for weighing out vnto the souldiers their wages; and their very pay thereupon was called Stipendium, from whence cometh Stipend, a word commonly received. According to which manner and custome, all buyings and sellings at this day which passe with warrantise, are usually performed by interposition of the ballance, which ferueth to testifie the realitie of the contra & bargain on both parts.

Touching brasse mony, *Servius Tullius* a king of Rome, caused it first to be coined with a stampe, for before his daies, they vied it at Rome rude in the masse or lumpe, as *Remens* mine author doth testifie. And what was the marke imprinted thereupon? euen a sheepe, which in Latine they call Pecus: and from thence proceedeth the word Pecunia, that significeth mony. And note here by the way, that during the reigne of that king, the best man in all Rome was vallew to be worth in goods not about 1200000 Asse in brasse: and at this rate were affixed the principall houses of the city in the kings bookes: and this was counted the first Classis.

Afterwards, in the 485 yere from the foundation of the city, when *Q. Ogulnius* and *C. Fabius* were Consuls, five yeares before the first Punicke warre, they began to stampe siluer mony at Rome, and three severall pieces were coined. At what time ordained it was, That the Denarius

or Denier should goe for tenne Asse or pounds of brasse mony; the halfe Denier, Quinarius, should be currant for five, and the Sesterce reckoned worth two and a halfe. Now, for as much as during the first Punick war against the Carthaginians, the city was growne much behind hand and farre indebted, so as they were not able to goe through the charges which they were to defray, agreed it was and ordained to raise the worth of the brasse mony by diminishing the poise: whereas therefore the Asse weighed a pound of twelue ounces, they made the Ate of two ounces: By which deuise, the Commonwealth gained five parts in six; and the Fisque or city chamber by that means was soone acquit of all debts. But if you would know what was the marke of this new brasse Asse: of the one side it was stamped with a two faced *Ianus*, on the other side with the beake-head of a ship, armed with brasse pikes. Other smaller pieces there were, according to that proportion, to wit, Trientes, the third part of an Asse; and Quadrantes the fourth, which had the print of *punts or small boats vpon them. As for the piece Quadrans, it was before time called Triuncus, because it weighed three ounces. Howbeit in proceesse of time, when *Annibal* pressed hard vpon the city, and put them to an exigent for mony to maintain the wars against him, driven they were to their shifts and forced (when *Q. Fabius* was Dictator) to bring downe the foresaid Asse of two ounces vnto one. Yea, and ened it was, That the siluer denier, which went before time for ten Asse, should be worth * sixteen; the halfe Denier or Quinarius, eight; and the Sesterce foure; and by this means the State gained the one halfe full. And yet I must except the mony paid to souldiers for their wages: for a Denier vnto them was neuer reckoned about ten Asse. As for the siluer Deniers, stamped they were with the pourtraiture of coches drawne with two horses or foure horses, whereupon they were called Bigati and Quadrigati. Within a while after there passed an act promouged by *Papirius*, by vertue whereof the Asse weighed not about halfe an ounce. Then came *Lucius Drusus* in place, who being one of the Prouosts or Tribunes of the commons, brought in base money, and delaid the siluer with one eighth part of brasse. Touching that piece of coine, which now is called Victorius, stamped it was by an Act propoed by *Clodius*, for before his time, those pieces of mony were brought out of Selaunio, and reckoned as merchandise: and stamped it is with the image of Victorie, of which it took that name.

Concerning gold coined into mony, it came vp three score and two yeres after the stamping of siluer pieces: and a scripture of gold was taxed and valued at twenty sesterces, which ariseth in euery pound according to the worth of sesterces as they were rated in those daies, to nine hundred Sesterces. But afterwards it was thought good to cast and stampe pieces of gold, after the proportion of fiftie to a pound: And those, the Emperors by little and little diminished (till in poise, till at length *Nero* brought them downe to the lowest, and caused them to be coined after the rate of five and fiftie pieces to the pound. In summe, the very foure and originall of all avarice proceedeth from this mony and coine, deuised first by lony and vsurie, and continued still by such idle persons that put forth their mony to worke for them, whilst they sit still, and find the sweetnes of the gaine comming in so easly. But this greedy desire of hauing more still, is growne after an outrageous manner to be excessive, and no more to be named couetousnesse, but rather insatiable hunger after gold: in so much as *Septimilius*, an inward and familiar friend of *C. Gracchus*, forgot all bonds of amitie, and hauing cut off his friends head, vpon promise to haue the weight of it in gold, brought the same vnto *Optimus*: howbeit, he poured molten lead into the mouth thereof to make it more heauie, and so together with this parricide and vnnaturall murder, couened also & beguiled the Commonwealth. But to speak no more of any particular citizen of Rome, the whole name of the Romanes hath bene infamous among foraine nations for avarice and corruption in this kind: as may appear by the conceit that king *Mithridates* had of them, who caused *Agulnus* (a Generall of theirs, whose hap was to fall into his hands) for to drinke molten gold. See what couetousnesse brings home with it in the end.

Now when I behold and consider no more but these strange names of our vessell in plate, which are newly deuised in Greeke from time to time, according as the siluer is either double or parcell gilt, or the gold enclosed and bound within worke, I am ashamed of it; and the rather, for that in regard of these deuised names and daintie toies, such plate as well of beaten gold, as guiled only, should be so vendible and sell so deare: especially knowing as we do full well, the good order that *Spartacus* held in his campe, expressly commanding that no man should haue any plate of gold or siluer. A great reproch to vs Romans, that our fugitives & banished persons should

* And therefore they were called *Rattius* of *Rattus*.

* Ordinarily the Romanes find the letter X stamped vpon it, but these Deniers had XPII^{ss} insin.

* Called also Sigillum.

* He speaketh now generally, as I take it, for Denarius was a siluer piece: but he meaneth any piece of coine.

should shew a more nobler spirit than we our felices. *Messala* the great Oratour hath left in writing, That *M. Antonius* vied to discharge all the ordure and filthy excrements of the body into vessels of gold: yea, and allowed *Cleopatra* likewise to do the same by her monthly superfluities, most shamefully. Noted it was among foreine Nations for excessive licentiousness, and that in the highest degree, that *K. Philip* of Macedony was neuer wont to go to bed and sleepe without a standing cup of gold vnder his pillow also. That *Agamenon* (a great captain vnder *Alexander the Great*) was given to such wastfull prodigality, as to fasten his shoes and pantophes with buckles of gold. But *Antony* about named, to the contumelie and contempt of *Nature*, abused gold, and imploied it to the basest seruice that is: an act (as much as any other) deferring prodigality and outlawing indeed.

But among diuers things besides, I wonder much at this, That the people of Rome, vpon the conquest of so many Nations, imposed vpon them a tribute to be paid alwaies in silver, & neuer made mention of gold as for example, when Carthage was subdued, & *Annibal* vanquished, the Carthaginians were inioined for 50 yeres together to make payment yerely of * [12000] pound of silver only, and no gold at all. Neither can it be thought that there was little gold at that time to be had abroad in the world, for *Midas* and *Cresus* both, were possesse of infinit sums and huge masses of gold: and *Cyrus* vpon his conquest of Asia, met with 34000 pound weight of gold, besides the golden plate and vessell, and other gold which he found ready wrought: and among the rest, certain *leaves, a Plane and a vine-tree, both of beaten gold. In the pillage also of this victory, he gaue away 500000 talents of silver, and one standing cup that he tooke from *Semiramis*, that weighed 15 talents. And *Varro* mine Author saith, That the poise of the Egyptian talent ariseth to * 80 pound. Besides, there had raigned before time ouer the Colchians, a tale so incredible, as *Cesar* afterwards Diatour, was the first that in his *Edileship*, when hee exhibited a solemne memoriall in the honour of his father departed, did furnish the whole Cirque and these place, with all things meet for such a solemnity, of cleane silver, in so much as the chasing staves and bore-speares were of silver, wherewith the wild beasts were assaulted: a speeche neuer scene before. And not long after, *C. Antonius* set forth his plaies (when he was *Edile*) vpon a stage or scaffold of silver: after whose example, diuers feire cities and townes of the empire haue don the like. Semblably, *L. Murena* and *C. Caligula* the Emperor, erected a frame or pagant to go and rise vp of it selfe with vices, supporting images and jewels in the place of publick pastimes, which was thought to haue in it 124000 pound of silver. *Claudius Cesar* who succeeded Emperor after him, when he rode in triumph for the conquest of Brittain, among other crownes of beaten gold, shewed two that were principall, the one of 7 pound weight, which high Spaine had giuen to him; the other weighing 9 pounds, sent vnto him as a Present from that part of Gaule which is called *Comata*: as appeared by the inscriptions and titles which they bare. *Nero* his successeur, to shew vnto *Tyridates* king of Armenia what abundance of treasure he had, kept the great Theatre of *Pompeius* for one whole day covered all ouer with gold. But what was that furniture in comparison of his golden house, which tooke vp a great part of the city, and seemed (as it were) to compasse it about. In that yeare when *Sex. Iulius*, and *Lucius Aurelius* were Consuls (which fell out to be 7 yeres before the third Punicke warre) there was found in the treasury or chamber of Rome, * 700026 pound weight of gold, in Masse or Ingots; M of silver likewise in Bullion, 92000 pound weight; besides the coine and ready money, which amounted to 375000 Sesterces. The yeare wherein *Sex. Iulius* and *L. Aurelius* were Consuls, the wit, in the beginning of the sociall warre against the Marcians and other Romane allies, the treasure of Rome arose to 846 pounds of gold in Bullion. *C. Cesar* at his first entrance into

A the city of Rome, when the ciuill war between him and *Pompey* was begun, took out of the citie chamber 15000 wedges or ingots of gold, 35000 lumps or masses of silver, and in ready money 40000 Sesterces. And to say a truth, neuer was the city of Rome wealthier than at this time. Moreover, *Emilius Paulus*, after he had defeated and vanquished *Perseus* the Macedonian King, brought into the Treasury of the Citie a bootie of 3000 pound of gold in weight. After which time the common people of Rome had neuer any tributes or taxes leuiued of them by the State.

Moreover, this is to be obserued, That after the ouerthrow and destruction of Carthage, the beames began first to be gilded within the temple of the Capitoll, whiles *Lu. Mummius* was Censor. And now adaeies you shall not see any good house of a priuat man, but it is laid thicke and covered ouer with gold. Nay, the brauery of men hath not staid so, but they haue proceeded to the arched and embowed routs, to the walls likewise of their houses, which we may see euery where as well and thoroughly gilded as the silver plate vpon their cupbords. And yet *Catulus* was diuerly thought of in the age wherein he liued, because he was the first that gilded the brazen tiles of the Capitoll.

Touching the first inventors, as well of gold, as also of all other mettals to speake of, I haue already written in my seuenth booke. As for the estimation of this metall, that it should bechiefe as it is, I suppose it proceedeth not from the colour, for silver hath a brighter lustre, more like to the day, and in this respect more agreeable to the ensignes of war than that of gold, because it glittereth and shineth farther off and hereby is their error manifestly conuincied, who commend the colour of gold, in this regard, that it resemblen the flares: for well it is knowne that their colour is not reputed richell, either in precious stones or in many things besides. Neither is gold preferred before other mettals, because the matter is more weighty or pliable than the rest; for lead furnerth it, both in the one and the other. But I hold, that the reputation which it hath, cometh from hence, That it alone of all things in the world, loseth nothing in the fire: for say that a house be burnt wherewith gold is, yet it wasteth not: and looke what gold is committed to the funerall flames, it cometh not with the dead body, but is found all againe among the ashes. Nay, the oftener it hath bin in the fire, the better it is, and the more refined: in such sort, that the best gold which they call *Oz. yzum*, is knowne by this, if it be of the same deep red colour that the fire is wherewith it is tried. And a principal argument this is of fine gold, if it hardly be kindled & set on fire red hot. Moreover, this is wonderful in the nature of * gold: that in a fire made of light straw or chaff: it wil most quickly become red hot and melt; put the same among the hottest burning coles that can be of wood, vnneth or hardly wil it yeeld to the heat thereof and resolute: as also for the purifying thereof, it ought to be melted with lead. A greater reason there is besides that maketh gold so precious: for that with vife or handling there is little of it lost and wasted; whereas silver, brasse, and lead, if you draw any lines therewith, colour as they go and leave somewhat behind: they soile their hands also who occupie the same with the substance and matter that sheddeth from them.ouer and besides, there is not a metall will be driuen out broader with the hammer, or diuide easily into more parcels than gold, in so much as euery ounce of it may be reduced into 750 leaues, or more, and each one of them foure fingers large euery way. The thickest gold foile beareth the name at this day of *Prænestium*, for that the Image of Fortune at *Præneste* is about all other most richly gilded. The next thereto in goodnesse is the foile or leafe of gold named *Qu. victoria*. In Spaine they vse to call by the name of *Strigiles*, the small pieces of that fine gold which is found naturally alone about all the rest either compact in some masse, or in manner of sand or grauell; whereas all other parcels of gold taken out of the Mines, need to be fined and brought to their perfection by the meanes of fire. But this gold that I speake of, is gold presently at the first, and no sooner is found, but the matter thereof by and by is consummat and accomplished. Lo how gold is found in the owne nature pure and perfect! As for the other manner of finding and refining gold, whereof I meane to speake anon, it is forced (as it were) and vpon constraint. But about all other properties to commend the goodnesse of gold, this especially is to be obserued, That there is no rust nor canker, nor any filth besides breeding of it selfe therein, which is able either to corrupt the goodnesse, or diminish the weight and substance thereof. What should I say how firme it continueth an indurable against salt and vineger, scorning all their iniuries: and yet otherwise their moisture is able to eat into any other mettals, yea, and to consume and tame all things else

* According to *Budens*.

* Thishaply may be true in one or other, while in fused gold it is not so: for the finer that it is, the stronger & it is to be melted by.

* According to *Budens*.

* Which had golden vessels for vessels of honour.

* For in all they were to pay 10000 talents: reck on a talent at 60 pounds, which is the less. Attike, * *Folia*, I think rather *folia*, i. bathing vessels. * Some say 75.

•or Chrysoperid.

¶ The manner of finding gold naturally in the Mine. When were knowne the first statunes of gold. The medicinable vertues and properties of gold.

To begin then with those who feek for this mettall: first aboue all they hit vpon a vaine of L
earth called Segullum, and this is it that giueth them the first light and shew that gold is there
to be had. This they take vp: the bed and couch wherein it lieth: the grauell likewise & the fand
about it they wash, obseruing diligently that which seeth in the bottome, for by it they haue
a good guesse and aim that directeth them to gold, whether it lie deep or shallow. And by this
conjecture, otherwhiles their hap is so good, as to find that which they desire, aloft, euen ebbe
vnder the vpmost coile of the earth: but I must needs say, a rare felicity is this: & yet of late daies
during the Empire of Nero, there was found in Dalmatia a vaine of gold ore within one spades
griffe in the first turfe of the ground, which yielded euery day the weight of fifty pound. This
manner of earth, if it be found also vnder a vaine of gold, they call Alutatio. Moreover, this is to
be noted, That ordinarily the dry and barren mountains in Spaine which beare and bring forth
nothing else, are forced (as it were) by Nature to furnish the world with this treasure, and doe
yeeld mines of gold. As for that gold ore which is digged forth of pits, some call it in Latine
Canalicum, others Canalicene. And verily this is found sticking to the grit and vrmost cruft of
hard rocks of marble, not after the manner of drops or sparkes glittering in orient Saphire, or the

* Quasi ad pi-
-las cusam.

* Who were
said to reare
one mountain
vpon the head
of another.

when

be naturall) to discover and shew any poison: for be there poison in a cup of this mettall, a man shall see therein certain semicircles resembling rainbows, & perceive besides the liquor to keep a hissing and sparkling noise as the fire doth; which 2 signs do certainly give warning of poison.

As touching statues of gold: it is said, that the first image that euer was knowne to be solid and masse, was that of the goddesse *Diana* surnamed *Anahis*, which stood within a temple dedicated to her, which in my Cosmography I haue signified vnder that name, and this was before any brazen statue of that making. This temple in those parts was accounted in regard of the diuine power of this goddesse, most holy and sacred; and such a kind of Image they call Ho'lophyron. Howbeit, as religious as the church was, *Antonie* in his voyage into Parthia, spoiled it, and carried away the said Image. And here I cannot forget to put downe a pretty speech, which (by report) an old gentleman and souldier of Bononie deliuered to *Augustus Caesar* at what time as he was entertained as a guest and supped with the said Emperour at his owne table: for being asked by *Augustus*, whether it was true, that the man who first violated this goddesse, died blind, lame, and bereaued of all his limbs: he answered, Yea sir, that it is; and that me thinks you should know best, for euen now a leg of his you haue at supper, and *all your wealth besides is come to you by that faceage.

The first man that *caused his owne statue to be made of gold, and the same solid & masse, was *Gorgias Leontinus* the great Orator and Rhetorician, which (to immortalize his owne name) he set vp in the temple at Delphos; and this was about the 70 Olympias: whereby we may see what wealth and gain was gotten in those daies by teaching Oratory and the Art of Rhetorick.

But to come at length vnto the medicinable vertues of gold: certes, diuers waies effectuall it is in the cure of many diseases: for first of all, foweraign it is for green wounds, if it be outwardly applied; and if yong children weare it about them, lesse harme shall they haue by any sorcery, witchcraft, or enchantments, that be brought into the house, or practised where they are: howbeit, gold it selfe if it be carried ouer one, is thought to be mischieuous and hurtfull: for in that sort it doth harme also to hens that coue and sit, or ewes that are great with lambe and ready to yeane. But what is the remedy to preuent this mischiefe? marry take the same gold that is thus brought in place to doo a shrewd turn, wash it well, and with that water besprinkle them that you would cure. Moreover, gold may be terrified once with cornes of salt taken to the triple weight thereof; and a second time with two parts of salt, and one of the stone which they call Schistis: by this manner of preparing, all the venomous and hurtfull quality that is therein, it doth transfuse into the other things that be calcined or burnt therewith (which must be done vpon an earthen vessel), and it selfe continueth pure and incorrupt still. Now the rest of the ashes separated from the gold, saued in an earthen pot, and incorporat with water into the forme of a liniment, healeth the foule cancer that appeareth in the face: it cureth the same disease also, if the face be rubbed with the said ashes and beane flour together, but then it must be afterwards washed off. These ashes thus prepared, cure the hollow vlcers called fistuloes, and also the hæmorrhoids: but in case you put thereto the *floure of salnitre, it healeth corrupt and putrified vlcers, & such as stink again: the same being boiled in hony with *Nigella Romana*, doth gently loose the belly, if the nauel be anointed therewith. To conclude, *M. Varro* saith, that gold will cause werts to fall off.

CHAP. V.

Of *Borras*, and the six medicinable properties that it hath: the wonderfull Nature thereof in joining one mettall with another, and in bringing all metall to their perfection.

Chrysololla, called otherwife Borax, or green earth, is found in those pits and mines that are digged for gold: and a humor it is at the first, running along the veine of gold, which as it thickneth and groweth muddy, congealeth at length by the extreame cold of winter to the hardnesse of a pumish stone. Howbeit, the best kind of Borax we haue known by experience to be ingendred in mines of brasse; and the next to it for goodnes, in those of silver: otherwhiles also men meet withal in leaden mines, but the same is not so good as that which the gold mines doe yeeld. Moreover, there may be an artificiall *Borras* made in all the said mettall mines, but far inferior to that which is naturall; namely, by letting water gently to run among their veins all winter long vntill the month of Iune: the which water, in Iune & Iuly will grow to be dry and prooue

A prooue *Borras*; whereby a man may perceiue plainly, that *Borras* is nothing els but a putrified vein of mettall. But this Minerall, if it be of the owne kind, differeth from this other which is made by art of man, especially in hardnesse, for much harder it is, and called the yellow *Borax*, or in Latine *Lutea*; and yet it may be brought to that colour by artificiall means, namely by dyeing with an herb called likewise **Lutea*: for of this nature it is, that it will take color & drink it in as well as linnen or woollen. But for to dresse and prepare it for the purpose, first they pun it, in a mortar, then they let it passe through a sinesere; afterwards it is ground or beaten againe, & so it is sieved a second time through a finer sere; whatsoeuer passeth not through, but remaineth behind, must be punned once more in a mortar, & so ground into a finall powder: and euer as they haue reduced any into powder, they put it into sundry pots or cruets: then they let the same to lie enufled and foked in vinegre, till the hardnes therein be wholly resolued: which done, the mortar it goeth againe, where it must be thoroughly stamped for altogether, and so when it is well washed out of one tray or boll into another, they let it dry: after it is thus prepared they giue it a colour with the herb *Lutea* (before said) and alum de plume: and thus you see it must be painted and died first, before it selfe serue to paint or die withall. And herein it skilleth much how pliable & apt it is to receiue the said color; for vntill it haue willingly taken a deep tincture, they vse to put thereto *Schyttanum* and *Turbylum*, for so they call two drugs which serue to make it take a color the better. This *Borax* thus died, our painters vse to call *Orobitis*: and two kinds they make thereof, to wit, *Lutea*, the yellow, which they keep for the powder or colour **Lomuntum*; the other liquid, namely when the said grains or pellets be resolued into a kind of moisture, like drops of sweat. This *Borax* of both sorts, is made in the Ille Cypros. The principall and best of all other comes from Armenia in a second degree, from Macedonia: but the greatest quantity thereof is in Spain. The excellent *Borax* is known by this mark especially, if it resemble perfectly in colour the deep and full green that is in the blade of corn well liking. In our time, & namely in the daies of the Emperour *Nero*, the floor of the grand-cirque or show-place at Rome, was peued all ouer with Greene *Borax*, at what time as he exhibited goodly fights and pastimes to the people; and namely, when he meant himselfe to run a race with chariots, and took pleasure to driue his horses vpon a ground suitable to the colour of the cloth or liuerie that he wore himself at that time: and in truth, a world of workemen he brought thither to lay the said paving. All the sorts of *Borax* may be reduced into three distinct kinds: to wit, the rough, valued at seven denarij a pound; the meane, which is worth five; and the powdered *Borax*, called also the grasse-green *Borax*, which costeth not about three deniers the pound. As for the sandie or powdered *Borax*, the painters before they vse it, lay the first ground vnderneath it, of *viatrioll* and **Parætonium*, and then the *Borax* also: for these things take it passing well, & besides giue a pleasant lustre to the color. This *Parætonium* (for that it is most fattie & vnctuous by nature, & for the smoothnes besides most apt to stick to and take hold) ought to be laid first, vpon which must follow a course of the *viatrioll* oil, for fearc least the whitenes of the foresaid *Parætonium* do pall the greennesse of the *Borax*, which is to make the third coat. As for the *Borax* called *Lutea*, some thinke itooke that name of the herbe *Lutea*, which also, if it be mixed and tempered with azure or blew, maketh a greene, which many do lay and paint withall in stead of *Borax*; which as it is the cheapest greene of all other, so is it a most deceitfull colour.

Borax doth not onely serue painters, but is much vsed also by Physicians; and namely, to mundifie wounds and vlcers, if it be made into a salve with wax and oile; and dry as it is of it selfe in powder, it hath a desiccative qualitie, and doth conglutinate and sodder very well: being mixed with hony into an electuarie, they giue it inwardly vnto those that haue the squinnace, and cannot draw their wind but sitting vpright, and so it prouoketh vomit. Moreover, it entrench into many collicries or cie-falues, especially to consume and discusse the cicatrices and scilms growing within the cic: it goeth also to the making of green plasters, such as be applied either to mitigate paine, or to heale the skin. And verily this *Borax* not artificially died, thus employed in Physick, the Physicians call *Acefin*; and is not that which men name *Orobitis*, and which receiue a tincture from mans hand.

Furthermore, there is a *Borax* or *Chrysololla*, that goldsmiths occupie especially about soldering their gold: so of this kind all the rest take the name also of *Chrysololla*. This is altogether artificiall, and is made of Cyprian *Verdegis* or rust of brasse, the vrin of a yong lad, and salnitre, tempered all together & incorporat in a brazen mortar, stamped with a pestill of the same mettall.

* Some take it to be weld or yellows.

* *Lomuntum*, See the beginning of the next booke.

* For some write called *Præstina* that ran for the pills, i. Green kins.

* A kind of chalkie earth, or clay, growing near the sea shore.

* Whereupon is made the name *Chrysololla*, i. golden earth.

* For *Augustus Caesar* desired *Antony*, which was mightily enuied by the Spoils of him. And yet other writers say, that all Greece erected statues in his honor him withall.

* *Nitrum*, or *Aphronit*, i. Sal-petre.

call. Our countrymen in Latin call this Borax Santerna: with it they use to sodder that gold e. G. specially which standeth much upon silver, and is therefore called Argentofum. This kind of gold may be known thus; namely, if it will look bright and cleare vpon the putting of Santerna to it: whereas contrariwise if it hold much vpon brasse (and such gold is named Arosfum) it will haue no lustre at all, but looke dim and dusky vpon the laying of Borax vpon it, and besides will hardly be soddered. But to sodder such gold, there is a proper glue or sodder made, with an addition of gold and the seventh part of silver to the rest abouenamed, and all the same stamped and vnited together. And since I am entred into the feat of sodding, it were very meet and convenient to annex vnto this present discourse, all things els concerning it, that we may vnder one view behold the admirable works of Nature in this kind. The sodder of gold then is Borax, which I haue shewed already. Iron is soddered with the stiffe potters clei Argilla. Brasse ore or Chalmine called Cadmia, serueth to vnite and knit pieces of brasse together in masse. Alume is good to hold plates of brasse one to another. Rosin doth sodder lead, and besides is the proper cement of marble: but black lead will ioine well, by the means of the *white: and one piece of tin with another, with the helpe of oile. In like manner, tin will hold sure with a sodder of brasse file-dust, and silver, with tin. Both brasse or copper, & also yron ore, melt best with an yron made of Pine-wood; as also with the Papyr reed in Egypt: but contrariwise gold fooner melts with a fire of chaffe and huls. Quickelime will catch an heat and burne, if water be cast vpon it, and so doth the * Thracian stone: but the same oile doth quench. Fire is most of all extinguished and put out with vinegre, with birdlime, and the white of an egg. No kind of right earth will burn light or flame. Finally, charcole which hath bene once one fire, then quenched and afterwards set a burning againe, is of more force and giueth a greater heat, than that which commeth new from the earth.

CHAP. VI.

¶ Of Silver, Quick-silver natural, Stibium, or Alabastrum. The drosse or refuse of silver, and Litharge of silver.

IT followeth by good order to write in the next place, of silver mines, from whence proceedeth the second rage that hath bet men a madding: where first and foremost this is to be noted, that there is but one means to find silver, and that is in pits funke of purpose for it: neither is there any shew at all of silver to giue light thereof, and to put vs in hope of finding: no sparkes shining, like as there be in gold mines which direct vs to it. The earth that engendeth the veins of silver, is in one place reddish, in another of a dead ash color. But this is a generall rule, that it is not possible to melt and trie our silver ore, but either with lead, or the veine and ore of lead. This minnerall or metall they call * Galena, found for the most part neere to the veins and mines of silver. Now by the means of fire, when these are melted together, part of the silver ore sealeth downward and turneth to be lead, the pure silver floateth aloft, like as oile vpon water. In all our provinces, yea and parts of the world to speake of, there be mines of silver to be found: howbeit the fairest be in Spaine, and yeeld the finest and most beautifull silver: and the same also like as gold, is engendered in a barrenne soile otherwise and fruitlesse, and euen within mountains: look also where one vein is discovered, there is another alwaies found not farre off: which is a rule obserued not in mines of silver only, but also in all others of what metalls soeuer, and hereupon it seemeth that the Greekes doe call them * Metalla. And verily, strange it is and wonderfull, that the mines of silver in Spaine which were so long agoe begun by Anniball, should continue still as they do, and retain the names of those Cartaginians who first found, discovered and brought them to light of which, one named then Bebelo, & so called at this day, yeilded vnto Anniball daily 300 pound weight; which mine euen at that time had gone vnder the ground and hollowed the mountain a good mile and a halfe: and all that way the Aquitans at this day standing in water, lade the same vp, labouring night and day by the candle or lampe-light, euery man in his turne, and during the burning of a certaine measure of oile, in such wise as they diuert the water from thence, and make a good big riuer thereof, to passe and run another way. A veine of silver which lieth but ebb within the ground, and is there discovered, the miners call Crudaria, as it were a raw vein. In old time those that digged for silver, if they met once with allum, were wont to giue ouer their work and seeke no farther: but of late daies it happened, that vnder alume there was found a veine of white brasse or laton, which sed mens hopes still,

and

A and cause them now to sink lower, and neuer rest so far as they can dig. And yet there is a damp or vapor breathing out of silver mines, hurtfull to all liuing creatures, and to dogs especially. Moreover, this point is well to be marked, that gold and silver both, the softer that they be and tender, the better they are esteemed: and silver being white as it is, most men maruell how it commeth to passe, that if one rule paper or any thing therewith, it will draw black lines & fully as it doth.

Furthermore, within these veines and mines abouesaid, there is a certaine stone found which yeelds from it an humor continually, & the same continues alwaies liquid: men call it * Quick-silver (howbeit being the bane and poison of all things whatsoeuer, it might be called Death-silver well enough) so penetrant is this liquor, that there is no vessel in the world but it will eat B and breake through it, piercing and passing on stil, consuming and wasting as it goes: it supports any thing that is cast into it, and wil not suffer it to settle downward, but swim aloft, vnlesse it be gold only, that is the only thing which it leueth to draw vnto it and embrace: very proper it is therefore to refine gold; for if gold and it be put together into earthen pots, and after often shaking be poured out of one into another, it mightily purifies the gold & casts forth all the filthy excrements thereof; and when it hath rid away all the impurities and grosse refuse, it selfe ought then to be separated from the gold: for which purpose poured forth the one & the other ought to be, vpon certaine skinned leather well tewed and dressed vntill they be soft, through which the quick-silver may passe: and then shall you see it stand in drops vpon the other side like sweat sent out by the pores of our skin, leauing the gold pure and fine behind it: and verily the affinitie betwixt gold & quick-silver is so great, that if any vessels or pieces of brasse are to be begilded, rub the same ouer first with quick-silver before the gold soile be laid on, it will hold the same most surely: many this one discommodity there is in it, that if the leaues of gold be either single or very thin, the whitenesse of the quick-silver will appeare through, and make the gilding more pale and wan: wherefore our cunning goldsmiths who would make their Chapmen to pay for their plate as double gilt, when it is indeed but thin laid and single, and to picke their purses, set a rich and deep colour vpon their work for the time, by laying vnder the gold in stead of quick-silver natural, the white of an egg, and then vpon it artificial quick-silver named Hydragryum, whereof I purpose to write in place conuenient. And to say a truth, the right quick-silver which is of the own kind, is not commonly found in great plenty.

D Ouer and besides, within the same mines and among the veines of silver, there is found a minnerall, which to speake properly is a stone concrete of a certain scum or some, white and shining, howbeit not transparent, which is called by some Stimmi, by others * Stibium, Alabastrum, or Larabon: and hereof there be two kinds, the male and the female; but the female Antimony or Stibium is the better esteemed: for the male is more rude, rough, and rugged, & yet for all that not so lowtighy, bright and radiant; besides that, it is more charged with sand: whereas the female contrariwise shineth and glittereth plentifully, being also brittle & tender, apt to cleaue easily into plates or flakes, and not to breake into lumps and gobbets.

Touching the vertues of Stibium pertinent vnto physick, althrought it is and refrigerant, yet a principal and peculiar medicine to be employed about the eyes; for therupon it was that most E men called it Platyophthalmion, for that being put into those ointments that are to * beautifie the eyes of women, (named thereupon Calliblephara) it seemes to extend the compass of the eyes, and make them appeare open, faire, and * large withall. Antimonie puluerised and incorporated with the powder of frankincense, by the means of gum withall, staith the flux of humors into the eyes, and healeth the fretting and exulcerations incident thereto: being otherwise a proper medicine to staunch the blood that gusheth or issueth from the braine. But for to stop the bleeding of any fresh wound, the powder of Antimony alone is thought to be more effectfull: all if the place be strewed withall: which also is a singular thing to heal the old bitings of dogs. It cureth moreover any burn occasioned by fire, in case it be tempered in some conuenient lute and wax, with Litharge of silver, and Ceruse or White lead, and so reduced into a salve. But F for to prepare Antimonie aright, it ought to be well lured all ouer with a certain kind of paste made of Cow-dung, and then dunged and calcined in an oven; which being done, to bee quenched with Womens milke, and then stamped and brayed very well in a mortar, putting thereunto raine water also among, and euer and anon the troubled water ought to bee transfused into a vessell of brasse, and clarified therein together with Sal-nitre. As for that which seeld in

Sf 3

the

* Some take this for Tin-glaze.

* Which some take for pitch-colour, or sea-cole rather, such as cometh to New-castle by sea: or rather a kind of yeast.

* or, Molybdæna.

* Quasi: * one after another.

* or Life silver.

* We call it Antimonium.

* And therefore Jon called it plumbum stibium, quædamque, when he reckons vp the duties that Quomodo had to pay and trimmer selfe.

* Which will cause a grace in old time, as may appeare by Shemur, who giueth vnto Quædam the Epithet of hæmæ, (a grey broad eye), as is a Cow or Heifer.

the bottome of the mortar, is held to be the droffe and dregs thereof, standing most vpon lead, and is throwne away as good for nothing: but the pot or vessell whereinto the troubled water aforesaid was poured, after it is well covered and stopp'd with a linnen cloth, must be suffed to stand all night to take a setting; and the next morrow that which floteth aloft is to be poured out by little and little, and the rest of the liquor to be foked forth with sponges, and separated from the Antimonic. Now, that which resteth in the bottom is taken to be the floure of Antimonic, and so called; which they lay forth in the Sun a drying, covered with a fine linnen cloth that it should not be ouermuch dried: which done, they beat this fine floure againe in a mortar, and so reduce it into trochisks. But in this operation of preparing antimonic, about all things regard would be had in the burning thereof, that it be not ouermuch calcined, and so turne into lead. Some in the burning of antimonic vse no dung, as is before said; but rather lap the same about with some grease or tallow: others, after it is well beat and punned, streine it with water through a threefold linnen cloth, & cast away the dregs remaining behind: but the liquor that is passed through, they poure out of one vessell into another, and the residue alwaies they gather and saue, which they mix in the composition of plaisters and cie-falues, or colleries.

As touching the droffe or refuse in siluer, the Greeks call it Heleyma: the nature thereof is restrincting & refrigeratiue: it entrencheth into plaisters like as lead ore doth (which is named Molybdæna, and whereof I intend to write in my treatise of lead) especially those that are made to heale, cicatrice, and skin. Also being injected by way of clistre with oile of myrtles, it cureth itches and dyenteries. It is vsed much also in those lenitie and vntuous plaistes named Liptæ, and serueth likewise for the excrecence of proud flesh in vlcers, & for those exulcerations which come of rubbing and fretting, or the running sores and scalls in the head.

Within the mettall mines aforesaid there is ingendered another minnall, known by the name of Spuma argenti [i.e. the some of siluer] commonly called litharge, & three sorts there be found of it. The best litharge, of gold, which they call Chrystitis: the second, of siluer, named Argiritis; and a third of lead, which is Molybdæna; many times all these kinds to distinct in color, are found in one and the same lump or pulled loaf of litharge. The best litharge is brought out of the region Attica: the next in goodness comes from Spain. Litharge of gold, named Chrystitis, is made of the very mine and vein of siluer; Argiritis, of siluer it selfe; and Molybdæna, of the lead which is melted with the siluer: as wee may see at Puteoli, where great store of it is made, and of that place took the name Putcolana. All the sorts of them are made, after that the mettall or matter appropriat vnto them, is thoroughly melted and tried; for it runneth downe from the vpper pan into that vnderneath, out of which it is taken vp with iron broches, and to the end that it might be of a small weight, some wind it about the broch in the very flame of the furnace; and as it may appeare by the very name, it is no other thing but the scum of the ore, or mettall boiling and melting ouer the furnace: from droffe it differeth as much as scum or froth about, may from dregges or lees beneath: and as the one is an excrement cast vp from a matter whiles it is purging it selfe, so the other is the refuse or grounds thereof after it is purged and settled. Howbeit many there be who make but two kinds of this forme of litharge; the one

* Stereifit, as it were solid and massiue; the other * Peumene, as one would say, pulled vp and full of wind. As for the third named Molybdæna, they reckon as a thing by it selfe, to be treated of in the discourse or chapter of lead. Now the litharge aforesaid ought for the vse that it is employed about, for to be prepared in this manner: first the lumps aforesaid are to be broken into small pieces as big as Hæfel nuts, and set ouer the fire againe: thus when it is once red hot by the blast of bellows, to the end that the coles and cinders might be separated one from another, there is wine or vinegar cast vnto it, both to wash, & also withall to quench the same. Now if it be Argiritis, to the end it may look the whiter, they vse to break it to the bignes of beans, and giue order to seeth it in water within an earthen pot, putting thereto wheat and barley lap-dregg within pieces of new linnen cloth, and suffer them to boil therewith till they be burst, which done, for six dayes together they put it in mortars, washing it thrice euery day in cold water, and in the end with hot, and so at length put to euery pound of the said Litharge, the weight of one Obolus of Sal-gem. The last day of all they put it vp into a pot or vessell of lead. Some there be who seeth it with blanched beans and husked barley, and after that dry it in the sun: others think it better to seeth it with beans and white wool, untill such time as it colour the wooll no more black: then they put thereto Sal-gem, changing effsoones the water, and dry it for the space of forty

A forty daies together in the hottest season of the Summer. There be again who think it best to seeth it in water within a swines belly, and when they haue taken it forth, rub it wel with salt-tre, and pun it in mortars, as before, with salt. Ye shall haue them that neuer bestow seething of it, but only beat it with salt, and then put water thereto and wash it. Well, thus prepared as is before said, it serueth for colleries and cie-falues; in a liniment also, to take away the foule cicatrices or scars, the pimples and specks likewise that mar the beauty of women, yea & our dames wash the haire of their head withall, to make it clean and pure. And in very truth, Litharge is of power to dry, mollifie, coole, and attemper; to cleanse also, to incarnate vlcers, and to assuage or mitigate any tumors. Being reduced into the vnguent or plaisters aforesaid, and namely with an addition of rue, myrtles, and vineger, it is singular for S. Antonies fire. Semblably, being in B corporat with oile of myrtles and wax into a ceror, it healeth kided heeles.

CHAP. VII.

¶ Of Vermilion; and of what estimation it was among the old Romans: the first inuention thereof. Of Cimmaris, the vse thereof in Pictures and in Physicks. The sundry sorts of Minium or Vermilion: and how it is to be ordered to serue painters.

C T Here is found also in siluer mines a mineral called Minium, i. Vermilion, which is a colour at this day of great price and estimation, like as it was in old time: for the ancient Romans made exceeding great account of it, not only for pictures, but also for diuers sacred & holy vses. And verily *Varro* alledgeth and rehearseth many authors, whose credit ought not to be disproued, who affirm, That the manner was in times past to paint the very face of *Iupiters* image on high and festiual daies with Vermilion; as also, that the valiant captains who rode in triumphant manner into Rome, had in former times their bodies * coloured all ouer therewith: after which manner (they say) noble *Camillus* entred the city in triumph. And euen to this day, according to that ancient and religious custom, ordinary it is, to colour all the vnguenters that are vsed in a festiual supper at a solemne triumph, with Vermilion. And no one thing doe the Censors D giue charge and order for to be done, at their entrance into office, before the painting of *Iupiters* visage with Minium. The cause and motiue that should induce our ancestors to this ceremony I marvel much at, and cannot imagin what it should be. True it is and well known, that in these daies the *Æthiopians* in general set much store by this colour, and haue it in great request, in so much as not only the Princes and great Lords of those countries haue their bodies stained throughout therewith, but also the images of their gods are painted with no other colour: in which regard I am moued to discourse more curiously and at large of all particulars that may concerne it.

Theophrastus saith, that 90 years before *Praxibulus* was established chiefe ruler of the Athenians (which falls out iust vpon the 249 yere after the foundation of our city of Rome) *Callias* the Athenian was the first that deuised the vse of Vermilion, and brought the liuely colour thereof into name: for, finding a kinde of red earth or sandy grit in the mines of siluer, and hoping that by circulation there might be gold extracted out of it, he tried what he could do by fire, and so by that means brought it vnto that fresh and pleasant hue that it hath: which was the first Original of Vermilion. Hee saith moreover, That euen in those daies there was found Minium in Spain, but the same was hard and full of gritty sand. Likewise among the Colchians, in a certaine rock inaccessible, by reason whereof the people of the country were so afraid by shooting at it, to shake and drive it down: howbeit the same was but a bastard Minium. But the best simply (saith he) was gotten in the territorie of the Cilbians, somewhat higher in the country than *Elphesus* in sum. That the said Minium or Vermilion is a certaine sandy earth of a deepe scarlet F colour, which was prepared in this order: first they pun and beat it into pouder, and then washed it being thus puluerised. Afterwards, that which settled in the bottom they washed a second time. In which artificial handling of Minium this difference there is, that some make perfect Vermilion of it with the first washing: others thinke the Vermilion of that making to be too pale and weak in colour, and therefore hold that of the second washing to be best. And verily I won-

* or rather, Incense

* or rather, Stereifit.

* Rumpuer.

* To stiew the bloody bat: it is they had fought, and what carnage of their Enemies they had made: with our much estimation and drawing of this blood they might not triumph.

exceeding foure inches in length, and two in bredth. That part or side which lies about toward G the Sunne when it is found, is thought better for touch, than the other which lieth to the earth. By means of these touchstones, our cunning and expert mine-malters, if they touch any ore of these metalls, which with a pickaxe or foile they haue gotten forth of the veine in the mine, will tell you by and by how much gold there is in it, how much siluer or brasse, and they will not misse a scruple: a wonderfull experiment and the same infallible.

As touching siluer, two degrees there be of it, different in goodnesse, which may be knowne and discerned in this manner: For lay a peece of siluer ore vpon a scife, plate, or fire pan of yron and red hot, if it continue white still, it is very good, if the same become reddish, go it may for good red in a lower degree; but in case it looke blacke, there is no goodnes at all in it. Howbeit, there is some deceit also in this triall and experiment: which may crosse a man in his iudgement. If the said scife or plate lie a time in a mans vrine, be the ore neuer so base that is laid thereupon, on when it is burning red hot, it will seeme to take a white colour for the time, and deceiue him on when it is brought to the fire, if it be brought and burnished, and that is by breathing vpon it: for if the breath be seene thereupon presently as a sweat, and the same passe away incontinently as a cloud, it is a signe of perfect siluer.

CHAP. IX.

¶ Of mirrors or looking glasses. And of the Egyptian siluer.

AN opinion it was sometime generally receiued and beleued, That no plates might be dri-
un by the hammer, nor mirrors made, but of the best and purest siluer: And euen this
periment is falsified and corrupted by deceit. But surely a wonderful thing in Nature this
is of these mirrors of siluer, that they should represent so perfectly the image of any thing that
is before them, as they do: which must needs be (as all men confesse) by the reuerberation of the
aire from the solid body of the mirror, which being beaten backe againe from it, bringeth
therewith the said image expresse therein. The same reuerberation is the cause that such looking
glasses as by much vniage are polished and made subtile, doe in that sort gently driue backe the
image represented within them, that it seemes infinitely big in proportion of the body it selfe:
such difference there is in them, & so materiall it is, whether they repercuss and reject the aire,
or receiue and entertaine it. Moreover, there be drinking cups so framed and fashioned with a
number of mirrors within, that if there do but one looke within them, he shall imagine that he
saw a multitude of people, euen as many images as there be mirrors. There are deuised looking
glasses also, which will represent monstrous shapes; and such be those mirrors that are dedica-
ted in the temple at Smyrna: but this comes by reason that the matter wherof they be made, is
in that sort fashioned. For it skilleth much whether mirrors be hollow, either in manner of a
drinking pot, or of a Threidian buckler: whether the middle part lie low and inward, or rise
and beare out with a bellie: whether they be set crosse and ouerthwart, or stand bias, whether
they hang with their heads bending backward, or bolt upright: For according as the matter
which receiueth the image, is disposed to this or that fashion, or set one way or other, so it tur-
neth the shadowes backe againe: for verily the said image represented in a mirror, is nothing els
but the brightnesse and clearenesse of the matter which receiueth the same, returned and beaten
backe againe. But to go through in this place with all things concerning such looking glasses,
and the best known in old time vnto our ancestors, came from Brindis, and those consisted of tin and
brasse tempered together. But when siluer mirrors came in place, those went downe, and these
were preferred before them. The first that made them of siluer, was *Praxiteles* in the daies of
Pompey the great. Of late, men had this opinion of siluer mirrors, That they would represent an
image more liuely and truly, in case their backe part were laid ouer with gold.

But to returne againe to siluer, the Egyptians vaine a deuise to paint it, to the end that they would
drinke more devoutly, seeing their god *Amnis* painted within their pots. And in truth they rest
contented with painting their plate, and neuer graue or chase any peece. This deuise is growne
into such credit by the precedent receiued from thence, that the statues of filer caried in a
shew at triumphs, be nought set by, vnlesse they be also enamelled & painted blacke: & wonder-
full it is how much more pretious they are thought to be when the native brightnes thereof, is thus
hid and the light quite put out or blindfolded. The manner of making this black siluer, is thus:
They

A They take of siluer and sulphur vif as much of the one as the other, of Cyprian brasse or latton
plates (which brasse they call *Coronarium*) as thin as may be, a third part: these they mix toge-
ther and melt them in an earthen pot well luted all ouer with clay: and boile they must so long,
vntill the lid of the pot doth rise vp and flie open of it selfe. Moreover, siluer will looke black with
the yolke of an egge roasted hard and well beaten with vineger and Tripoli.

To come now vnto those that counterfeit money. *Antonius* while hee was one of the three v-
surping Triumvirs, mixed yron with the Roman siluer denier. He tempered it also with the bra-
sen coine, and so sent abroad false and counterfeit money. Others there be that make money too
light (namely, vnder the lawful proportion) which is, to coin and stamp for eury pound weight
of siluer 84 deniers. This enormity grew to this passe, that *M. Gratidianus* published a law, by
vertue whereof there was an act intituled and ordained for the prooue and allowance of siluer
deniers, what touch and what poise they should haue: by which act of his hee pleased the
Commons of Rome, that there was not a street throughout all the city, but they erected a siluer
statue, pourtraied all whole in a gowne in the fauor and honour of *M. Gratidianus*. But strange it
is, and a man would not think it, that this art and cunning deuised for the detecting of falshood
and forgerie, is the only means to teach deceit and wickednesse, for many a man will goo too too
much for false money, and many siluer deniers for one counterfeit, well and cleanly made to
take forsooth a pattern thereby, and learne to deceiue others.

CHAP. V.

C ¶ Of excessive summes of money in mens hands. Who they were in old time that
were thought richest. And when there began largesses at
Rome, and money to be scattered and cast
abroad to the people.

IN old time men knew no number about 10000: and therefore at this day also in stead of a
million we multiply the said number by ten, and say thus in Latine, *Decies centina mill. a. a.* A
hundred thousand ten times told, and so forward, * repeating alwaies a hundred thousand to
the numerall aduerbe, as the sums doth amount. Vsuries, interests, and coined money haue been
the cause of these multiplications: and by that occasion all came debts to be called euen vnto
D this age, by the name of *As alienum*. And thereof arose the proud name of *Diuities*, i. Rich, for
great monied men were so called. Yet take this withall, That the first man that euer was knowne
by that surname * *Diuus*, brought a shilling to nine pence in the end, proud Banquerout, & de-
feated his creditours. As for *M. Crassus*, one of that same house, and who gaue the same armes,
would commonly say, That no man was to be counted rich, and worthie of that title *Diuus*, vn-
lesse he were able to dispend by the yeare as much in reuenues as would maintaine a legion of
souldiers. And verily his owne lands were esteemed worth *His milles sestertium*, that is to say,
Two hundred millions of sesterties, Roman: & setting aside *Sylla*, he was the richest Roman that
euer was knowne. And yet such was his avarice, that hee could not content himselfe with that
wealthy estate, but vpon a hungry desire to haue all the gold of the Parthians, would needs vn-
dertake a * voiage against him. And albeit by his inestimable wealth he vsurped the title & ad-
dition of *Optimus* i. The best, in his time, yet (for me thinks it doth me good to prosecute still, &
inuike against this insatiable desire of hauing more) we haue known many after him, & those
otherwise of base condition, and no better than slaues newly enfranchised, to haue growne vnto
greater wealth; and namely three at one time, to wit, during the Empire of *Claudius Caesar*: and
those were *Pallas*, *Calpurnias*, and *Narcissus*, late bond slaues all to the said Emperor. But to let these
men passe, as if they were lords fill of worldly wealth: in that yeare wherein *C. Ainius Gallus* &
M. Martius Censorinus were Consuls of Rome, died *C. Caecilius Claudius*, who signified by his last
will and testament, bearing date the 6 day before the Calends of February, the yeare about vnto
F he should leave behind him at the houre of his death, of slaues belonging to his retinue foure
thousand one hundred and sixteen; in oxen, three thousand and six hundred yokes; of other cattell
257000 head, and in ready coine, *H. S. D. C.* i. threecore millions of sesterties Roman. And be-
sides, he set out for defraying of his funerall charges, * eleuen thousand sesterties, and gaue or-
der expressly, to be entered so sumptuously. But what of all this? Set case these and such like
men times told.

* To wittene
the times, or a
hundred
thousand, &c.

* *Crassus*.

* In which ex-
pedition he was
taken prisoner
by *Sertius*,
licutenant
general for the
king of Par-
thia who
strake off his
head, and
poured gold
melted into
his mouth to
satiate his hu-
gre desire.
* *H. S. L.* which
if you read by
the numerall
aduerbe (*va-
decies*) a thou-
sand times told.

The three and thirtieth Booke

men gathered together innumerable fums of money, and an infinit masse of goods, yet they shall come nothing neare to the wealth of *K. Ptolomæus*, who according to the testimony of *M. Varro*, (at what time as *Pompey* the great warred: kept an ordinary table within his court of a thousand persons, and those had every man his own cup of gold to drink out of, and at each course and change of meats that came in, new plate was serued vp still to the board. These guests of his sared to highly, that a man would haue said they had bin franke-fed. But how far short was this mighty and sumptuous prince then ye? (for I will say no more now of kings) in comparison of one *Pythius* a Bithynian, who sent to *Darius* the king a Present of a Plane-tree, all entire of beaten gold, and withall, that famous gold Vine, so much renowned by all writers: sealed the whole army of that mighty monarch, and those were * 788000 men: promising ouer and aboute five moneths pay for them all, and come for so long to serue the whole campe, if of fine sones that he had of his owne, the king would spare him but one to beare him company in his old age, and not prest him forth to serue in the wars. Certes, a man that heareth thus much of this *Pythius*, might compare him with that rich *Craesus* king of Lydia. But what folly and madnesse in the duels name is this, to hunger and thirst so much in this life after that, which either is common to base slaues, and may fall vnto them, or els wherof kings themselves can find no end? And thus much of gathering good and heaping riches together.

thering good and heaping riches together.

To come now to the scattering thereof, I finde in the Chronicles, That in the yeare wherein *Sp. Posthumus*, and *Qu. Martius* were Consuls, they began at Rome to make largesse, and to fling money abroad to the com mon people. And at that time such plenty of coine ther was stirring at Rome, that the City bestowd by a generall contribution vpon *Lu. Scipio*, as much as bare out his charges in exhibiting the solemne games and plaies vnto the people. As for that purse which was made for the funerals of *Agrippa Menenius*, wherein euery man put his sextant, i. the sixt part of an As, I take it to haue been no Largeffe, but a beneuolence to testifie how the people honoured *Agrippa*, and a supply of meere necessitie, considering how poore the man died.

CHAP. XI.

¶ Of the superfluitie and frugality both, of men in times past, touching plate and silver vessels. Of beds and tables of silver. Also when there were devised chargers and platters of silver to be made of huge capacity beyond all measure.

The world is giuen to so much inconstancy as touching siluer plate, that a wonder it is to see the nature of men how variable they be in the fashion and making of such vessel: for no workmanship will please them long. One while we must haue our plate out of *Furnius* his shop; another while we will be furnished from *Clodius*: and againe in a new fit, none will content vs but of *Gratius* his making (for our cupboards of plate & tables, forsooth, must beare the name of such and such Goldsmiths shops.) Moreouer, when the toy takes vs in the head, al our delight is in chased and embossed plate; or els to carued, engrauen, and deep cut in, as it is rough againe in the hand, wrought in imagery or floure-work, as if the painter had drawne them. And now adaiies we are growne to this paffe, that our dishes are set vpon the table borne vp with feet and supporters to sustaine the viands and meat therein; but in any wise their sides must be pared verry neere; for herein I may tell you lieth a great matter, and the more that the sides and edges hath lost by the file, the richer is the plate esteemed to be.

As touching the vessell ferring in the kitchen I did *Calvus* the noble Oratour complaine in his time that it was of siluer? Why, wee in these dayes doe more than fo, for wee haue deuifed that our coaches should bee all siluer, and these couridly wrought and engrauen. And within the remembrance of man, euen in this age, *Poppaea* the Empreffe, wife to *Nero* the Emperour, was knowne to caufe her Fettes ordinarily to those her coach-horses and other palfreys for her Maddle (such especially as shee fere flore by, and counted more daintie than the rest) with cleane gold. To what exceffe and prodigalitie is the world now grown to? *Scipio Africanus* the second of that name when hee dyed, left no more vnto his Heire in Silver Plate and Coin than two and thirtie pound weight: and yet this worthie Knight, when hee rode in triumph for the conquest

A queſt of the Carthaginians ſhewed in that ſolemn pompe, and brought into the chamber of Rome as much treaſure as amounted to * foure thouſand foure hundred and ſeventy pounds weight of ſilver, a thouſand times old. This was all the treaſure in ſilver that the whole ſtate of Carthage was able to make in thoſe daies ; Carthage (I ſay) that great and proud city which pretended a title to the Empire of the world, and maintained the fame againſt Rome : and yet ſee ! in this age there is as much laid out in our cupboards of plate, and furniture of our tables. The ſame *Africanus* afterwards, upon the winning and ſinall ruine of Numantia, gaue among his ſouldiers in a triumph, 17000 pound weight of ſilver : O braue ſouldiers, and worthy to noble a captain, who ſtood contented with ſuch a reward. A brother of this *Scipio*, ſurnamed *Allobrogus*, was the firſt knowne to haue in plate, one thouſand pound weight : but *Lynus Drufus*, while he

ding piece there was of his making, with a deuise appendant to it, for to be set too and taken off by a vice, and the same resembled *Vlixes* and *Diomedes*, stealing the Palladium out of the temple of *Minerva* in Troy. The same workman deuised to set into little cups, prettie images or mannikins resembling cookies, which he termed *Magiriscia*, but so finely & delicately wrought they were, that the patterns of them could not be taken out in any mould, without hurting and spoiling; so subiect were they to any outward injuries in the handling. Furthermore, *Tencus* was famous in his time, for his dexterity and light hand in shallow imbossing. Well, in as great request as these artificers were in times past, yet this cunning decayed all on a sudden, and grew so far out of vse, that nothing now commendeth such pieces of work, but only antiquity: in which regard, how neare foueuer they be worn with continuall handling, in somuch as the shapcs and proportions of the imagerie ingrauen cannot be discerned, yet great store is set by any such antique plate wherefoeuer it is to be had.

Ouer and besides, it is to be noted, that siluer will rust in medicinable waters, such as stand vpon some especiall mine, yea, the salt aire breathing from them, is able to infect it: as wee may see in the Mediterranean parts of Spaine far remote from the sea.

Also, in mines of gold & siluer, there are ingendred certain mineral colours seruing for painters; to wit, * Sil and Azur. As for Sil, so speake properly, it is a kind of muddy slime: the best of this kind is called Atticum: and euery pound of it is worth 32 deniers. The next in goodnesse is hard as stone or marble, and carieth hardly halfe the price of the other named Atticum: there is a third sort, of a fast & compact substance, which because it is brought out of the Island Scyros, some call Scyticum: and yet of late verily, we haue it out of Achaia also, and this is the Sil that painters vse for their shadows: this is sold after two sesterces the pound. As for the Sil which cometh out of France, called the Bright Sil, it is sold in euery pound two asses lesse than that of Achaia. This Sil, and the first called Atticum, painters vse to giue a lustre and light withall: but the second kinde, which standeth vpon marble, is not imployed but in tablements and chapters of pillars, for that the marble grit within it, doth withstand the bitterness of the lime. This Sil is digged likewise out of certain hills not past 20 miles from the city of Rome: afterwards, they burne it, and by that means do sophisticate and sell it for the fast or flat kinde named Pressum: but that it is not true and natural, but calced, appeareth evidently by the bitterness that it hath, and for that it is resolu'd into powder.

CHAP. XIII.

¶ Of * Sil, * Caruleum, Nestorianum, and Calum. Also that all these kindes keep not the same price euery yeare.

Polygnotus and *Mycon* were the first Painters who wrought with Sil or Ochre, but they vsed onely that of Athens in their pictures. The age ensuing, imployed it much in giuing light vnto their colours, but that of Scyros and Lydia for shadowes. As for the Lydian ochre, it was commonly bought at Sardis, the capitall city of Lydia, but now it is growne out of all remembrance.

As touching Caruleum or Azur, it is a certaine sandy grit or powder: of which, in old time there were knowne 3 kinds: to wit, the Egyptian, most commended aboue the rest: the Scythian which is easie to be dissolved and tempered, and in the grinding turneth into foure colours: namely, the Azur, which is of a pallet colour, called therefore the whiter; the blacker Azur of a deeper blew: there is the Azur also of a grosser substance; and the fourth of a finer. The Cyprian Azur is preferred before that of Scythia. Ouer and aboue those Azures before named, wee haue some from Puteoli and Spaine, where they be artificiall, and they haue taken to making it, of a kind of sand. All the sorts of these Azures, receiue first a dye, and are boiled with a certain hearbe appropriat to it, called Oad, the colour and iuice whereof Azur is apt to drinke in and receiue. As for all the preparation and making of it otherwise, it is the same that belongeth to Chrysocolia or Borax. Of Azur there is made that powder which wee call in Latine Lomentum, for which purpose it must be first punned, puluerized, and washed; and this is whiter indeed than the Azur it selfe: sold it is after three and twentie deniers the pound, whereas Azur may be bought for eigheteene. Herewith they vse to paint walls that be ouercast with plaisters, for lime it will not abide. Of late daies there is a kinde of Azur growne into request, called Nestorianum,

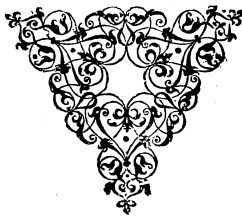
num, taking that name of him who first deuised it: made it is of the lightest part of the Egyptian Azur, and it colletteth 40 deniers the pound. Of the same vse also is the Azur of Puteoli, saue only in windows; and this some call Cælon. It is not long, since another kind of Azur or blew named Indico, began to be brought ouer vnto vs out of India, which is prized at 17 deniers the pound. It serueth painters wel for the lines called Incisura, that is to say, for to diuide shadowes from lights in their workes. To conclude, there is another kinde of Lomentum or blew powder of the basest account of all other; some call it Tritum, and it is not esteemed worth aboue five asses the pound.

But to try the right and perfect Azur indeed, the best experiment is to see whether it will flame vpon a burning cole. As for the false and sophisticat Azur, it is thus made: they take the floures of violets dried, and boile them in water: the iuice they presse forth through a linnen cloth, and mix the same with the chauly earth called Eretia, vntill such time as it be well incorporated with it.

To proceed vnto the medicinable vertues of Azur: It is holden to be a great clenfer, & therefore it mundifieth vlcers: in which regard, it entrencheth into plaisters: as also into potentiall cauterics. As touching Ochre or Sil, it is exceeding hard to be reduced into powder: and this also serueth in Physicke; for it hath a mild kind of mordacity: astringent it is besides & incarnatiue; in which respect, soueraigne to heale vlcers: but before that it will doe any good, it ought to be burnt and calcined vpon an earthen pan.

To conclude with the prices of all those things named heretofore: how foueuer hitherto I haue set them downe, yet I am not ignorant, how they vary according to the place; yea, and alter in manner euery yeare: and well I know, that as shipping and navigation speeds well or ill, as the Merchant buyeth cheap or deare, the price may rise and fall. Againe, it falleth out, that sometime one rich munger or other, buying vp a commodity, and bringing it wholly into his owne hands for to haue the Monopoly of it, raiseth the market, and inhaunceth the price: for I remember well, how in the daies of *Nero* late Emperor, all the spicers, druggers, and Apothecaries, preferred a Bill of complaint vnto the Consuls, against one *Demetrius* a regrater. Yet notwithstanding, I thought it necessarie to put downe the prices of things as they are ordinarily

valued at Rome one yeare with another, to shew in some sort (by a generall æstimate) the worth of such wares and commodities whereof I haue written.



THE XXXIV. BOOKE OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

The Proem.

CHAP. I.

¶ The Mines of Brasse.

IT is now time to go in hand with Mines of Brasse, a mettall esteemed most of all other next to Gold and Silver, in regard of the uses about which it is employed: nay, if I should say truly, preferred it is (especially that which is called the Laton of Corinth) in diuers respects before silver, yea, and gold it selfe: for brasse (I may tell you) is of great authority in the campe, and carrieth no small stroke among souldiers in regard of their pay, which (as I haue said before) was weighed them out in brasse: and hereupon their wages-money is vially called by the name of *Ara militum*. From this mettall likewise, the generall Receiueurs and Treasurers take their title of credit and place: for at Rome they be called *Tribuni aerarii*, as a man would say, The Tribunes or Officers to the chamber of brasse coine, that is indeed, of the Treasury: hercof also is the Chamber of the city or Treasury it selfe, called *Aerarium*: finally, those that be deeply indebted to any man, are in Latine named *Obserari*, as it were charged and pressed with the heavy burden of brasse, i. debt. Moreover, I haue shewed already (for the greater credit and authority of this mettall) for how many yeres together the people of Rome vied no other money but brasse coine. And otherwise, as may appeare by antient records and histories, the credit of brasse took root at the beginning, and hath bin in authority euer since Rome was Rome: an euident proofe whereof we haue from *K. Numa*, who founded and erected a third society or confraternity of brasse-founders. As touching the ore or veine of brasse, digged it is out of the mie in manner aforesaid, but it is tried, & brought to perfection by fire. Made also it is of the Chalamine stone, named otherwise *Cadmia*. The best mines of brasse that yeeld the excellent mettall, are now in Asia; howsoever in old time Campaine in Italy carried the name. And euen at this day, the brasse digged out of the mines within the territory of the Bergomats in the farthest part of Italy, is in great request: and as it is said, there are good mines thereof discovered lately in Germany, a Prouince vnder the Roman Empire.

CHAP. II.

¶ Diuers kinds of Brasse: and namely, the Brasse of Corinth, of the Isles of *Delos* and *Argina*.

IN the Island of Cyprus, where first were found mines of brasse, the same is made of another *M* stone also besides *Cadmia*, which they name *Chalcitis*: but this * Cyprian brasse sel soon to beare a low price, by reason of a better kind which other countries did yeeld: and principally the Laton called *Orichalcum*, which for a long time was counted the best and held in greatest admiration. Howbeit, this kind of brasse hath not bin gotten for these many yeres, as if the earth were

A were not in heart, and had giuen ouer bearing of it. Next to this *Aurichalcum*, the most reckoning was made of the brasse *Sallustianum*, within the tract or quarter of the Centromes among the Alps: neither held these mines out any long time, but after it, succeeded the *Liuian* brasse, discovered in France. These two kinds last mentioned, take name both of the lords and masters of the mines wherein they were digged: the former of one *Sallustius*, a great friend and fauorite of *Augustus Caesar* the Emperor: the other of the Empreffe *Liuias* his wife: and this mine also quickly failed. And verily of this *Liuian* brasse very little or none there is to be had. But now adies all the name goes of the *Marian* brasse, which also is called *Cordubense*: and to say a truth setting aside the aboue-named *Liuian* brasse, there is not any wil take the yellow tincture of the *Cadmia* or *Chalamine* stone better, or cometh so neer in goodnesse to the Laton *Orichalcum*; as if a man would say that a piece of coin stamped of it, were a sesterces, or at leastwise a double As; to the Cyprian piece, which is but a single As. And thus much concerning the degrees in goodnesse and credit, of those kinds of brasse which be naturall.

There be other sorts of brasse mettall, which stand vpon an artificiall mixture and temperature, whereof I purpose to write in more ample manner in place conuenient, after I haue shewed aboue all other things the excellencie of this mettall in generalitie, thus tempered. In old time there was a mixt mettall made of brasse, gold and silver, melt and confused all together, whereof were made singular pieces of worke: and albeit the mettall was rich and precious, yet euermore the workmanship was the dearer and went beyond it. But now, it is hard to say, whether is worse of the two, the matter or the art that is seen in it? But certes, I cannot but maruell much how it cometh to passe, That these brasse workes, hauing alwaies bin from time to time so dear, and growing to infinitely as they do still in price to be bought & sold, yet the magnificence and credit of this art is so much decayed & vterly gone? But I take this verily to be the cause, that in times past artificers wrought for to win glory and fame; & now, as all things els, for gain and lucre only. Certes, in old time the feat of casting mettall was counted so magnificent, that the Poets ascribed it to some of the principal gods, as a mytery becomming their diuine workmanship; in so much, as the great lords and noble princes of the world sought to win an immortal name by this means: and yet I say for all that, the manner of tempering and casting this precious *Mascellin*, this compound mettall I mean of gold, silver, and brasse, is so far grown out of practise and knowledge, that for these many yeres past Fortune her selfe hath had no power either to retain or to restore the antient art belonging thereto. But setting aside the glorious *Mascellin* of old time, the *Corinthian* brasse mettall was most highly commended: and the same mixture happened euen by mere chance and fortune, when the city *Corinth* was woon, sacked and burnt to the ground: and wonderful! it is how the minds of many great men was affected to this compound mettall, and how they stood vpon the hauing thereof, in so much as (by report) there was no other cause in the world why *Verres*, whom *Cicero* had caused to be condemned, was together with him proscribed, outlawed, and banished by *Antonie*, but only this, For that he vaunted that he had as goodly vessels and pieces of *Corinth* mettall as himselfe, and would not part with any of them to *Antonie*: howbeit, in my conceit, most part of those men who delight thus in this *Corinth* *Mascellin*, in a certain singularity by themselves, because they would seem to know more than their fellows, make semblance rather of a special insight and skill that they haue therein, than know indeed any thing by it of such exquisite stuffe. And this will I shew and declare to you in few words: the city of *Corinth* was woun and destroyed in the 156 Olympiads, and the third yere thereof, which fell out to be in the 608 yeare by our computation at Rome: now long before this time, those great masters and imagers, so famous for mettall-founding and casting of Images were dead and gon; and yet all the pieces of their making, these men so forth at this day will needs haue to be of *Corinthian* medley, and so they call them. And therefore to disprove this erroneous opinion of theirs, I purpose as I proceed in this my discourse, to range all the notable artificers that antiquity hath knowne in this kind, according to the several ages wherein they liued & flourished in the world. For easie it wil be to calculate and collect the yeres from the foundation of our city, by the former comparison of them with the Olympiads. All the vessels then which our delicats haue, those I mean that would seem to be more fine in their houses than their neighbors, are only of the *Corinth* mettall and no better, which they cast, partly into pots and pans and such like kitchen vessel for to seeth meat in, partly into candlesticks, chafers, chamber pots, and such like homely and base vessels, without any regard of cleanness

*As if the world say, this metall is so much better than the Cyprian brasse & copper, as the Sesterce and Dupondius, is of more value than As: i. i. double, or double and halfe.

and

and neat service. But this Corinthian metall may be reduced well into three principall kinds, G to wit, the white, which cometh nearest in brightnesse to silver, as standing most indeed vpon the mixture of silver: the second yellow, according to the nature and colour of gold, which beareth the chiefe stroke in it: and a third of an equal medley and temperature, wherein a man shall not perceiue any one metall predominant. Ouer and besides, these 3 sorts of Corinthian brasse, there is another kind of Mactelin, as touching the mixture whereof precisely, we are not able to yeeld any reason: for although there be found Images and statues thereof made, wherein we may see the handy worke of man, yet it should seem that Fortune in some fort hath giuen the temperature thereto: and that dainty and precious colour that it hath, is a deep red, much resembling that of the Silver, and therefore they call it commonly Hepatizon. Short it cometh far of the Corinthian metall, but out-goeth a great way the brasse either of *Agina* or *Delos*, which two metalls for a long time were thought to be the chiefe. And in very truth, for ancient glory and name the Deliake brasse may challenge the first place: for thither, as to a mart or fair, there was great resort of chapmen from all parts of the world; & specially of those artificers who were curious in making of table feet, trestles, and bed-steads: and indeed the finest workmanship at first was seen herein, and thereby artificers came to be innobled. But in proceesse of time they went farther, euen to cast the images of gods, the personages also of men for statues, yea, & the solid forms and portraits of beasts and other such liuing creatures. After this brasse of *Delos*, the most account was made of that which came from *Agina*: an Island this is without any mine at all of brasse in it, howbeit, much renowned for the excellent metall-founders therein, in regard of the singular temperature that they gaue vnto their brasse. The brasse Ox which standeth in the beaust market at Rome was brought from thence. And this may serue for a paterne of the *Aginetick* brasse: but the image of *Iupiter*, erected within the chappel of *Iupiter*, surnamed Thundring, in the Capitoll, is the true paterne, testifying what kind of brasse that of *Delos* was. And, as *Myron* was wont to cast the metall of *Agina* in all his works, so *Polydorus* vied ordinarily that of *Delos* for this purpose; and these two were rare Imageurs, liuing at one time, and prentises at the Art together: but they indeauoured to surpasse one the other in diuers metalls which they occupied.

CHAP. III.

¶ Of Candle-sticks and Ornaments belonging to Temples, made of Brasse.

IN old time the Island *Agina* was in especial name for the workmanship only of the branches, sockets, & heads of candle-sticks, like as Tarentum, for the shanke, shaft, & body supporting the same: and therefore that candle-sticke was counted rich indeed, when both these places seemed to concur to the making and workmanship thereof: for such a candle-sticke some haue not bin ashamed to giue as much money as the salarie and yearly pension of a Tribune militarie or Colonell, cometh to: and yet you see, an implement or moueable it is, that hath but a vile & base name, for called it is in Latine *Candelabrum*, of sticking a candle in it. But wil you know who was so foolish as to bestow so much vpon a candle-stick, and what a tale belongeth therunto, for to mend the hard bargain: thus stood the case, it was a jolly dame in Rome, named *Gegania*, who made this wife match. And when she had so done, she must needs forsooth make a feast to shew this candle-stick to her guests, which cost her 50000 sesterces. Now *Cleippus*, the founder or Brasier that sold it her, was mishapen and bunch-backed. And order was taken by the commandement of *Theon* a publick crier of Rome, that he should in the midst of supper be brought into the place stark naked as euer he was borne (and as foule and ill-fauoured a fellow he was otherwise as a man should lightly see) vnder a colour to make sport and to set the company in a laughing; but indeed to mocke *Gegania* the Mistresse of the house. But what followed thereupon? The woman cast a faspie to him by and by, and in that heat of loue, or lust rather, admitted him anon to her bed, and after set him into her will, and made him her heire. This crooke-backed squire seeing himselfe exceedingly inrich by this double bargain, adored the said candlestick no lesse than a god, as the only cause of his rising, and all the wealth he had: and thus by his occasion, one tale more goeth current abroad in the world, of Corinthian vessels. And yet afterwards (as it were) to punish his Mistresse for that light behaviour of hers) he caused a stately and magnificent sepulchre to be made for her, whereby the infamy and shame of *Gegania*, might be

eter-

A eternized and continue fresh in remembrance with all posterity. But to return again to Corinthian Brasse and the vessels made thereof, although it be well knowne, that there are no Candle-sticks indeed made of that Mactelin, yet there goeth a great name of them, as if they aboute all other things were certainly cast of that metall: and the reason is, because that *Mummius*, as in the heat of his victorie he sacked and destroyed Corinth, so withall hee dispersed the brasse by parcels and piece-meale, and sent it away into many other townes and cities of Greece.

Moreover, this is to be noted, That in old time it was an ordinary thing to make of brasse, the sides, lintels, sills, and leaues of great dores belonging to temples. I read also in Chronicles, that *Cn. Octavius*, who defeated *K. Persus* in fight at sea, and rode in triumph for that naual victorie, caused the double gallerie, which standeth nere vnto the Cirque of *Flaminius*, to be erected; which was called the Corinthian gallerie, for that the chapters of the pillars were of brasse. Furthermore, the Annals do testifie, that it was thought good, That the route of the chappel of *Vesta*, should be alwaies covered ouer with Brasse, after the manner of Saracossian work. Likewise *M. Agrippa* made all the chapters of the pillars, standing in the temple *Pantheon*, of Syracusan brasse, which remaine at this day to be seene. And not onely publick places and buildings were thus beautified and adorned, but great men priuat houses also were enriched by this metall: for it appeareth vpon record, That *Sp. Carvilius*, one of the Treasurers of Rome, amongst other criminal imputations that he objected to *Camillus*, challenged him for this, That the dores of his dwelling house were plated and garnished with brasse & copper. Moreover, as *L. Piso* reporteth in his Chronicle, *Cneus Manlius* after his conquest of Asia, was the first that in the triumph wherein he rode in the yeare after the foundation of Rome 568, he made a shew of three-fixed tables, cup-bourds, and bourds, supported by one foot all of brasse: And *Valerius Antias* verily doth write, That *L. Crassus*, heire to that great Orator *L. Crassus*, made sale of many such brasse tables, which fell vnto him by right of inheritance. Semblably, I find in the histories, That in old time they were wont to make many large basons, supported with a frame of 3 feet, known by the name of Delphick basons, for that they were commonly dedicated to *Apollo*, the patron or god of Delphos, for to receive the gifts and oblations offered to him. In those daies also the lamp-branches hanging aloft in churches, spreading out their arms abroad and carrying lights like trees bearing fruit were usually made of brasse: and such a one is to be seen in the temple of *Apollo* within the Palatine hill at Rome: which being found by *Alexander* the great in the sacage of Thebes, the said prince dedicated to the god *Apollo* at Cyme, a towne in *Æolia*. To conclude, this art of founding and casting brasse proceeded farther and passed on, vntil it was commonly practised in making the idols and images of the gods.

CHAP. IIII.

¶ At what time the first brasse Image was cast at Rome. The first originall and beginning of statues, and the honour that belongeth to statues. Also the diuers kinds and fashions of them.

THE first Image of brasse that euer was made at Rome, I finde to be consecrated to *Ceres*, & raised it was out of the goods of *Sp. Cassius*, who aspiring to be a king, was therefore slaine by his owne father. But this honor continued not long proper to the gods, but passed from them vnto the statues of men also and their portraitures, and that after sundry sorts. In ancient time the manner was to vernish their images and statues of brasse, with ** Bitumen*: more maruel it is therefore, that afterwards men should take such pleasure to guild them as they did: this inuention, whether it came from Rome or no, I know not: but if it did, surely it was no ancient deuise, nor of any long continuance there. Certes, the manner was not in old time to expresse the liuely similitude of men in brasse, vnlesse they were such worthy persons as by some notable and famous acts deserved to be immortalized, as namely, for winning the prizes at any of the foure sacred and solemne games holden in Greece, and principally at those of Olympia, where it was an ordinary thing to see the statues of those erected and dedicated, who had achieved any victory there. But in case any one were so happy as to obtain victorie at those solemnities, a feweral times his statue in brasse was so liuely & perfectly cast, that it resembled his person full & whole, according to the proportion of euery member, joint and muske of the body, yea, euen to the

or as some say, with a kind of Amber.

Which was a tale, or 50000 sesterces.

* Cleippus for gibber, &c. not Fallo. Who as it should seeme, was one of the guests, & knew how to play his part well enough.

the haire of the head and beard. And such kind of complete images, the Greeks use to call Icones, personages. The manner of the Athenians was to honour men of singular vertue and valour, by representing their personages in brasse; but I am not sure whether those Athenians were the first that brought up that manner or no: true it is, that long ago they caused statues of *Harmodius* and *Aristogiton*, to be made of brasse at the charges of the state, and to be erected in publick place, for that they had the courage and heart to kill *Pisistratus*, who tyrannized ouer them: and this fell out just in that very year wherein the kings were also deposed at Rome, and expelled the city for euer. And in proceffe of time this manner was taken up in all parts of the world: so plaussible to the nature of man, is the ambitious desire to perpetuate their memorie by such monuments, in so much as there is not a good towne within our prouinces, but they have begun already to beautifie their market places with many such ornaments of brasse statues & images, together with titles, honours, and dignities engrauen at the bases or piedestal thereof, for the better continuance of mens memoriall, that the posterity might be informed by such inscriptions, as well as by their tombs and sepulchers. And at length the ambition of men proceeded so far, that as well their priuat houses within, as the base courts and porches without, were so beset with images, that a man would take them for some publicke places within a city: and all this arose from the deuote courtisie of vassalls, in token of homage and honour done to those their patrons and lords, whom they acknowledged to be the protectors and maintainers of their life and liberty.

CHAP. V.

¶ Of brasse statues in long robes, and diuers other sorts of Images. Whose statues were first erected vpon pillars. When they were set up first in publicke, and at the common charges. Finally, which were the first in Rome.

IN antient time all the images and statues erected to the honour of any men, were in their gowns and robes. Men delighted also to haue them otherwhiles all naked, resting vpon their spears which they held in their hands: this pattern came from the Greeks, resembling the manner of their young men, which in that sort did exercise naked in their publick wrestling places, thereupon called *Gymasia*: and such images are named *Achilles*. And verily, the Greekish fashion it is, To hide no part of the body, but to shew all: whereas the Romanes contrariwise (like souldiers and military men) used to make their statues armed with a cuirace or breast plate only, leaving the rest of the body discovered and bare. And *Julius Caesar* verily the Dictator, was well content that his image should be set up in the Forum or common place at Rome, armed with an habergeon or coat of male. As for such statues which represented in habit the priests of *Pan*, called *Luperes* (i. all discovered but their priuities) it is an inuention new come up, and as lately deuised as those which be portraited in clothes or mantles. *Mancius* appointed that his image should be erected in that habit and manner, that is to say, bound and unarmed, as he was deliuered prisoner to the Numantines his enemies. As touching the statue of *L. Atilius*, a famous Poet, I will report vnto you what writers haue recorded, namely, That being himselfe a very little man and low of stature, he caused his image to be made exceeding big and tall, and so to be set up within the temple of the Muses at Rome. As for the statues represented on horse-backe; in great name and request they were among the Romans: but no doubt they had their precedent from the Greeks. At first they honoured such horsemen only in this sort, who had won the price in the race at those solemn & sacred games which were held in Greece, and those horse-runners they called *Celeres*: howbeit, afterwards the like honour obtained they, who had born themselves best at the running of chariots, whether they were drawn with 2 horses or four. And from hence came the manner with vs of our valiant captains and victorious generalls, to haue their statues made riding triumphant in their chariots. Howbeit, long it was first ere this fashion came to be taken up: and before the daies of *Augustus Caesar*, late Emperour of famous memory, there had not been knowne any such images at Rome riding in chariots either drawne with six steeds, or Elephants, as now there be. The manner also of riding in coches with 2 horses about the cirque or show place (which vsually they did who had bin lords Pretors of Rome) represented in their portraitures, is not antient.

Con-

- A Concerning statues erected vpon columns or pillars, they be of greater antiquity, as may appeare by that of *C. Marius*, who vanquished the antient Latines that invaded the territory of Rome: vnto which nation, the people of Rome was wont by vertue of the league, to allow the third part of the bootie and pillage gotten in the wars: during the Consulship of which *C. Marius*, vpon the victory atchieued of the Antiats, the city of Rome ordained, that the beak-heads with their brasse tines, which were taken from them in a conflict at sea, should be fastened vnto the pulpit of publicke pleas and Orations, which thereupon was euer after called *Rostra*: and this fortuned in the 416 year after the foundation of Rome. The like statue vpon a column was set up for the honour of *C. Duillius*, who first defeated the Carthaginians by sea, and for that small vicorie entered Rome in triumph: the same remaineth at this day to be seen in the Forum or grand place of the city. Semblably, *P. Minucius* obtained the same honour, who being Puruer or general of corne for the city in time of a dearth, behaued himselfe so well in that office, that his statue of brasse was erected vpon a pillar without the gate of Rome called *Trigemina*: and that by an vniuersall contribution of the people, who gaue voluntarily toward the charges thereof, every man to the value of an ounce of brasse coine. And I wot not whether I may boldly say that he was the first man who receiued that honour at the peoples hands: for before time I am well assured that the Senat only granted such rewards for mens good seruice. Certes, these were braue and honourable memorialls, had they not begun vpon occasion of some trifling matters to speake of. For such a statue was that of *Atilius Nauius* the Augur or Soothsayer, which stood before the entrie of the Curia or Councell chamber of Rome: the base or foot of which pillar was burnt, at what time as the said Curia or Senat-house caught a light fire, at the funerals of *P. Clodius*. The like image was set up (by authoritie from the State) in the publicke place of elections at Rome, called Comitium, to the honor of *Hermodorus* the Ephesian, who translated out of Greeke into Latine the lawes of the 12 tables, which the ten Decemvirs had gathered and set down for the publicke benefit of the city. As for the statue of *Hiranius Cocles*, which remaineth to this day, there was another reason of it, and the same of greater credit and importance: for that he alone sustaining the charge and brunt of *K. Porseus* army, made good the wooden bridge ouer Tybre at Rome, and caused the enemies perforce to abandon the place. As touching the Statues of the Prophetses *Sibyls*, three of them there be neare vnto the *Rostra*, before said, but of a lesse making, whereat I nothing maruell: the one was repaired by *Sen. Pacuvius Taurus*, one of the *Aediles* of the Commons; the other two by *M. Messala*. And I assure you I would haue taken these Images and that of *Atilius Nauius* to haue bene the most antique of all others, as being set up in the daies of *K. Tarquinius Priscus*, but that I see the statues of the former kings within the Capitoll.

CHAP. VI.

¶ Statues without gowne or robe at all. Of other Statues, Which was the first statue on horse-backe. When and whereupon all the Images, as well publicke as priuat were demolished and put downe. What women they were at Rome who were honoured with brasse statues: and which were the first statues erected publicly at Rome by strangers.

- A Among the said Statues of Roman kings, that of *Romulus* is without any coat or cassocke at all, like as that also of *Camillus*, which standeth at the pulpit *Rostra*. As for the Image of *Q. Marius Tremellius*, which was erected before the temple of *Castor* and *Pollux*, the same was in a gowne, and sitting vpon horse-backe: this noble knight had vanquished the Samnites twice: and by the winning of Anagnia, a city not far from Rome, procured thereby an easment vnto the people, from paying tribute vnto the state for the maintenance of the wars. In the ranke of the most antique monuments of Rome, I may range the statues of *Tullius Clabius*, *L. Roscius*, *Sp. Nauius*, and *C. Fulcinius*, which stand about the Pulpit *Rostra*: and these were the foure Roman Embassadors, who against all law of Nations, were during their embassage murdered by the Fidenatians. For this was an ordinary custome with the Romanes, to honour those in this manner, who in the seruice of the Commonwealth were vniuistly killed: as may appear likewise by *P. Iunius*, and *T. Cornelianus*, who by *Tecusa* the queene of the Illyrians were put to death, notwithstanding

* The twelfth part of their

wistanding they came in embassade to her. And here I cannot ouerpasse one point noted in the Annals, that the measure of the statues erected in the common place at Rome, was set down precisely to be three foot in height: whereby it may appeare, that this proportion and scantling in those daies was thought to be honorable. Neither will I conceale from you & omit the memorable example of C. * *Othavium*, who for one word speaking lost his life: this man being sent as Embassadour vnto king *Antiochus*, and hauing delivered his message vnto him according to his charge and Commission, when hee saw that the king made no haite to giue him his dispatch presently, but said hee would make him an answer another day; made no more adoe, but with a wand or rod that he had in his hand, drew a circle about the king, and compelled him by force to giue him his answer before he stirred his foot without that compasse. But this coft him his life: and for that he was killed thus in his Embassade, the Senat of Rome ordained, That his statue should be erected in the most conspicuous place of the city, and that was in the publick pulpit for Pleas and Orations, the Rostra before named. I read in the Chronicles, that the Senat made a decree, that *Taracia Calpa*, or, as some say, *Suffista*, a Votary or Vestall Nun, should haue her image made of brasse, and this speciall prerogative besides, that she might set it vp in what place she would her self: which addition or branch of the decree implieth no lesse honor than the grant it selfe of a Statue to a woman. What her desert might be, in consideration whereof she was thus honoured, I will set downe word for word, as I finde it written in the Chronicles, namely, *For that she had conferred fr ankely upon the people of Rome, a peece of meadow ground lying vnder the River Tybre, which was her owne Free-land.* I finde moreover vpon record, That the Statues of *Pythagoras* and *Alcihiades* were set vp in the cornered nooke of the Comitum at Rome, & that I by direction from the Oracle of *Apollo Pythius*, vnto which the Senate sent of purpose to know the issue of the Samnites warre, which was then in hand: from whence they had this answer, that if they looked to speed well in their affaires, they should take order to erect two statues of brasse in the most frequented place of the city of Rome, the one in the honour of the most valiant man, and the other in the honour of the wisest person of all the Greekeish Nation: which Images remained there vntill such time as *Sylla* the Dictatour built his stately hall or pallace in the same place: But I maruell very much, that those sage fathers (the Senatours of Rome at that time being) preferred either for wisdom *Pythagoras* before *Socrates* (considering that the said *Socrates* by the very same Oracle of *Apollo*, was judged the wisest man, not of Greeks only but of all others in the world;) or in regard of valour, *Alcihiades*, before so many hardie Captaines in Greece: but most of all I muse, that in both respects, as well of wisdom as vertue, they set any one before *Themistocles*. Now if a man be desirous to know the reason of these Columns and Pillars, which supported those Statues aforesaid, it was to signifie, That such persons were now advanced and lifted vp above all other mortall men: which also is meant by the triumphant Arches, a new inuention, and deuised but of late daies: yet both it, and all other such honourable testimonies, began first with the Greekes. But amongst many and sundry statues which it is granted and allowed vnto such as they affected and liked of, I suppose, there was neuer man had more than *Phalaris Demetrius* at Athens: for the Athenians honoured him with three hundred and threescore: and yet soone after they * brake them all to peeeces, euen before one full yeare went ouer their heads, that is to say, a few daies more than there were Images. Moreover, all the tribes or wards of Rome set vp a statue in euery street of the city (as I haue said before) in the honor of *Marinus Graidianus*, and those they ouerthrew euery one, against the coming in of *Scylla*.

As touching Statues and Images on foot, I doubt not but they haue beene for a long time greatly esteemed at Rome. Howbeit those on horse-backe were very antient: and that which more is, this honour they did communicat also vnto women as well as men; as may appeare yet at this day by the statue of *Clodia* sitting on horse-backe, as if shee could not haue bene honoured sufficiently by making her statue in the habit of a Damofell or Ladie of Rome in a side gowne. And yet neither the Chaste dame *Lucretia*, nor the valiant *Brutus* (who chased the kings and all their race out of Rome, and for whose sake and in whose quarrell the said *Clodia* was deliuered as an Hostage among others) neuer attained vnto that honour. And I doe verily beleue, that this Statue of hers, and that of *Horatius Coclus*, were the first that publique authoritie ordainyd: for before time King *Quintinus Priscus* caused both his owne Statue and also *Silvius* to be made, like as the other kings before him and after, as may be presumed by all lihood

A lihood and probabilitee. And yet *Piso* saith, that the other damofels and young gentlewomen her fellow hostages, after they were set free and sent home safe againe by king *Porfena* (for the honour that he meant vnto *Clodia* in consideration onely of her rare and singular vertue) caused the said statue or image of hers to be cast in brasse, and erected. But *Annus Fastidius* (another antiquarie or heralt at armes of Rome) reporteth this storie otherwise; for he writeth, That the statue of a woman sitting on horsebacke (which standeth ouer-against the temple of *Iupiter Stator*, and hard at the gate or entry of king *Tarquinius* the Proud his Pallace) was of ladie *Valeria*, daughter vnto *Valerius* the Consul, surnamed *Publicola*: who saith moreover, that shee it was alone who escaped from her fellowes, and swam ouer the riuer *Tiberis*; whereas the rest of the virgins which had been sent as pledges vnto king *Porfena*, were murthered all, by the secret traines B and indirect meanes of *Tarquinius* the Proud.

L. *Piso* moreover hath left in writing, that in the yeare when *M. Aemilius* and *C. Popilius* the second time were Consuls, the Censors for the time being (*P. Cornelius Scipio* and *M. Popilius*) caused all the images and statues of those who had been made magistrats, that stood about the Forum of Rome, to be taken downe; permitting those onely to stand which had beene erected and set vp either by grant from the people, or warrant and decree of the Senat. As for that statue which *Sp. Caelius* (him I meane who ambitiously fought to be a king) caused to be erected for his owne selfe before the church of the goddesse *Tellus*, the Censors not only pulled it down, but also took order that it should be melted. And this (no doubt) did those wise and prouident fathers, to cut off all means euen in such things as these, that might feed the ambitious spirit of men. There be yet extant certaine declamations of *Cato*, who being Censor, cried out against the vain-glorie and pride of certaine Romane Ladies who suffered their own images to be set vp in the prouinces abroad; yet with all his exclamations, he could not repress their ambition, but that their statues must be erected euen in Rome also: as for example, *Cornelia*, the daughter of the former *Scipio Africanus*, and mother to the two *Gracchi*, whose statue was made sitting: and this singularitie it had besides from all others, That her shooes were pourtrayed open and loose without any strings or latches at all. This image of hers was set vp in the great gallery or publick walking-place of *Metellus*, but now it is to be seen among the stately workes and buildings of *Octavia*.

Moreover, (by allowance and permission of the state) there haue been statues set vp in Rome in publicke place, by strangers: as namely, for *C. Aelius* a Tribune or Prouost of the commons, for that he published and enacted a law, That *Stennius Statilius* a Lucan, who twice had invaded and ouer-run in hostile manner, the Territory of *Thurium*, should be reputed as an enemy vnto the Romanes. In regard of which demerit, the *Thurines* honoured the said *Aelius* with a statue of brasse, and represented to him a coronet of gold. The same *Thurines* also caused another statue to be made in the honour of *Fabritius*, for raising the siege that inuested and beleaguered their citie. By occasion of which succour and reliefe giuen vnto strangers and aliens, it came to passe in process of time, that forreine states and cities shrouded themselues ordinarily vnder the protection of some great men at Rome; and in deuotion to them, honoured such as their lords and masters, by statues and all other means, euen as their bounden vassals. At length, there grew such disorder and confusion of these statues, that we had them pell mell at Rome without any choise or regard at all: in somuch as it this day, they are no fewer than three statues of *Annibal* to be seene at Rome, in three seuerall places of that citie, within the walls whereof he was the onely enemy euer knowne to haue launced his iaelin.

CHAP. VII.

Of the Brasse-founders in old time. The inestimable prices of molten Images. Of the most renowned Colosses and gyant-like Images in Rome.

THat the art of Founderie or casting mettals for Images hath been very antique, praiged alto and professen in Italie as well as in other countries time out of mind, may be evidently proued by the statue of *Hercules*, which *K. Evander* consecrated to the honour of him, in that very place (by folks saying) which now is the beast market in Rome. This image is called at this day, *Hercules triumphalis*, and at euery triumph is richly clad in triumphant habit. The image likewise of *Ianus* with two faces, dedicated by *K. Numa*, testified no lesse, and honoured

he is no lesse than a god, as by whom the times of war and peace be distinctly knowne. Moreover, the fingers of his hand are in that sort fashioned and formed, as they represent the number of 365, which are the daies of the whole yere; by which notification of the yere, he sheweth sufficiently, that he is the god and patron of time and ages. The images also which are knowne commonly by the name of Thufcanica, which are so dispersed abroad in all parts of the world, who will euer doubt but that they were commonly made in Tuscan? I would haue thought verily, that these Thufcanica had beene the images of the gods, and no other, but that *Metodorus Scerpius* who for the immortal hatred that he bare against the Romans had his * surname giuen him, reproches the Romanes among other imputations, That they had forced and sacked the towne Volusini, for the loue of two thousand pretty images in brasse which were therein. Considering then, that the inuention of making such molten images hath beene so antique in Italie, I cannot chuse but much maruaile, that the idols and images of the gods in times past dedicated in churches and chappells, were either of wood or potters earth, rather than of brasse, vntill the conquest of Asia, from whence to say a truer, first arose and proceeded all our exccesse and superfluities. As touching the first deuise and original or causing by moulds and forming the liuely similitudes of any thing expressly to the patterne, I shall haue fitter and better occasion to write thereof in my treatise of the art of Pottery, which the Greeks call *Plastice*, for of more antiquity I take it to be than this feat of foundrie: & yet this craft and cunning so flourished in times past, and brought forth art such excellent pieces of worke, and for number so infinit, that if I should put down the greater part of them, it would require many volumes; for, to comprehend them all, what man is able? During the time that *M. Scannus* was *Ædile*, there were three thousand molten images shewed vpon the stage when he exhibited his plaies, notwithstanding this theatre of his was made not to continue any time, but to serue for the present. *Mummus*, after the conquest of Achaia, brought in with him so many of these images, that hee filled the citie therewith, and no corner was free; and yet when he departed this life & died, hee left not behind him a competent portion for to bestow his daughter in marriage. And this I write not to accuse him a competent portion for to bestow his daughter in marriage. And this I write not to accuse him a competent portion for to bestow his daughter in marriage. And this I write not to accuse him a competent portion for to bestow his daughter in marriage.

What good speed this art had, may appeare by an example which I will set downe, of an image, deuised to expresse the likeness neither of god nor man: and a dogg it was in brasse, which many a man hath seene in our time in a chappell of *Iano* within the Capitoll temple, before it was burnt now last by the *Perillians*: This dog was made licking his owne wound; but how artificially it was wrought, and how liuely it expresse the proportion & feature of a dog indeed, to the wonder of all those that beholding it could not discern the same from a liuing creature, is apparant not only by this, That it was thought worthy to stand in that place and to be dedicated to that goddesse, but also by the strange manner of charge laid vpon them that had the keeping and custodie thereof: for no reall caution of money was thought sufficient to

A be pledged and pawned for the warrantise, or to counteruaile the worth thereof: Order therefore was giuen by the state, and the same obserued from time to time, that the sextons or wardens of the said chappell should performe the safety and forth-comming of it vnder paine of death.

As touching the bold and venturous pieces of worke that haue been performed and finished by this art, we haue an infinite number of such examples: for we see what huge and gyant-like images they haue deuised to make in brasse, resembling high towers more like that personages, and such they called Colossi. Of this kind is the image of *Apollon* within the Capitoll, transported by *M. Lucullus* out of Apollonia, a city within the kingdom of Pontus, which in height was thirtie cubits, and cost a hundred and fifty talents the making. Such another is that of *Isis* within *Mars* held, dedicated by *Claudius Caesar* the Emperour, which because it standeth so

neere vnto *Pompeys* theatre, men commonly call *Iupiter Pompeianus*, and full as big he is as *Apollon* abouemented. Like vnto these, is the colosse or stately image of *Hercules* at Tarentum, the handiwork of the said *Zysippus*, but he is forty cubits high and miraculous is the deuile of this colosse, if it be true which is commonly reported thereof, namely, that a man may moue and stirre it easily with his hand, so truly ballanced it stands and equally counterpoised by Geometry; and yet no wind, no storme or tempest, is able to shake it. Certes, it is said, that the workman himselfe *Zysippus*, provided well for this danger, in that a pretty way off he reared a colosse or pillar of stone full opposit to the winds mouth, for to breake the force and rage thereof, from that side where it was like to blow and beat most vpon the colosse: and verily so huge it was to weld, and so hard to bee removed, that *Fabius* furnished *Verrucosus*, durst not meddle

withall, but was forced to let it alone & leaue it behind him, notwithstanding be brought with him thence another *Hercules*, which now standeth within the Capitoll. But the Colosse of the Sun which stood at Rhodes, and was wrought by *Chares* of Lyndus, apprentice to the abouemented *Zysippus*, was aboute all others most admirable; for it carried fceuty cubits in height: well, as mighty an image as it was, it stood not on end aboute threefore yeaues and six, for in an earthquake that then happened, it was ouerthrowne: but lying as it doth along, a wonderfull and prodigious thing it is to view and behold: for first and foremost, the thumbs of the hand fingers and toes are bigger than the most part of other whole statues and images; and looke where any of the members or limbs were broken with the fall, a man that saw them would say they were

D broad holes and huge caues in the ground: for within these fractures and breaches, you shall see monstrous big stones, which the workmen at the first rearing and setting of it had couched artificially within, for to strengthen the colosse, that standing firme and vpright so ballasted, it might checke the violence of wind and weather. Twelve yeaues (they say) *Chares* was in making of it before he could fully finish it, & the bare workmanship cost three hundred talents: This money was raised out of *K. Demetrius* his prouision which he had set by for that purpose, & paid from time to time by his officers, for that he would not himselfe endure to stay so long for the workmanship thereof. Other images there are besides of the nature of colosses in the same citie of Rhodes to the number of one hundred, lesser indeed than the foresaid colosse of the Sun, yet there is not one of them, but for the bignesse were sufficient to giue a name to the place and enoble it, wherefoeuer it should stand.ouer and above, there be in the said citie fceue other gyant-like images or colosses representing some gods, and those of an huge bignesse, which were of *Braxas* his making. Thus much of workmen strangers.

And to come somewhat nearer home: we Italians also haue practised to make such colosses, forsurely we may see (and go no further than to the librarie belonging to the temple of *Augustus Caesar* here in Rome) a Tuscan colosse made for *Apollon*, and the same is fiftie foot high from the great toe vppward; but the bignesse thereof is not so much as the matter and workmanship: for hard it is to say, whether is more admirable, the beautifull feature of the body, or the exquisite temperature of the metall. Moreover, *Sp. Carvilius* long agoe made the great image of *Iupiter* which standeth in the Capitoll hill, after the Samnites were vanquished in that dangerous war, wherein they bound themselves by a sacred lay and oath to fight it out to the last man, vnder paine of death to as many as seemed to turne backe or once recule; to the making whereof, he tooke the brasse cuiraces, grieues, and morions of the enemies that lay dead and slaine vpon the ground: which is so exceeding bigg and large, that hee may very plainly and euidently bee discovered and seene from the other *Iupiter* in Latium, called therefore *Latianus*.

* It doth not appear what it was, but by all likelihood

* It should seeme that the Greeks had a piece in gold answerable in weight vnto the Roman *Denarius* in silver, which was aduantageous: and this cometh next vnto our French crowne.

* Those that sided with the

* *Fabius* faith 105 foot: whereby it appeareth that a cubit was one foot & a halfe. *Chares* the workman engraued vnder it this Hypogram in flambecke verse: *Tis is fideus videri* *non videtur videri* *Non videtur videri* *Non videtur videri*

* Tale incipiente
tē some read,
tale incedente.

loved rather to follow his father in such Workes as carried some constancie and maiesty with them, than any daintie gesture or curious elegancie, wherein his father excelled: and hee chose rather to employ his wit in expressing sad, austere, and graue personages, than to beat his braine about pleasant and beautiful works to please and content the eye. And therefore the portrait of *Hercules* which is to be seen at Delphos within the temple of *Apollo*, he exprest most excellently. The statue also of *K. Alexander* the great was of his making, and is thought to be a rare piece of work: the hunter *Thespius* was of his making, a work highly esteemed: like as the nine Muses also, known by the name of *Thepiades*. Hee represented also in brasse a skirmish on horsebacke, representing that Turnois which was performed at the Oracle of *Iupiter Trophonius*: likewise the coches of Queen *Medea* drawn with foure horses, of which kinde hee made many: as also an horse with panners: and hunters hounds as if there were a cry of them.

He brought vp vnder him one *Tisicrates*, who also was a Sicyonian, but hee rather seemed to imitate *Lyfippus*, than his master *Euthykrates*, in so much as many pieces of his making could be hardly discerned from those in the same kinde, which came out of *Lyfippus* his hand: as for example, the image of an old man resembling in habit a Theban, the portrait of *K. Demetrius*, and of one *Pentecles* who faued the life of *Alexander* the Great; in which regard hee deferred well to be immortalized by so good a hand.

Moreover, diuers artificers there be who haue written great volumes of singular workmen in Imagery, and they commend wonderfully one *T. elephants* a Phoecean, whose name otherwise had bin vnkown, for that in theffailly where he dwelt his works lay hidden & neuer came to light: for in regard of his skill and sufficiency, by all their voices equal hee was to *Polyclerus*, *Myron*, and *Pythagoras*. And to come vnto particulars, they write much in praise of his *Larissa*, his *Apollo*, and one *Spinarius* a notable wrestler, and who had won severall prizes in all the five kinds of masteries and feats of athleticke. And yet I am not ignorant, that some alledge another cause of his obscurenesse, and why hee was no more talked of, because hee was a feed workman to *Xerxes* and *Darius*, and devoted himselfe wholly to their seruice, and had the work of those two Kings onely.

As for *Praxiteles*, his workmanship was more scene in cutting of marble, and making Images thereof, wherein he had a singular grace and rare felicitie, and in which regard his name was the greater. Yet he shewed good proofe of his skill in foundery also, for there be most beautiful cast images of brasse which he made, to wit, the raising of *Proserpina* by *Pluto*, a Spinster spinning, which hee called *Catagnusa*: the image of Drunkennesse, god *Bacchus* attended with one of the Satyrs, a noble piece of worke, and which for the great voice and bruit that went of it, the Greekes firnamed *Periboeos*. The brasse images likewise, which stood sometimes in the forefront of the temple at Rome dedicated vnto *Felicity*, were of his making: as also the goddesse *Venus*, which when the chappell wherein the stood erected was burnt, during the reign of *Claud. Cesar* the emperor, was melted, an exquisite piece of work, and comparable to that *Venus* of his cutting in marble, which all the world speaks so much of. He portraied also in brasse a woman making corbeles and Chapters of floures, which goes vnder the name of *Thespiusa*: a foule old trot & a nasty, bearing the title of *Spilumene*: a carier also of flaggons or wine-pots, knowne by the addition of *Ocnophorus*. He exprest moreover in brasse, and that most liuely, *Harmodius* and *Aristogiton*, massacring the tyrant *Pisistratus*: which images being with other pillage taken and caried away by *Xerxes* K. of Persia, and recovered by King *Alexander* the Great when hee had conquered the kingdom of Persis, the said prince and conquerer sent them home to the Athenians again. Furthermore, he cast in brasse a youth lying in wait with an arrow to kill a Lizard, which was ready to creepe close vnto him and to sting; which piece of work hee termed *Sauroctonus*. Two images there are besides of his making, which people take much pleasure to behold, and those in countenance shew diuers affections; to wit, a sober Matron weeping, and a light Courtisan smirking: It is thought that this Courtisan was his owne Sweet-heart *Thyrpe*; for men doe note both (in the curious workmanship of the Artificer) the loue of him which fancied her, and also (in the pleasant countenance of the harlot) the contentment that shee took by receiving her hire. There is an image also of his making, which doth expresse his owne benignity & bountifull mind; for to a coach of *Calamis* his doing, drawn with foure horses, he set a choiceman of his owne handiwork: and why? because the posteritie another day should not thinke, That *Calamis* hauing done so well in pourtraying the horses, failed of the like cunning in expressing the

* Some thinke
he meant
this of *Apollo*.

A the manner to say a truth, *Calamis* was not altogether so perfect & ready in personages of men and women, as in the portraiture of horses. This *Calamis* was he who made many other coaches and chariots, as well with two steeds as foure, and verily, for absolute workmanship about horses, wherein hee neuer missed, he had not his fellow againe in the world: and yet because hee would not be thought vnlike himselfe, but be taken for as good an imager in expressing men and women, as in representing horses, one statue hee made in resemblance of *Ladie Alcmene*, which is so exquisitely wrought as no man could euer set a better piece of worke by it.

To come now to *Alcamenes*, trained vp vnder *Phidias*. A singular workman he was, & wrought many pieces in marble, as also in brasse, and namely a brasse *Pentathlus*, knowne also by the name of *Encriomachus*.

B But *Aristides*, who learned his skill vnder *Polyclerus*, is famous for the chariots that hee made as well with foure as two horses. *Iphicrates* likewise cast in brasse a Lionesse, which is much praised, and goes vnder the name of *Leana*, and that vpon this occasion: There was a certaine sturpet named *Leana*, who being familiarly acquainted with *Harmodius* and *Aristogiton* aboutened, (for that shee could play vpon the harpe, and withal sing so sweetly to it) and priuie to their plots and projects as touching the murder of the tyrant *Pisistratus*, would neuer, to die for it, discouer and reueale this intention and purpose of theirs vnto the tyrant and his fauourites. notwithstanding shee was put to most exquisite & dolorous torments about it. The Athenians therefore desirous to honour this woman for her resolute constancie accordingly, and yet loth to be thought for to make so much of such an harlot as shee was, deuised to represent the memoriall of her and her act by a beast of her name, and that was a Lionesse, yet for to expresse the particular mortue and reason of this honour done vnto the said Lionesse, they gaue order vnto *Iphicrates* the workman, to leaue out the tongue in the head of this Lionesse.

C Touching *Braxias*, there be two excellent pieces of his making, to wit, *Aesculapius* and *Selenus*. As for *Bedas*, he resembled in brasse old *Battus* adoring *Apollo* and *Iuno*: And all three by him curiously wrought, are now standing in Rome within the temple of *Concord*. *Ctesilas* exprest in brasse a man grievously wounded, fainting and ready to die thereupon, which hee did so liuely, that one might perceiue therein how little life & breath was left within his body. Hee made likewise the image of *Pericles* * *Olympius*, who for his diuine eloquence and holinesse was worthy of that heavenly name. And here by the way, a wonderfull gift this art hath, that it alwaies hath made noble and worthy persons more noble and famous.

D As for *Cephissodorus*, the admirable image of *Minerva* which is to be see in the hauen or harbor of the Athenians, was his workmanship: The altar also before the temple of *Iupiter*, firnamed *Sacrior*, neer the said hauen, was of his doing, and few pieces of worke there be comparable vnto it.

E *Canachus* made one excellent image of *Apollo* all naked, which by the title and synname of *Philefius*, stands in the temple called *Didymum*. And this *Apollo* was cast of the brasse of *Aegieticke* temperature. There is with the said *Apollo* another most exquisite and curious piece of worke by him deuised and wrought, to wit, a flag standing so lightly vpon his feet, that a man may draw a thred vnder them; and the same takes hold of the floore vnderneath, so daintily that hee seemeth to touch it with one foot by the clea, with another by the heele, and the same after such a winding manner twining and turning, as well with the one as the other, that a man would thinke one while hee were about to bounce and spring forward, and another while to start and cast himself backward by turns. The same workman inuented a deuise of yong lads & youths vaulting and mounting on horsebacke. *Cherax* exprest in brasse the liuely pourtraitures of *K. Alexander* the Great, and king *Philip* his father. *Cleofalus* represented in the same metall, one of these *Doryphori*, which were of *K. Darius* his guard, bearing a speare or pertuisane, as one of those warlike women, *Amasons*, wounded. And *Demetrius* woon great credit by making *Lyfsmache* in brasse, who had bene the Priestresse of *Minerva*, and exercised that ministerie threecore and foure yeares. And this artifice made also the image of *Minerva*, firnamed *Musica*, vpon this deuise. For that the dragons or serpents which serue in stead of haire vpon her *Gorgon* or *Medusaes* head, wrought in her targuet, would ring and rebound againe, if one strucke the strings of an Harpe or Citron neer to them. And the same imager made the liuely pourtraiture of *Sarcomus* riding on horsebacke; for that hee was the first that wrote of horsemanship. *Dedalus* moreover, who is ranged among the excellent founders & imagers of old time, deuised in brasse two boies, rubbing, scraping, and carrying the sweat from their bodies in the baine. And *Dinomachus* was

* For this harlot *Leana* fearing least the might for pain and torment let passe some word, and bewray the thing, shee bit out her owne tongue, & spit it in the face of the tyrant and the courtiers.

* For hee neuer made speech to the people, but with ioint hands lifted vp to heauen, hee praised *Zeus*.

was the workman, who cast the full proportion and similitude of *Proteflans*, and of *Pythodorus* the famous wrestler. *Alexander*, otherwise called *Paris*, was of *Euphranor* his making: The excellent art and workmanship wherof was seen in this, that it represented to the eye all at once, a iudge between the goddesses, the lover of *Helena*, and yet the murderer of *Achilles*. The image of that *Minerva* at Rome, which is called *Catulliana*, came out of this mans shop: and it is the same which was dedicated and set vp beneath the Capitoll by *Quintus Lutatius Catulus*, whereupon it took that name. Moreover, the image that signifieth good lucke or happy success, carrying in the right hand a boule or drinking cup, in the left an eare of corne and a Poppy head, was his handie worke. Like as the princeesse or ladie *Latoia*, newly deliuered of *Apollo* and *Diana*, holding these her two babes in her armes: and this is that *Latoia* which you see in the church of *Concordia* in Rome. He made besides many chariots, drawne as well with foure as two horses: as also a key-bearer or *Gliduchus*, of incomparable beautie. Semblably two other statues, resembling *Vertue* and *Vice*, both which were of an extraordinary stature and bignes, gyant-like, in manner of Coloffes. He made besides a woman ministring, and yet worshipping withall. Item King *Alexander* the Great, and King *Philip* his father, riding both in chariots drawne with foure horses. *Eurychides* a renowned imageur, represented the riuier *Enrotas* in brasse: and many men that saw this worke, were wont to lay, That the water ran not so cleare in that riuier, as art and cunning did appeare in this workmanship. *Hegyas* the imageur made *Minerva* and King *Pyrrhus*, which be much praised for the art of the maker: likewise boies practising to ride on horsebacke: the images also of *Cassor* and *Pollux*, which stand before the temple of thundering *Iupiter* in Rome. In the colonie or city *Parium*, there is an excellent statue of *Hercules*, the handy worke of *Isidorus*. *Buthyrcus* the Lycian was taught his cunning by *Myron*, who among many other pieces, beseming the apprentife of such a master, deuised in brasse to represent a boy blowing at a fire halfe out: and he it was that cast in the same metall the famous *Argonautes*, in that voyage to *Colchos*.

Leocras made the *Egle* that rauished *Ganymede*, and flew away with him; but so artificially, as if he knowing what a fine & dainty boy he had in charge, and to whom she caried him, claped the child so tenderly, that shee forbore with her tallons to pierce through the very cloths. The boy *Autolycus* also, winning the prize in all games and feats of aciuitie, was of his making; for whose sake *Xenophon* wrote his booke entituled *Symposion*: likewise that noble image of *Iupiter* in the Capitoll of Rome, surnamed *Thundering*, which is commended aboue all others: as also *Apollo*, with a crowne or diademe.

Lyciscus counterfeited *Lage* a boy, who in manner of a page or lacquey, seemed to be double diligent, & after a flattering and deceitfull sort performed nothing but cie-seruice. *Lycus* also made another boy blowing the coales for to maintain fire. *Menechmus* deuised to cast in brasse a calfe, turning vp the neck & head at the man that setteth his knee vpon his sides, and keeps his body down. This *Menechmus* was a singular imageur, and himself wrote a booke as concerning his own art. *Nauicles* was iudged to be an excellent workman, by the making of *Mercury*, & of a discobole or coiterias also for counterfeiting in brasse one that was a sacrificing or killing a ram. *Nauerus* woon credit by making of a wrestler, puffing & blowing for wind. *Nicerates* had the name for the curious workmanship of *Aesculapius* and *Hygia*, which are to be seen at Rome within the temple of *Concord*. *Porymachus* got great reputation by a coach drawn with four steeds, & ruled by *Alcibiades* the coachman, all of his making. *Pelicles* was the maker of that noble piece of worke that goeth vnder the name of *Hermaphroditus*. *Pyrrhus* counterfeited in brasse another *Hygia* & *Minerva*. And *Phenix* who learned his art of *Zyffippus*, liuely counterfeited the famous wrestler *Epitheser*. *Stipax* the Cyprian got himselfe a name by an image resembling one *Stranchopter*: This was a pretty boy or page belonging to *Pericles*, surnamed *Olympius*, whom *Stipax* made frying & roasting the inwards of a beaft at the fire, puffing and blowing therat with his mouth full of breath and wind for to make it burne. *Silanius* did cast the similitude of *Apollodorus* in brasse, who likewise was himselfe a founder and imageur, but of all other most curious and precise in his art, he neuer thought a thing of his owne making well done, and no man censured his worke so hardly as himselfe: many a time when he had finished an excellent piece of worke, he would in a mistlike vnto it, path it in pieces, and neuer stood contented and satisfied with any thing when it was all done, howe soe ful of art soeuer it was, and therefore he was surnamed Mad: VVhich furious passion of his, when *Silanius* aforesaid would expresse, he made not the man himselfe alone of brasse, but the

* i. Good health.

A the very image of Anger and Wrath also with him, in habit of a woman.ouer and besides, the noble *Achilles* was of his making, a piece of worke well accepted and much talked of. Of his doing is *Epistates*, teaching men how to wrestle and exercise other fears of aciuitie. As for *Strangelyon*, he made one of the Amazons, which for an excellent fine and proper leg that she had, they call *Eucnemus*; and in that regard *Nero* the Emperour set so great store by this image, that it was carried ordinarily where soeuer he went. This artificer made likewise another brasse image resembling a faire and sweet boy, which for the singular beautie *Brunus* of *Philippo* so loued, that it was commonly called by his surname *Philippensis*.

Theodorus who made the Maze or Labyrinth at *Samos*, caused his own image to be cast in brasse, which besides the wonderfull neere resemblance and likeness to himselfe, was contriued so artificially besides, and so set out with other fine deuises, that he was much renowned for the workmanship, and in the sight of all men it was admirable: he carrieth yet in his right hand a file, and in his left hand he bare sometime (with three fingers) a little pretty coach, and the same with four horses at it; which was afterwards taken from the rest, and had away to *Præneste*: but both the coach, the teeme of horses, and the coachman were couched in so small a roome, that a little file (which also he deuised to be made to the rest) couered all with her prettie wings.

Xenocrates was apprentice to *Tiscrates*, or as some say, to *Euthyrcates*; but whether of the twaine soeuer was his master, he outwent them both in the number of statues and images that he wrought, and besides compiled bookes of his owne art and workmanship.

Many artificers there were, that by imagerie delighted to counterfeite in brasse the battrailes that king *Atalides* and *Eumenes* both, fought against the *Galatians* or *Gallogreekes*, and namely, *Ligonius*, *Pyromachus*, *Stratonicus*, and *Antigonus*; and this artificer last named, composed bookes also of his own art. *Boethius*, although he was a better workman in siluer, yet one piece of worke he made in brasse, which had an excellent grace, and that was a child throttling a Goose by the necke.

Of all these pieces of antique worke which I haue reckoned vp, the most choise and singular about the rest, *Nero* before time had by his violent edicts and commandements caused to bee brought from all parts to Rome, and he disposed them in diuerse roomes of his golden house for to adorne and beautifie the same; but now they be consecrated by *Vespasian* the Emperour, in the temple of Peace, and in other stately buildings and edifices of his.

D Many other excellent artificers there are besides these about rehearsed: but they may be all ranged in one ranke, and counted for their skill and cunning equally, for a man shall not find one piece of worke of their making, that carrieth any singularity about the rest, and namely *Ariston*, who also was wont to graue and chase in siluer, *Callias*, *Clephas*, *Cantharus* of *Sicyone*, *Dionysodorus* who was an apprentife trained vp vnder *Critias*, *Deliaides*, *Euphorion*, *Eumicus*, and *Hecateus*. As touching famous engrauers in siluer, I read of *Lesboles*, *Praxinos*, *Priodiceus*, and *Polygnonius*, who also were most excellent and renowned painters. Likewise of siluer smiths or grauers in siluer, we haue *Stratonicus*, and *Scymnus*, who had for his master *Critias*.

Now will I reckon vp those worthy and famous Imageurs, who employed themselves in one and the same kind of worke. In the first place, *Apollodorus*, *Androbulus*, *Aclepodorus*, and *Alcetas* tooke pleasure to expresse the similitudes of learned men & Philosphers. As for *Apelles*, he delighted besides to represent women at their deuotions, adoring the gods, and offering sacrifices. *Antigonus* had a grace likewise to represent one carrying and scraping his skin al over the body in a house, as also the murderers of the Tyrants abouenamed. *Antimachus* and *Athenodorus* loved to haue in their shops the statues of great ladies and noblewomen. *Aristodorus* tooke much pleasure to busie himselfe about the portraying of wrestlers, coaches with two horses set therof, and a coachman, Philosphers and great clearkes, old matrons, and king *Seleucus*: There is also of his making a *Doryphorus*, resembling one of *Darius* his guard, which is a proper piece of worke & a louely. As touching the *Cephistodori* (for two of them there were) the elder had a great dexterity in making *Mercurie* fostering prince *Bacchus* in his infancie: He made also one, preaching to the people, and casting forth his armes; but what person of quality he should be, it is not certainly knowne: the younger was wont to represent the Philosphers. *Calathas*, who joined with *Phidias* in the making of *Iupiter Olympius*: He delighted also to be doing with the images of Philosphers. So did *Clison* and *Cenchramis*, *Callicles*, and *Cephis*. As for *Calcothones*, he busied and amused himselfe in the counterfeits of *Comedians*, players of enterludes, and champions. *Daphippus*

* *Antimachus* the same that *Antimachus*

hippus had a very good hand, in making one scraping and rubbing his body in an hot-house. *G Daiphron, Democritus, and Demon* were as cunning and perfect in the personages of Philosophers, and *Sages, Epigenus* would haue his hand in all those works in manner which I haue rehearsed, and laboured to imitate those artificers: but he surpassed them all in a Trumpeter of his owne devising, and a little infant, who seeing the mother slaine, made toward the dead corps, and hung about it as if it would play and be played withall, full pittiously to behold. *Eubolides* made one, as if he were counting upon his fingers. *Mycon* his cunning was most seen in the counterfeiting of wrestlers and such as practise feats of actiuitie: and *Menogenes*, in making chariots with foure horses. *Nicoratus* likewise enterprised all manner of works wherein others were best seen: and besides represented the personage of *Alciades*, together with his mother *Demarete*, as shee sacrificed with lampe light burning by her. *Pisicrates* shewed much skill with a chariot of two horses, wherein he bestowed * *Pisbo* sitting in the habit of a woman: The images *Mars* and *Mercurie* also, which stand in Rome in the temple of *Concordia*, be of this mans making. As for *Perillus*, there is no man commendeth him for his workmanship, but holdeth him more cruell than *Phalaris* the Tyrant, who set him a work, for that he deuised a brazen Bull, to roste & frie condemned persons in, assuring the Tyrant, that after the fire was made vnder it, they would when they cried seeme to bellow like a Bull, & so rather make sport than moue compassion: but this *Perillus* was the first himselfe that gaue the hanell to the engine of his own inuention, & although this was cruelty in the Tyrant, yet surely such a workman deserved no better a reward, & justly he felt the smart of it: For why? The art and cunning foundry, which of all others is most ciuile & agreeable to our nature, and which had bene emploied ordinarily in representing the personages of men and gods, this monster of men abused, and debased to this vile and vnaturall ministry of tormenting man. VVould one haue euer thought, that after so many witty & worthy men who had trauelled in this science to bring it to some perfection, all their labours should turne in the end to this purpose, for to make instruments thereby of torture? And certes, there being many pieces of his workmanship, they be kept and saued for this cause onely, that as many as see the same, may detest and abhor the wicked hand that made them. But to proceed forward to other workmen in this kinde. Of *Silens* making are the images of *Ceres, Iupiter* and *Minerua*, which at Rome are within the temple of *Concord*. The same man took pleasure in counterfeiting ancient dames and matrons, weeping, praying, and offering sacrifice. *Simon* [of *Agina*] was very good at the making of a dog and an archer. *Syratonicus* that famous cutter and engrauer, was neuer well but when he portrayed some Philosopher or other: no more than *Scopus*, both the one and the other. As for wrestlers and champions, armed men, hunters, and sacrificers, they were the onely workes that these artificers following delighted most in, so wit, *Eucher, Glaucides, Heliodorus, Hecanus, Leophron, Lyfon, Leon, Menodorus, Myagrus, Polygrates, Polydorus, Pyloricritus, and Protagenes* (who also was a most excellent & renowned painter, as I will hereafter shew more at large) also *Patrocles, Polix, Posidonius* born at Ephesus, who likewise chased and engraued in silver most finely, *Periclimenus, Philon, Simenus, Timotheus, Thomestus, Timarchides, Timon, Tisias, and Tirasion*. But aboue all other, *Callimachus* is the workman of greatest note, in regard of a by name giuen vnto him, and that was *Cacizotechnos*: and well he might be so called, for hee would alwaies be finding fault with his own workmanship, & neuer could see when to make an end, thinking still that he had not bestowed art ynough vpon that he had vnder his hand. And so he brought forth little or nothing perfect in the end: A notable and memorable example to teach all men not to be ouer curious and exquisite in any thing, but to hold a measure in all. And there is a daunce of Lacedemonian women of his making: a piece of work which he went about also to amend, and when he thought to make it better, he married it cleane, so that it lost all the grace it had before. Some say, that this *Callimachus* had bin in former time a painter. And since I haue entred so far into this Treatise of statues & images, I may not passe ouer in silence, but note (as it were) by the way one thing of *Cato*, although haply it may be thought but a meere vanity: In that expedition or voyage wherein Cyprus was conquered and reduced vnder the dominion of Rome, hee made port-faile of all the pillage taken there, saue only one statue of *Zeno*, not for the excellencie of the matter, for it was but brasse, nor yet for the art and curious workmanship thereof, but for that it was the image of a Philosopher. In this discourse of statues and images, I must not passe by one, although it is not certainly known who was the maker of it, and this is *Hercules* in his shirt and other habit that he wore vpon the mount Oete: standing now at Rome neere vnto the publicke

pulpit

A pulpit called *Rostra*: Made he is (whosoever did it) with a grim, sterne, and fower countenance, and such indeed as doth bewray and feel those intolerable torments which the body sustained by that poisoned thirst [sent to him from *Deianira*.] Vpon this statue there stand 3 titles or inscriptions: the first is this; *L. Lucullus Imperatoris de Manubius*; *L. Lucullus* Lord Generall, erected this statue out of the spoile of the enemies: the second, *Papilius Luculli filius ex S. C. dedicauit*, i. The son of *L. Lucullus*, being orphan or ward, dedicated this, by an order or act from the Senat: the third, *T. Septimius Sabinus Aedilis Curulis, ex priuato in publicum restituit*, i. *T. Septimius Sabinus*, Aedile Curule for the time being, hath from a priuato house caused it to stand againe in publick place. This is the image of that worthy *Hercules* that fought for many battels, indured such hard conflicts and labors, and was so highly honored.

B Now is it time to returne to the different kinds and sundry temperatures of brasse, from which I haue digressed: first and foremost therefore this is to be noted, That in Cyprian brasse or copper there is to be considered, one sort which is named Coronarium, and the other that they call Regulare; and both the one and the other will abide the hammer & be brought into thin plates As for the Coronarium or Laton, when it is reduced into thin leaues or plates, and then coloured or rubbed ouer with the gal of an oxe, it looketh like gold, and maketh afaire shew in those coronets that plaiers weare; whereupon it tooke the name Coronarium: the same, after that to euery ounce of it there be put six scruples of gold, and be reduced into a very thin foile, resembling the color of fire, like a rubie or carbuncle stone. As touching this brasse, it is found also in other mines of metall, like as the pot brasse Caldarium: this only is the difference, that this Caldarium will melt only, for vnder the hammer it will break; whereas the other sort of copper named Regulare, yeeldeth to the hammer and will be drawne out, whereupon some there be who call it *Ductile*, battable; and such is all the kind of copper or Cyprian brasse. That also which is found in the mines of other metalls, by art refined, differeth from the foresaid pot-metall, for out of what mine soeuer it cometh, after that the dross & imperfections thereof be thoroughly purged by the fire, being thus (I say) cleansed, it becometh Regulare and will abide the hammer. As for all other sorts besides the Cyprian brasse aboue named, the Campana brasse is counted best: like to which, there is much in other parts also of Italy, and in the provinces: but to euery [hundred pound of brasse] they put 8 pound of lead: then they boile it as it were and melt it again with a soft fire, for want and scarcitie of wood and fuel. And what difference there may be in that regard, it is most of all seen in the heart of France, where it is commonly melted (for lack of other fuel) among stones made red hot: for by reason that this is a swift & scorching fire, it becometh black and brittle withall: besides, they melt it but once: but surely to doe so oftner, maketh very much for the goodnesse thereof.

CHAP. IX.

¶ The difference in Brasse: the diuers mixtures thereof: and how Brasse should be kept.

E Moreouer, it were not amisse to note thus much also, that all kind of brasse melteth best in coldest weather. Now there is another temperature of brasse which serueth for founders, imageurs, and brazen tables, called thereupon in Latine, *Statuaria* and *Tabularis*, which is made in this manner following: first, the masse, ore, or stone as it cometh out of the mine, is melted in the bloome-smithie, and so soone as it is melted, they put thereto a third part of the brasse *Collectaneum*, that is to say, broken pieces of old vessels that haue bin vfed, and bought vp here and there. In the choice whereof, this care would be had, that for to giue vnto this temperature the kind seasoning as it were, which peculiarly it requireth, there would be gotten such pottain or old metall which is ouerborne, and by ordinary occupying and vring to the hand, bright-shining, and as one would say tamed, made gentle, and pliable. It would not be forgotten also, to euery 100 pound weight of the said melted ore, to mix 12 pound and a halfe of Tin. But to haue a kinde of Brasse metall that is most tender and soft, there must be giuen vnto it that mixture or temperature which is called Formall, namely, by putting thereto of ordinarie lead a tenth part, and of Tin a twentieth part; and by that means especially it taketh that colour which they call *Grecanicke*. The last temperature is that, which in Latine they call *Ollaria*, as one would say, the pot-brasse, for it taketh the name of that vessel whereto it is most emploied.

X x

and

and this is by tempering with every hundred pound weight of brasſe, 3 or four pound weight of G
argentine lead or tin. To Cyprian brasſe or copper, if you put lead, you ſhall have that deep red
or purple colour which giueth the tincture to the robes that ſtatues are portraited with. More-
over, this is to be noted, that the more you do ſcour any veſſels of brasſe, the more are they ſub-
ject to ruſt, and ſooner will they gather it, than if they were neglected and not medled withall;
vneleſſe they be well annointed with oil. It is ſaid, that a vermith made of tarre, is ſingular for to
preferue and ſaue any brasſe from ruſt. To conclude, brasſe hath ſerued many a year ago, for the
perpetuity of memorials and regiſters, as we may ſee by thoſe braſen tables here in Rome, when
it be cut and ingrauen all our publick laws and conſtitutions.

CHAPTER. X.

¶ *Of Cadmia or Brasse ore, and the medicines wherein it is usually employed.*

THe mines and veins of brasſe ore do many waies furniſh vs with medicines : a good prooſe whereof this may be, that any vlcers be ſooner healed therewith : but the moſt medicinable of all minerals that belong to brasſe mettall, is Cadmia [artificial.] And verily there is a kind of Cadmia found in the furnaces where ſiluer is fined, of a whiter colour and leſſe ponderous, but nothing comparable to that which cometh from the brasſe furnaces. And ſundry forts there be of Cadmia: for the very ſtone of which they make brasſe, is called Cadmia, and as it is neceſſary for foundlers, ſo it is of no uſe at all in Phyſick. Now is there a Cadmia beſides which is made in the furnaces, and ſo called, but the reaſon thereof is far different : and this kinde of Cadmia cometh of the fineſt and thinneſt part of the ore or matter in the furnace, caſt vp aloft by the flame & blaſt, ſticking to the rooſe or ſides of the furnace, higher or lower according to the proportion of the lightneſſe that it carrieth, more or leſſe. The fineſt and the ſoure as it were of Cadmia, is found in the very mouth of the furnace, whereas the flames * do ſtrive to get forth; the Greeks call it Capnitis, for that it is ſmokie and burnt, and for the exceeding leuety thereof reſemble flying cinders. That which is more inward and hangeth downe from the coping and vaulted rooſe of the furnace, is the beſt : and in that reſpect, becauſe it hangeth ſo as it were by cluſters, they giue it the name Botrytis: heauier this than the former, but lighter than thoſe that follow after. As for the colour thereof, it is in two ſorts: that which you ſee of a dead blew like aſhes is the worſe, whereas the red is the better; the ſame alſo is brittle and will ſonne crumble ſmall: for eie-ſalues and collyries reputed ſoueraign. A third kind of Cadmia ſticketh by the way, to the ſides and wals of the furnace; for by reaſon of the heauineſſe and ponderoſity, it was not able to mount vp to the bending rooſe of the furnace: this the Greeks call Placitis : and well it may be ſo named; for a cruſt rather it is than a ſcaly ſubſtance: break it, you ſhall find many colours in it; and this Cadmia for to heale ſcabs and ſcurfe, as alſo to cicatrice or ſkin a ſore, is better than the former. Out of this kinde, there proceed other twaine, to wit, Onychitis, which in the outſide is after a ſort blewish, but within, it reſembleth the flecks or ſpots of the onyx ſtone; and Oftracitis, blacke throughout, of all the reſt moſt ſoule and groſſe, howbeit, fitteſt for wounds.

Generally, that Cadmia, of what kinde soeuer, is best, which is found within the furnaces of Cyprus: the Physicians doe burne a second time with pure coles; and when it is calcined and turned to ashes, they quench it with Ammeian wine, if they meane to prepare it for plasters; but with vinegar, for scabs and scurfe. Some there be, who after it is stamped grosse, burne or calcine it in an earthen pot, then wash it well in a mortar, and afterwards dry it. *Nymphodorus* taketh the very stone or the ore as it lieth in the mine, the heauiest and most compact that may be found, which he burneth among coles, and after it is sufficiently burnt, quencheth it in wine of Chios: he beateth and punneth it then again, anon he drieth or bouldeth it through a linnen cloth, and grindeth it finer in a mortar: this done, soon after he steepeth and soketh it wel in rain water, and that which setleth in the bottom he stampeth: and this he doth, vntill such time as it be like ceruse or white lead, and wil not crake between the teeth. The same maner of preparing vith *Rollus*, but he chuseth the purest and brightest stone that he can get.

The medicinable operations of Cadmia, bee, to drie, to heale throughly, to stay fluxes, to cleanse the filthinesse in the eyes, and to scour the pin and web, to extenuate any roughnesse; and

A and in one word, to worke all those effects which I shall attribute hereafter to Lead.

Furthermore, brasse it selfe may be burnt; and being so prepared, it serueth for all those purposes beforenamed: ouer and aboue, it cureth the pearls, filmes, and skars in the eies; if it be incorporated with milk; it healeth the vlcers in the eies: the same likewise they vse to grinde vpon hard stones, after the manner of the Egyptian collyrie; taken as a lochoch inwardly with hony, it cureth vomit. Now as touching copper, the manner is to burn it in vnaked earthen pans, with the like weight of brimstone; but all the breathing holes of the furnace ought to be well clofed and luted vp where they must stand, vntill such time as the said pans be thoroughly baked hard: some put salt thereto: others in stead of brimstone take alumne; and there be againe, who vse neither the one nor the other, but sprinkle it well with vineger onely: when it is thus calcined, they put it in a mortar of Thebaick marble, and then wash it in rain water. Howbeit, this first lotion of it maketh it but weak and of small effect: and therefore it had need of a second washing, in a greater quantity of water, and to be braied againe therein, and left so standing vntill it be settled: this would be reiterated often, vntill such time as it be brought to looke like vnro Minium: after that, it ought to be dried in the Sun, and saued in a brassen box.

С Ч А Р. XI.

¶ Of the drosse or refuse of Brasse : of the skales of Brasse : of Verdegreece or Spanish
greene : of Stomoma : of Verdegreece which is the rust of
Brasse, and of Hieracium.

C The dross of Brasse is washed after the same manner, but of lesse effect it is than Brasse it selfe: howbeit the floure of Brasse or verdegreece, is much vsed in Physick: and engendred it is, when Brasse is melted by much blowing, and then transferred out of the furnace into other receptacles; and there are shaken out certain scales of miller, and this they call Elos æris. Verdegreece. Now these scales vse to fall off, when as the masses of brasse be cooled with water and be red. Likewise of the same masses, there is made that which they call Lepis; and thus the verdegreece may be sophisticated, so as the said Lepis or scales be sold for it. Now these scales come, by being driuen & smitten off from those nails which they vse to forge of the said masses and lumps of brasse, and all these most commonly are found in the Cyprian forges: herein only is the difference, that the foresaid scales are driuen forcibly & smitten from the said pains or masses of brasse, whereas the floure of verdegreece falls off by it selfe. And yet there is a second kind of these scales more fine and subtile than the other, to wit, driuen and smitten from the very outside and vppermost part of the brasse, and this they call a Stomoma.

Howbeit, Physicians in these daies (with reverence to their profession and with their good leave be it spoken) are ignorant wholly of all these things; yea, and the greater part of them be not so much as acquainted with the terms and bare names (so far be they from the true composition of medicines :) and yet in times past, it belonged properly unto Physicians, for to be acquainted with the terms of all simples, and to be perfect in the knowledge of them. But our physicians in this age, when they are to make any composition of simples, they have recourse straightwaies to their books to be directed by them, that is to say, they try experiments by the hazard of their poore patients; and then finding the names of this and that, they fet downe a receipt, & for the making thereof trust the Apothecaries, as also for the ingredients, which commonly they do sophisticat and corrupt by all deceitfull means that possibly they can devise, selling their emplasters and collories that are old made, and such drugs as are past all goodnesse, serving the bills of the Physicians with the very refuse of their shop. And thus the deceitfull wares that they haue, they rid their hands of, to the discredit of the Physician, and danger of the sickes.

But to come again unto our skales, and floure of brasse or verdegreece; the manner is, first to calcine both the one and the other, either vpon earthen vessels or brasse pans; then, to wash the same as is before said, and for the fumes. But ouer and aboue, these being prepared thus accordingly, are singular for the carnosities and excrecences within the nostrils, or the fundament: for hardnesse also of hearing, if they be blowne into those parts by meanes of a pipe: and the sores or cankers of the mouth they doe heale, by application of their powder: this powder also taketh away the inflammations and accidents of the tonsils or almonds about the thiroat, if it be tempered and incorporat with honey, and vsed in a collution or gargarisme. There is be-

side, a scale that commeth of laton or white brasse, farre better than that which the red brasse or copper doth yeeld.

Moreover, there is a deuise that some vse, namely, to let first the nails and panes of brasse to lie wet in the vrine of a boy; others, so soone as the scales be driuen off, bray them, and afterwards wash them in rain water; which they vse to giue for the dropsie, to the weight of two drams in one hemine of honied wine; and besides they make a liniment with it and houre, for to vse outwardly to the belly.

As touching the rust * of brasse, great vse there is of it in Physick: but it commeth after many sorts; for first and foremost, it is found sticking (in manner of the floure aforesaid) vnto the stone or ore out of which brasse is tried, in such sort as it must be * scraped from it before a man can haue it. Also it is made after an artificiall manner, by hanging certain plates of laton driuen full of holes, and hung in a pipe or barrell ouer vineger; but the same ought to be cloe covered and stopp'd with a lid of brasse, so as the said plates do not touch the vineger: and verily, verdegreece thus made, is far better than of scales in the same wise vfed. Some there be that take vessels of white brasse or laton, and put them in earthen pans, where they suffer them to lie in vineger for ten daies together, and then scrape off the verdegreece or rust that is gathered vpon the said laton. Others there are who couer the said vessels of laton in the refuse of grapes after they be pressed (skins I meane and stones;) and after ten daies, as is aforesaid, scrape off the Verdegreece which they find vpon the brasse. There be againe, who take the fine dust which the file fetcheth from brasse, and strew the same in a vessel of vineger, stirring it with spatules or laddes oftentimes in a day, vntill it be resolued into the vineger and consumed: and yet many think it better to work and stamp the said file-dust with strong vineger in a brassen mortar, for to gather verdegreece. But the speediest way of ingendring the said rust of brasse or verdegreece, is to take the cuttings, parings, or small pieces of laton plates, such as be employed about coronets, and to put them in vineger; and you shall haue diuers, who will not stick to sophisticated verdegreis (such especially as is brought out of Rhodes) by mixing it and the powder of marble together; others with the pumish stone puluerized, or els with gum. But the cunningest deuice that they haue to falsifie it and deceiue chapmen by, is to mingle vitiroll amongst: for all the other deceitfull tricks be soone found out by the teeth, because a man shall fee the verdegreece to craff and grate between them like grit, which hee shall not perceiue if it be sophisticated with vitiroll: howbeit, this sophistication also and fraudulent cast, may be soone detected and found out by an experiment made with a slice or fire-pan of yron made red hot in the fire: for cast vpon it the right and true verdegreece indeed, it will hold and keep the owne colour still; but if it be corrupted with vitiroll, you shall see it turne red. You may discouer likewise the fraud aboue said with * paper, tempered beforehand and foked in gall-nuts; for besmeare therewith the verdegreece that is falsified, it wil quickly become black. The cie also wil soon bewray the falsehood that is vied therein, for if it be naught, a man shall perceiue it to looke with a weak green color, nothing full nor fresh. But be the verdegreece true or false, the best way is, before it be employed in Physick, after it be dried, to calcine it vpon a new earthen pan that neuer was occupied, and in the burning to turne it often with a slice or spatule, vntill such time as it be reduced into light cinders, and then after it is finely puluerized, to lay it vp for vse. Others prepare it after another sort; they put it in an earthen pot vnaked, and set the same into an oven, where they let it stand to be calcined so long vntill the said pot of clay be well and thoroughly baked. Finally, there be, that before they vse Verdegreece, put thereto the male Frankincense, the best that can possibly be had.

The manner also is to wash verdegreece before it be occupied, after the same order as Cadmia is vfed. Being thus made & prepared as is aboue said, it is excellent to be put into eczemas or collyries, for by a * mordicative quality it helpeth weeping and watering eyes: in which regard, necessarie it is that it be washed first with pencils well bathed in hot water, so long vntill it haue lost that corrosiue quality.

As touching Hieracium, a composition it is or collyrie so called, and made in this manner: Take foure ounces of Sal Ammoniacke, of Cyprian Verdegreece two ounces, of shoemakers blacke, or that copperesse which the Greekes name Chalcantum as much, that is to say, two ounces, of Myfy or yellow vitiroll one ounce, and of saffron six: let all these be stamped together and tempered in the vineger of Thalos vntill they be conporcator, and then reduce them

into

A into trochiques. A singular collyrie or eyefalue this is to withstand the beginning of pearls, catarracts, and such accidents of the eyes; to discusse also the webs that come ouer their sight, to leuigate the roughnesse of the tunicles, to dispatch the white skars, and in one word to cure all the infirmities of the cielids. As for verdegreece, that is not calcined at all, it is excellent good to be put into vulnerarie or healing plasters: the same also is of a wonderful operation to cure the exulcerations of the mouth or the gumbes; the lips also exulcerat it heales, being reduced into a liniment with oyle; but if you put wax thereto, it doth mundifie, and withall skin and heale perfectly. Verdegreece is proper to eat away and consume the callosities growing in a fistula, and in those infirmities which are incident to the feat or fundament, whether it be brought into a liniment with gun Hammoniacke and so applied, or else in forme of a collyrie, that is to say, a tent thrust into the hollow fistula. The same verdegreece incorporat with a third part of the true rosin called Terpentinc, is souveraine for foule leproties and wild-fires.

CHAP. XII.

¶ Of * Scolecia; and * Chalcitis, of * Myfy, * Sory, and * Chalcantum.

A Nother sort there is of Brasse-rust or Verdegreece, which commonly is called Scolecia: this is made of alum, salt or salnitre, of each a like weight, stamped well together with the strongest white wine vinegre that can be gotten, in a mortar of Cyprian brasse or copper: and this must not be done but in the hottest daies of the yere, to wit, about the rising of the Dog-starre. Now must all the ingredients aforesaid be pnned and incorporat together, vntill such time as the masse become green, and that it gather and draw together in manner of * crawling wormes, whereupon it taketh the name Scolecia. But if I do be, that this manner of working and making it, chance to faile and doe not well, for to amend the same, the two parts of vinegre which entred into the mixture, ought to be tempered with as much vrine of a boy vnder fourteen years of age. Now if you would know the medicinable effects and vertues of this kind of verdegreece, both it and the artificiall Borax before said (which I named Santerna) be of the very same operation that the ordinary rust of brasse or verdegreece, called in Latin * Ergo. There is a kind of Scolecia naturall or minerrall of it selfe, without addition of any thing els whatsoeuer; whereof I purpose to speake in this place, and the same is scraped from the stone or ore of which commeth brasse. There is a stone lying in the mine which they name Chalcitis, out of which also (with burning) they exco& brasse; differ it doth from Cadmia; for Chalcitis is hew'd out of the mines that lye aboue, very ebb and expos'd to the aire, whereas the other is digged from vnder the ground in those mines that lie hidden. Item, Chalcitis (as being of a tender and soft nature) presently will crumble into pieces, so as it seemeth to be a certain fine molle concreate and gathered together. Also, there is another difference between these two Marcaffins, for that, Chalcitis containeth in it three severall kinds of matter, to wit, Brasse, Myfy, and Sory; of which I purpose to speake severally by themselves in their due place. Now this Chalcitis lies within the brasse mine in long veins: that which is of a yellowish colour like hony, full of small veines running here and there, brittle and apt to crumble, and not of a stony hardnesse, is counted the best: the fresher also and more newly gathered that it is, the more effectual and wholesome men take it to be; for that being long kept, it will grow into the nature of Sory. Being thus in the right nature, it hath a facultie (if it be puluerized) to consume the excrecence of proud or dead flesh in vlcers, to staunch blood, to repress also the accidents befalling to the gumbes, uvula, and tonsils: the same put vp into the naturall parts of a woman within a locke of wooll in manner of pessarie, helpeth the infirmities of those places: but if it be tempered and incorporat with the iuce of porret, it serueth to put into those plasters which are appropriat to the vlcers and sores of the priuities or members of generation. Now if you sleepe it in vinegre, and let it lie so infused within an earthen pot well luted with beasts dung, for the space of forty daies, it will come to the colour of saffron; put then vnto it of Cadmia stone the like quantitie in weight, you shall haue that medicine which is called Pforium. Also, if in this composition you put two parts of Chalcitis to one third part of Cadmia, & so temper them together, this foresaid medicine will be more quick & agree; but in case you would haue it yet more mordicant and stronger in operation, let the said ingredients be tempered rather with vinegre than wine. Calcine the same or torrifie it, you shall find it more effectual in all operations aforesaid.

X x 3

As

* Which some take to be verdegreece. * Ergo.

* Of the red paper.

* Olibanum.

* Great Vermilion, which Pliny tranlateth delacrymationis myddis proficiens, which also may be turned thus. Rubeth waxing cresspreading of some fisting humors.

* A kind of verdegreece or rust of brasse in manner of a worme; as Pliny taketh it. * The floure of copper. Ife, whereof is made vitiroll, also we think, * 3/4 saffraun holdeth it to be vitiroll. Romanes: so theis take it for yellow copper. * 4/5 dust or ash-colour copperesse. * Vitiroll. * It seemeth that Pliny doth here cry, by reading in Dioc. causidius. For vitiroll; & for it contains: cadmia: & the said mixture is to be reduced into it. * Certaine trochiques, or thin cakes called vitiroll, and not into the form of worms.

*i. The vine
or minerall,
whereof com-
meth the dyes,
kith Vitrioll.

As for * Sory, that which is brought out of Ægypt is counted best, and farre better than the Cyprian, Spanish, or African: neuerthelesse, some hold that which cometh from Cypresse, to be more appropriat to the cure of the eyes. But of what country soeuer it be, the principall is that which to smell vnto is of the rankest and most stinking fauour: the same also in the bruising will grow black and be vnctuous or fatty, and such lightly is hollow in manner of a sponge. A minerall this is altogether hurtfull to the stomack, and so contrary vnto the nature of it, that to some the very smell thereof is enough to ouertume it and to cause vomit: and especially the Ægyptian Sory is of this operation. That which cometh from other nations, when it is broken or braied, shineth againe.

Touching Myse, it is of a more hard and stony nature than Sory; but good it is for the tooth ache, if either it be held in the mouth, or a collution be made therewith to wash the teeth and gums: also it healeth the grievous and irksome sores of the mouth, yea though they grow to be cancerous and corrosiue. The manner is to burne and calcine it vpon coles of fire as Chalchitis. Some neuerthelesse haue writtten, that Myse is engendred by the means of a fire made with pine wood, in the hollow veins or mines of brasse ore: and they hold, that the cinders or ashes of this pine well, being mingled with the yellow greines or floure of the said metall, is that which begetteth Myse. But the truth is, of the foresaid stone ore it is ingendred naturally: howbeit, a thing it is by it selfe gathered, distinct and separat from it apart: and the best is that which is found in the mines and forges of Cypresse. You shall know it by these signes: break it (for crumble it will) there appeare within it certain sparks shining like gold: and in the braying or stamping, it runneth into the nature of a sand or earth, like vnto Chalchitis. This Myse is the Minerall that they put to gold ore, when it is to be tried and purified.

To come vnto the medicinable vertues thereof: being infused or powred into the eares with oile of roses, it cureth the running with matter: the same being applied in a frontal within wood to the head, easeth the ach thereof: it doth extenuat also and subtiliat the asperities of the eyes, such especially as be inueterat and haue continued long: but soveraigne it is found to bee for the inflammation or swelling of the tonsils, for the squinancy, and all impostumat sores growne to suppuration. For which purpose, prepared it would be in this wise, and after this proportion: Take of it 16 draams, seeth the same in one hemin of vineger with some addition of hony, vntil it begin to yeeld and relente, and in this manner ordred, it serueth in cases aforesaid: but when soeuer need requieth to mollifie the violence thereof, and make it more mild, it were good to wet it with some sprinkling of hony. If there be a lortion or fomentation made with it in vineger, it doth consume and eat away the hard callosities in fistuloes, and fortifieth greatly the collyries or tents to be made thereof, and put it into the concauity of the fore: it serueth also for the collyries that be eie-falues: it flancheth blood, represseth the malice of fletting humors in corrosiue vlcers and such as do putrifie: the excrecence of proud or ranke flesh it taketh downe and consumeth: a peculiar property it hath to cure the accidents of the members of generation in men: and withall stoppeth the immoderat flux of the moneths in women.

As concerning Vitrioll, which we call in Latine Atramentum Sutorium, i. Shoemakers blacke, the Greeks haue fitted it with a name respectiue vnto brasse, and by a neere affinity therunto call it Chalchantum: and verily there is not a minerall throughout all the mines, of so admirable a nature as it is. There haue been found in Spaine certaine pits or standing pooles, containing a water of the nature of Vitrioll: they vfed to seeth the same, putting thereto of other fresh water like quantitie, and poure it into certaine troughs or broad keelers of wood: ouer these vessels, there be certaine barres [of yron] or transoms ouerthwart, lying fast that they cannot stirre, at which there hang downe cords or ropes with stones at the end stretching them out right, that they reach to the bottome of the sayd decoction within those keelers, to the end that the viscous substance of the water may gather about those cords, which you shall see flicking fast thereto in drops, congealed in manner of a glasse, and it doth represent as if were the forme of grapes; and that is Vitrioll. Being taken forth and separated from the cords aforesaid, they let it dry for the space of thirtie dayes. In colour it is blew, and carrieth with it a most pleasant and liuely lustre, so cleare, as a man would take it to bee transparent glasse. Of this being infused in water, is made that blacke tincture which Curriers and Couriners occupie in colouring of their leather. This Vitrioll is ingendred many waies of the copperesse vein within the mine, being hollowed into certaine trenches: out of the sides whereof you shall see in the middle of

Winter

A Winter when it is a frost, certaine yfickles depending, as the drops destilled and grew one to another: whereupon this kind of Vitrioll they call Stralagmas, and a purer or clearer thing there is not. But look what part thereof is whitish of colour, but not transparent, and the same inclining to the wall floure or * white violet, the same they call Leucoion. There is a Vitrioll likewise made artificially in receipts and concauities (dugged of purpose in the stonie mines of Cypresse) by occasion of raine water there congealed, which had been conueighed into them, and gathered a viscous slime or mud in the passage. Also there is a cast to make it in manner of salt by letting fresh water into such hollow receptacles, and permitting the same to ferment in the sun when he is at the height and full strength of his heat in the summer, vntil it be gathered and hardened as salt. And therefore some there be who make two sorts of Vitrioll, to wit, the Naturall, or Minerall, and the Artificiall: this that is made by the industry and art of man is paler than the other, and looke how much the colour is abated, so much inferior it is in goodnesse. The Cyprian Vitrioll is thought best to be employed in Physicke. For, to expell the wormes out of the belly, it is giuen vnto the patient to the weight of one dram in honey, after the manner of an electuary. If the same be dissolved and conueyed vp into the nostrils, it purgeth the head. In like manner it purgeth the stomack, in case it be taken in hony or honied water. The asperities of the eyes, their paine, and the dimnesse or mists ouergrowing the sight, it dispatcheth: and healeth the sores in the mouth. It staeth bleeding at nose, and the immoderat running of the Hæmorrhoids. It draweth forth spels of broken bones: and tempered with the seed of Henbane, it stoppeth the course of a rheum running to the eyes, if it be laid in a cloth to the forehead in manner of a frontale. Of great effect it is in plaisters, both for to mundifie wounds and to consume the excrecence of flesh in vlcers. If the Vvula be fallen, it putteth it vp againe, by touching it only with the decoction thereof. Moreover, being incorporat with line-seed, it is singular good to be applied aloft vpon plaisters, for to mitigat pain. Of this kind, that which is white is preferred before any that are of a yellowish colour like * wall-floures aforesaid. Moreover, if it be blown into the ears by the means of a pipe, it doth remedy the hardnesse of hearing. A liniment made of Vitrioll alone, healeth vp wounds, but it draweth the skar too neare together: in regard of which astringencie of Vitrioll, there hath bin an inuention deuised of late, to cast the powder of Vitrioll into the mouths of Bears and Lions when they are to be baited: for so great a knitter and binder it is, that it will draw their chaws together in manner of a muzzle, that they shall not be able to bite.

*Violet: these
meaneth those
that resemble
Leucoion, and
which he col-
led before by
that name.

CHAP. XIII.

¶ Of Pompholyx. Of Spodos, Antispodos, and of Diphryges. Of the Tricent of Seruilius.

There be found ouer & besides in brasse smithies or furnaces, those matters which they call Pompholyx and Spodos: and the difference of the one from another, consisteth in this, that Pompholyx requieth washing for to be prepared; Spodos neuer cometh into water or liquor. And yet some distinguish them otherwise, calling the whitest and lightest part, Pompholyx: holding opinion, that it is nothing els but the very cinders of brasse, or the Calamine stone Cadmia, whereof brasse cometh: whereas Spodos (say they) is blacker and more weightie than Pompholyx, as being scraped from the wals and sides of the furnaces, among which you shall see many times grosse sparks, yea, and other whiles coles intermingled. Well, this Pompholyx being tempered or soaked in vineger, smells of brasse: and if a man touch it at the tongue end, hath a horrible tast that goeth against ones stomacke. Proper it is to enter into those compositions which be ordained for the eyes, for it helpeth all the infirmities incident thereto: and in one word, serueth for the same purposes that Spodos doth: herein onely lieth the difference, that Spodos is thought to be more mundificatiue, by reason that the strength of Pompholyx is delayed by the washing aforesaid. It is one of the ingredients also to those plaisters which are deuised for gentle refrigeratiues and excoiciates. And for what soeuer it shall be employed, better it is found to be, in case it were washed first with wine.

As touching Spodos, the Cyprian is most esteemed: and ingendred it is, whiles Cadmia and the brasse ore or stone be melted together in the furnace. Exceeding light it is, and apt to mount aloft with the smoake of the bloome smithie, very speedily, yea, & ready to flie out of the fur-

furnace : and much of it sticketh to the roufe and vppermost part thereof, differing onely from foot in whitenesse. That which is not so white as the rest, signifies that the furnace was not quick ynough, and that it is not yet come to the full perfection & concoction: and this, some there be who call Pompholyx. But looke how much thereof is found of a redder colour, the same hath much acrimony in it, and is of a more biting nature : yea, so fretting and corrosiue it is, that in the washing, if it chance to touch a mans eies, it will put out their light and make him blind. There is a kind of Spodos besides that looks yellowish like hony, wherein a man may perceiue that it standeth very much vpon brasle: but of what sort fouer it is, washing mendeth it much. First, before it be washed, they vse to cleanse it lightly with a wing or a bristle brush: & then afterwards to wash it in grosser manner, till the water be thick and muddie, rubbing it well with the fingers, vntill it haue lost all the roughnesse that it had. That which is washed in wine, is thought to be of a middle and indifferent operation. And when I say wine, you must thinke there is some difference therein also. For being washed in a small & mild wine, it is thought to be very good for those colleries which serue to comfort and fortifie the eies that haue been wearied and weakened with long watching: the same also thus prepared, is more effectual to heale vlcers that be matterie and run: the fores likewise in the mouth that are moist and rheumatic: & generally it serueth well to go into those salues and plaisters which are deuised against gangreens tending to mortification. Another kind there is besides of Spodos called Lauris, found in the furnaces where siluer is tried, but commonly it is held, & for certain affirmed, That the best

* Spodos is called Nil, whereof cometh the pety ambiguous speech, Nil prode oculis.

* Spodos for the eies, is that which cometh in the furnaces where gold is fined. Neither in any thing belonging to our life, is the wit & inuention of man more admirable than in this. For, because we should not take the pains to search into mines & furnaces for such matters, they haue deuised means to help themselves withal in the same cases, euen by the basest thing: that be in the ashes of Spodos; which thereupon they tearme by the name of Antispodos; for so they call the stee of the Figtree, whether it be the gentle or the wild; the ashes likewise of the Myrtle tree leaues, and the tenderest parts of the branches; as also of the wild Olive, the Quince, & the Lentiske trees. They haue a kind of Antispodos besides made of the vnrpe Mulberries, that is to say, whiles they be white, dried in the Sun: like as, of the tops of the box tree or the bastard Cypers, of brier crops, the leaues of the Terenbith or the wild vine Oceanthe flowers. Finally, they vse in stead of Spodos, the ashes of strong Buls glew, or of linnen rags: which is found to be as effectual as the right Spodos. Now for to haue the said ashes for this purpose, the manner is to burne and calcine all these matters abouenamed within some vessell of cleay, and to let it into the oven or furnace, where they are to be torried vntill the said vessell be thoroughly baked.

In the smithies where brasle is made and wrought, there cometh a certaine refuse or offall thereof, called Pifgma: to wit, when after the brasle ore is sufficiently melted and concocted, there be new coales put thereto, and the same let for fire and kept burning with the blast of bellows; for then of a suddaine (as it were by some extraordinary strong puffed) there are reiected and cast forth from it certain burs or chaffe (if I may so say) of brasle. Now the ground or floore to receiue this refuse as it falleth, ought to be well paved.

There is another stufte found in the said forges or bloom-smithies, easily discerned from this Pifgma, which the Greeks (for that it is, as it were, twise burnt or concocted) call Diphryges. And this is made three manner of waies: For first they say it comes of the Marquest stone burnt in a furnace vntill it be calcined and reduced in the red chalker Rubrica. It is engendered also of the earth or cleay within a certain caue in Cyprus, first dried and soon after gently burnt in a fire round about it, maintained with small sticks put thereto by little & little. There is a third way of making it, to wit, of the grosse dregs or drosse of brasle settling downe to the bottome of the furnace; in which furnace a man shall perceiue these different matters, to wit, the brasle it selfe, which being melted, runneth into pans and vessels ready for to receiue it; the refuse, called Scoria, which flies out of the furnace; the storey that stoteth aloft, & the Diphryges or drosse which remaineth behind. Some yeeld another reason and making of Diphryges in this manner, namely, That there be certain round bals or pellets (as it were) of hard stones found within the mines of brasle, which together with the Marquest or brasle ore doth not melt in the furnace, & a man shall see the brasle it selfe boile about the same: which round hard stones are vnited and founded onely, one to another by this means, but themselves resolute nor not melt perfectly, vnlesse they be transfused into other furnaces: for they be the very heart (as it were) of the whole matter.

But

A But in the second trial and boiling, that which remaineth behind, is called Diphryges. Well, be it what it will, the same reason there is of it in Physicke, as of the rest of this kind found in furnaces: for by nature it is desiccative: it consumeth besides all excrecences, & doth cleanse mightily. The trial of it is by the tongue, for if it bee good Diphryges, no sooner toucheth it the tongue, but it drieth it, and withall tasteth of brasle.

But before I depart from these brasle mines and furnaces, I cannot conceale from you one miraculous thing as touching this mettall. There is (you know) a noble family in Rome of the *Servily*, well renowned, as may appeare by the Roman Kalender and acts of record: and these haue among them a certaine peece of brasle coine called a Triens. The third part of a Roman Asse) which they do keep and feed with siluer and gold. For eat and consume it doth both the one and the other: from whence it came first, and what the reason in nature of this property is, I know not yet. But for my warrant, I will set downe as touching this matter the very words of old *Messala*: The house (quoth he) of the *Servily* hath a certain sacred Trient, in the honor of which peece they do sacrifice yerely with great deuotion and solemnity, omitting no magnificence nor ceremonies thereto belonging. And this Trient the common speech is of them all, that it seemeth one while to grow bigger, and another while to diminish and be smaller: according to which increase or decrease, the said *Servily* take prelage, That their family shall either rise to more honour, or decay in credit and reputation.

* which is our farthing.

CHAP. XIV.

C ¶ Of Iron, and Iron mines, and the different kinds of Iron.

I T remaineth now in the next place to discourse of the mines of yron, a mettall which we may well say is both the best and the worst implement vied now in the world; for with the helpe of yron we break vp and ear the ground, we plant and plot our groues, we set our hordyards and range our fruitful trees in rewes: we prune our vines, and by cutting off the superfluous branches and dead wood, we make them euery yere to look fresh and yong againe: by means of yron and Steele we build houses, hew quarries, and cut in stonew, yea, and in one word, we vse it to all other necessary vses of this life. Contrariwise, the same yron serueth for wars, murders, and robberies, not onely to offend and strike therewith in hand, but also to reach and kill as farre off, with diuers

D sorts of darts and shot, one while discharged and sent out of engines, another while lanced and flung by force of the arme, yea, and sometime let flie with wings: and this I take to be the wickedest inuention that euer was deuised by the head of man: for to the end that death may speed away the faster to a man, and surprize him more suddenly, we make it to flie as a bird in the aire, and to the arrow headed at one end with deadly yron, we fer feathers at the other: whereby it is euident, that the mischief proceeding from yron, is not to be imputed to the nature of it, but to the vnhappy wit of man. For good proofe wee had already by many experiments otherwise, that yron might be imploied and occupied, without any hurt or harme at all to mankind, and verily in those capitulations of peace, which after the expulsion of the kings, *Porcina*, king of the Tuscans tendred to the people of Rome, I find this expresse article & imposition, that they should not vse yron, but only about tillage of the ground. And as our Chronicles of great antiquity haue left recorded, it was not thought safe to permit writing and ingrauing letters with a stile of yron. Certes, in the third Consulship of *Pompey* the great, by occasion of a tumult and commotion raised within the city of Rome for the murder committed vpon the person of *P. Clodius*, there was an edict come forth (which now is extant vpon record) after the manner of an inhibition in this form: *Ne ullum telum in urbe esset*. That no man throughout all Rome should be seene to weare a weapon. Neuerthelesse men did not forbear and giue ouer to doe some honour vnto yron also in some other occasions of this life, tending to the entertaining of civility and humanity; for *Aristonides* the cunning artificer, minding to represent in an image the furious rage of *Athamas*, beginning now to coole and be allied, together with his repentance for the cruell murdering of his owne sonne *Learchus*, whom he flung headlong against the hard stones, and thereby dasht out his braines; made a temperature of brasle and yron together, to the end, that the rustie yron appearing through the bright lustre of the Brasle, might liuely expresse a blushing red in the countenance, becoming a man confused and dismayed for so vnnatural a fact. This Statue is at this day to bee seene at Thebes. Within the same Citie there is another

Image

* OPliny, what wouldst thou say, if thou didst see & hear the Pistols, muskets, Colles, &c. none in these daies.

image of *Hercules* all of hard yron or Steele, which *Alcon* the famous workman made of purpose to signifie the vndaunted heart of that deified *Hercules*, who vnderwent and indured all labours and perils whatfoeuer. Here also in Rome we may see certain drinking cups of Steele dedicated in the temple of *Mars* the Reuenger.

But to come vnto the nature of yron, herein appeareth still the same goodnesse of Nature, that this mettall working such mischiefe as it doth, should be reuenged of it selfe, and receiue condigne punishment by the own rust. See also the wonderful prouidence of Nature, *who maketh nothing in the world more subiect to death and corruption, than that which is most hurtfull and deadly to mankind.

As touching mines of yron ore, they are to be found almost in euery country, for there is not so much as the Island *Ilua* here within Italy, but it breedeth yron. And lightly wherefoeuer any such be, they are easily found, for the very leere of the earth, resembling the colour of ore, bewaitech where they lie. And when it is found out, they burn, try, and fine it, as other veins of mettall. Onely in Cappadocia there is some question and doubt made, whether in the making of yron they be more beholden to the earth that yeeldeth the ore, or to the water for the preparing and ordering of it: for this is certain, that vnto the vein of ore be well drenched and foked with the water of one riuer there, it will neuer yeeld yron out of the furnace. As for the kinds of yron many they are, and all distinct. The first difference ariseth from the diuersity of the soile and climates where the mines be found: for in some places, the ground & the position of the heavens do yeeld onely a soft ore, and coming nearer to the substance of lead than yron: in another, the mettall is * brittle and short, standing much vpon a veine of brasse, such as will not serue one whit for stroke and naile to bind cart-wheels withall, which tire indeed would be made of the other that is gentle and pliable. Moreover, some kind of yron there is that serueth onely, if it be wrought in short and smal works, as namely, for nailes, studs and tacks imploied about greeces and leg-harnes: another againe, that is more apt to take rust and canker than the rest. Howbeit, all the sorts of yron ore are termed in Latine *Strictura*, a word appropiart to this mettall & to no other, **fringenda acies*, of dazling the eyes, or drawing a naked sword. But the furnace it self, where the ore or yron stone is tried, maketh the greatest difference that is: for therein you shall haue to arise by much burning and fining, the purest part thereof, which in Latine is called *Nucleus ferri*, the kernell or heart of the yron (and it is that which we call Steele) and the same also of diuers sorts: for the best is it that hardeneth the edge of any weapon or toole: there is of it which serueth better for stithy or anuill heads, the faces of hammers, bits of mattocks, and yron crowes. But the most variety of yron cometh by the means of the water, wherein the yron red hot is eftsoones dipped and quenched for to be hardened. And verily, water onely which in some place is better, in other worse, is that which hath innobled many places for the excellent yron that cometh from them, as namely, *Bilbilis* in Spaine, and *Taraffio*, *Comus* also in Italy; for none of these places haue any yron mines of their owne, and yet there is no talk but of the yron and Steele that cometh from thence. Howbeit, as many kinds of yron as there bee, none shall match in goodnesse the Steele that cometh from the *Ceres* for this commoditie also, as hard ware as it is, they fend and sell with their soft silks and fine furs in a second degree of goodnesse, may be placed the *Parthian* yron. And setting aside these two countries, I know not where there be any bars or gads tempered of fine and pure Steele indeed, for all the rest haue a mixtue of yron, more or lesse. And generally in this West part of the world wherein we liue, all our Steele is of a more soft and gentle temperature than that of the *Leuant*. This goodnesse of Steele in some countries ariseth from the nature of the mine, as in *Austrich*: in others from the handling and temperature thereof, like as by quenching, as I said before, and namely at *Sulmo*, where the water serueth especially for that purpose: and no maruell, for we see a great difference in whetting and sharpening the edge of any instrument, between oyle wherfones that barbars vse, and the common water grind-stones: for surely the oile giueth a more fine and delicate edge. Furthermore, this is strange, that when the ore or vein is in the furnace, it yeeldeth yron liquid & cleare as water, and afterwards, being reduced into bars and gads when it is red hot, it is spongieous and brittle, apt to break or resoule into flakes. And considering the difference that is between the nature of oile and water (as I haue said) this is to be obserued, that the finer any edge tooles bee, the manner is to quench them in oile for to harden the edge: for feare lest the water should harden them ouer much, and make the edge more ready to breake out into nickes, than to bend

A and turne again. But wonderfull it is about all, that mans blood should haue such a vertue in it, as to be reuenged of the yron blade that shed it; for being once embred in therin, it is giuen ouer after eftsoones to rust and canker.

Concerning the load-stone, and the great concord or amity between yron and it, I meane to write more amply in the due place. Howbeit, for the present thus much I must needs say, that yron is the onely mettall which receiuech strength from that stone, yea, and keepeth the same a long time, in such as by vertue thereof, if it be once well touched & rubbed withal, it is able to take hold of other pieces of yron: and thus otherwhiles we may see a number of rings hanging together in manner of a chaine, notwithstanding they be not linked and inclosed one within another. The ignorant people seeing these rings thus rubbed with the load-stone, and cleauing one to another, call it quick-yron. Certes, any wound made by such a toole, are more eager and angry than by another. This stone is to be found in *Biskay*, scattered here and there in smal pieces by way of babbation (for that is the term they vse,) but it is not that true Magnet or load-stone indeed, which growes in one continued rock. And I wot not whether these be so good for glasse-makers, and serueth their turn so well in melting their glasse, as the other: for no man yet hath made experiment thereof. But sure I am, that if one do rub the edge, back, or blade of a knife therewith, it doth impart an attractive vertue of yron thereunto, as well as the right Magnet. An here I cannot chuse but acquaint you with the singular inuention of that great architect and master deuiner of *Alexandria* in *Egypt*, *Dinocrates*, who began to make the arched roofof the temple of *Arifnoe* all of Magnet or this load-stone, to the end, that within that temple the statue of the said princeesse made of yron, might seeme to hang in the aire by nothing. But preuented he was by death before he could finish his worke, like as *K. Ptoleme* also, who ordained that temple to be built in the honour of the said *Arifnoe* his sister.

But to returne again to our yron: of all mines that be, the vein of this mettall is largest, and spreadeth it self into most lengths euery way: as we may see in that part of *Biskay* that coasteth along the sea, and vpon which the Ocean beateth: where there is a craggy mountaine very steepe and high, which standeth all vpon a mine or veine of yron. A wonderfull thing, and in manner incredible, howbeit, most true, according as I haue shewed already in my *Cosmography*, as touching the circuit of the Ocean.

CHAP. XV.

¶ The temper of yron. The medicinable vertues thereof, as also of the rust of brasse and yron: Of the scales that shed and flie from yron: and of the liquid emplaster called by the Greekes *Hysgrimplastrum*.

Iron made once hot in the fire, vnto it is hardened with the Hammer, doth soone waste and corrupt. So long as it looketh but red, it is not ready for the hammer, neither would it be beaten before it begin to looke white in the fire. Before it is with vineger and Allum, it will looke like copper or brasse. If you be desirous to keep any yron-worke from rust, giue it a vernish with ceruse, plaster, and tar, incorporat all together. And this is that composition, which is called by the Greeks * *Antipathia*. And some say also, that there is a kind of hallowing yron that will preferre it from rust: as also that there is at this day to be seen the chaine of yron within the city called *Zeugma*, seated vpon *Euphrates*, wherewith king *Alexander* the Great sometime bound and strengthened the bridge ouer the riuer there: the linkes wherof, as many as haue been repaired and made new since, doe gather rust, whereas the rest of the first making, be all free therfrom.

As touching the vse of yron and Steele, in Physicke it serueth otherwise than for to launce cure and dismember withall: for take a knife or dagger and make an imaginarie circle two or three times with the point thereof, vpon a young child, or an elder body, and then goe round withall about the party as often, it is a singular preseruatiue against all poisons, forceries, or incantations. Also to take any yron nail out of the coffin or sepulchre wherein man or woman lieth buried, and to sticke the same fast to the lindle or side-post of a dore, leading either into the house or bed-chamber where any doth lie who is haunted with spirits in the night, hee or shee shall be deliuered and secured from such phantasticall illusions. Moreover, it is said, That if one be lightly pricked with the point of sword or dagger which hath bene the death of a man, it

is an excellent remedy against the paines of sides or breast, which come with sudden pricks and stitches. An auctuall cauterie of yron red hot, cureth many diseases, and especially the biting of a mad dog, in which case it is so effectually, that if the poison inflicted by that wound, haue pre-
 uailed so far, that the patient be fallen into an Hydrophobic thereby, and cannot abide drinke or water, let the fore be feared therewith, the party shall find help presently. Gads of Steele or o-
 ther yron red hot quenched in water, so long until the same water be hot, causeth it to be a whole-
 some drinke in many diseases, but principally in the bloody flux.

The very rust of yron also is counted medicinale: for *to Achilles* is said to haue healed *Tel-
 phus*: but whether the head of his spear were yron or brasse, of which heved the rust, I doe not
 certainly know. Certes, he is paynted thus: with his sword scraping and shaking off the rust
 into the wound. But if you would fetch off the rust from any old nails, scrape it with a knife wet
 before in water. As touching the vertues thereof, it is cleansing, exicative, and astringent; it re-
 couereth the haire in places despoiled thereof, if they be annointed therewith in the forme of a
 liniment: being reduced into a salve with wax and oil of Myrtles incorporate together, many
 vse it for roughnesse about the eie-lids: the pimples also breaking forth all ouer the body. For
 shingles and *S. Antonies* fire, it is singular good to apply it in an vnguent with vinegar: likewise
 it killeth scabs, and healeth whitlawes of the fingers, and the excrecence or turning vp of the
 flesh about the roots of the nails, if linnen rags wet therein be applied conueniently. The same
 conueyed vp in wooll after the manner of a pessary into the naturall parts of women, staeth the
 immoderat flux both of whites and reds. The rust of yron tempered in wine, and wrought to-
 gether with Myrrhe, is good for a Greene wound: put thereto vinegar, and then it helpeth the piles
 and swelling bigges of the fundament. A liniment made with it, mitigateth the paine of the
 gout.

As touching the skales of yron that flie from the edge or point of any weapon wrought in
 the smiths forge: they serue in the same cases, that the rust doth, and haue the like effects, saue
 only this, that they haue greater acrimonie, and work more eagerly: in which regard they are em-
 ployed about the repreffing of the flux that falleth into watering eies. But marke this one thing:
 Yron being that which woundeth most and sheddeth blood, yet the skales that come from it,
 slanch the same: a property they haue besides to stop the flux in women: and being applied to
 the region of the spleene, they do open the obstructions thereof, and ease other infirmities inci-
 dent thereto: the running hæmorrhoids they repress, and such vlcers as are giuen to spread far-
 ther and corrode as they go. Reduced into a fine powder, and gently strewed vpon the eye-lids,
 they are good for the accidents thereto belonging. But the principal vse of them, and for which
 they are most commended, is in a certain liquid plaster called *Hygremplastrum*, which ferueth
 to mundifie wounds, vlcers, and fistulaes: to eat away all callosities, and to incarnate and en-
 gender new flesh about bones that are perished. And this is the receipt of that composition:
 Take of the scouring Tuckers earth the weight of two oboli, of brasse six drams, of the skales of
 yron as much, and no lesse of wax, incorporate all these according to art in one sextar of oile. But
 in case there be need to mundifie any sores, or to incarnate, there would be put thereto some plain
 cerot besides.

CHAP. XVI.

¶ Of the Mines of Lead ore: of * white lead and blacke.

Now inueth the discourse of lead, and the nature of it; of which there be two principall
 kinds, the blacke, and the white. The richest of all, and that which carrieth the greatest
 price, is that which we in Latine name *Plumbum candidum*, i. the white bright lead, and the
 Greeks *Cassiteron*. But I hold it a meere fable and vaine tale, that all of it is fetched as farre as
 from the Islands of the Atlanticke sea, and that the inhabitants of those parts doe conueigh it
 in little twiggen boats, couered all ouer with feathers. For the truth is, that there is found of it
 in these daies within Portugall and Gallæcia, growing ebbe vpon the vppmost face of the earth,
 being among the sands, of a black colour, and by the weight only is knowne from the rest of the
 soile: and here and there among a man shall meet with small stones of the same stuffe, most of
 all within the brookes that be dry sometimes of the yere. This sandie and graucly substance,
 the mine masters and mettall finers vse to wash, and that which setleth downward, they burne
 and

A & melt in the furnace. There is found likewise in the gold mines a kind of lead ore which they
 cal *Elutia*, for that the water that they let into those mines (as I said before) washeth and carri-
 eth down withall certain little blacke stones streaked and marked a little with a kind of white,
 and as heauy they be in hand as the very ore of gold; and therefore gathered they be with the
 same ore, and laid in the paniers together therewith: and afterward in the furnace when the fire
 hath made a separation between them and gold, so soone as they are melted do resolue into the
 substance of the white lead or tinglasse aforesaid.

Moreover, this is strange, that throughout all Gallæcia you shal not find a mine of common
 black lead, & yet in Biskay (which consisteth hard vpon it) there is abundance of it & no other;
 neither out of the vein of this white lead shal you try any siluer, whereas out of the black it is an
 ordinary thing to extract siluer. Again, this is certain, that two pieces of black lead cannot pos-
 sibly be sodered together without this tinglasse; neither can this be vnited to the other but by
 means of oile: nay it is vnpossible to conioyne a piece of tin-soder or white lead with another,
 but with a soder of the black. This white lead or tinglasse hath bin of long time in estimation,
 euen since the war of Troy, as witnesse the poet *Homer*, who calls it *Cassiteron*. As for blacke
 lead, ingendred it is two manner of waies, for either it groweth in a vein of the owne without any
 other mettall with it, or els it doth participat with siluer in the same mine, and being intermixt
 in one piece or lump of ore, it is separated from it at the melting and fining only; for the first
 liquor that runs from it in the furnace is tin, and the second siluer. As for the third part of the
 vein which remaineth behind in the furnace, it is *Galæna*, that is to say, the very mettall it selfe
 of lead; which beeing once againe melted and tried in the fire, after two parts thereof be dedu-
 cted, yeeldeth that black lead whereof we now do treat.

CHAP. XVII.

¶ Of Tin, of Argentine Lead, and other points pertinent
 to these matters.

T In hath a proper vse to enhuile vessels of brasse, partly to take away the euil tast they haue,
 and to make them sweeter, and partly to preserue them from rust, or to qualifie the maliti-
 ous nature of brasse: and yet wonderfull it is, that such vessels thus tinned are neuer a jot
 the heauier by that means. Also in times past there were (as I haue already said) excellent Mir-
 roirs made of tin, and the same were tempered & wrought at Brundise: but those of siluer haue
 put them down since, that euery chamber-maid and such like seruing creature would be at their
 looking-glasse of siluer. But tin is found much counterfeited in these daies, by putting to White
 lead above said a third part of white brasse: yea and there is another deuise to sophisticate tin, to
 wit, by mixing white and blacke lead one with another by euery weight and portion: and this
 massen some call at this day, * siluer lead or argentine. As for that mixed matter wherin be two
 parts of black lead, and one of the white, they call it *Tertiarium*: this kind of tinne is sold after
 * 30 the pound, and it is that wherewith they vseto soder conduit pipes: but the lewder dispo-
 sition of pewterers haue a cast to put vnto this tin called *Tertiarium*, an equal quantity of white lead
 and then they call it *Argentarium*: which mettall they employ in vessels for the kitchen, y
 to seeth meat or what they list in them: and this kind of pewter wanteth no price, for they set it at
 130 the pound, whereas a pound of white lead or tinglasse pure and fine of it selfe, is sold for
 thirty, and the blacke for sixteen. As touching the temperature and nature of the white lead,
 it standeth more vpon a dry substance, contrariwise, that of blacke is wholly moist and liquid:
 which is the reason that the said white lead or tinglasse will serue to no vse or purpose vnlesse it
 be mixed with some other mettall; neither is it good to lead or soder siluer with, for sooner will
 siluer melt in the fire than it. There is a deuise to tin pots, pans, and other pieces of brasse so ar-
 tificially with white lead or tinglasse (an inuention which came out of France) that hardly a
 man shall discern them from vessell of siluer; and such leaded vessels are commonly called *In-
 coçilia*. After the same maner they haue taken vp of late another custome to siluer the trappings
 especially and caparisons of their horses of seruice, yea and the harness of coach-horses
 and draught jades, and namely in the town Alexia. As for the former inuention, those of Bour-
 ges haue the honour of it. Neither rested they so, but haue proceeded to adorn and garnish in

* i. Pewter, as
 some take it.

* This place
 seemeth to be
 corrupt.

that maner their chariots, wagons, and coaches. But our vain and wastfull wantons not herewith contented, are come now to their wagon seats, not of silver only, but also of gold: and that which in times past was condemned as monstrous prodigality, to be put into drinking vessels; the same to tread upon now with the feet, and to waste and consume about waggon and chariots, is commended for fineness, neatness, and elegance. But to return againe unto our white lead, if you would know whether it be right and good or no, the proof is to be made in paper: for put it melted into a sheet of paper, if it be not falsified, it will seem to break and rend the paper with the weight, and not with the scalding heat thereof.

Moreover, it is worth the obseruation, that the Indians haue no mines among them either of brasse or lead, but are content to part with their pearles and pretious stones vnto merchants, by way of counterchange for these mettals.

Black lead or common lead is much vsed with vs for sheets to make conduit pipes; also it is driuen with the hammer into thin plates and leaues. This mettall requireth much labor & toile in Spain and France, before it be gotten out of the mine, so deepe it lieth; whereas in Brittain it runneth ebb in the vppermost coat of the ground, and that in such abundance, that by an expresse act among the Islanders themselves, it is not lawfull to dig and gather ore aboue such a proportion, set down by statute. Furthermore, all the black lead which now men haue in request, is known by these names, to wit, Iovetanum, Capariense, and Oleastrense. As for the drosse and refuse that is purged from it, there is no difference at all, so that it haue the due cleansing by the fire as it ought. These mines alone of lead haue one wonderfull and admirable gift aboue all others, that if they be forelet a time and suffered to rest, they will grow againe and be more fertile of ore thereby. And in truth this seems to be the reason thereof, for that the aire hath good means and libertie to infuse it selfe, and to enter in at the pores and passages which it findes enlarged and open: much like as we obserue in certain women, who vpon their slips of abortiue fruit, proue thereby more fruitfull and apt to conceiue. And that this is true that I say of lead mines, it was found of late by good experience in the mines of Santaria in the province of Botica in Spain: for whereas in times past for two hundred yeares together, it was wont to be set for a rent of ten pound weight, after it had taken repose and was opened againe, it yielded for euertie ten, 55. Likewise the lead mine named Antimonianum within the said province, which paid in old time but a chiefe of ten pound weight, is come now to a yearly reueneue of four hundred pound. To conclude, one marvellous quality lead hath besides, that no vessel made thereof will melt ouer the fire, if there be water in it: and yet cast into the said water a little stone, or a small piece of brasse coin, although it be no more than a Quadrant, you shall see it melt, and a hole burnt through it by and by.

CHAP. XVIII.

¶ The medicines that we haue from Lead, and the refuse and drosse of Lead: of the vaine of Lead called Molybdæa or Galena: of Ceruse, white Lead, or Spanish White, called Plimithyrum: and of Sandaracha.

Great vse there is in physicke of lead applied by it selfe alone, and namely to repress and keepe downe the skars and cicatrices that rise aboue the other skin: also by the refrigeratiue quality that it hath to coole the heat of fleshy lust, if there be bound vnto the loins and region of the reins a thin plate or leafe thereof. And verily Calvus the Orator, who by occasion of much dreaming in his sleepe of venereous sports, fell into mighty pollutions; and so farther into the grievous maladie of Gonorrhæa or running of the reins, with wearing ordinarily these leaden plates, stayed (by report) all such vaine and wanton fantasies and imaginati-
ons: by which means he preferred also his strength, and had a body able to endure the labor of much study and sitting at his booke. And Nero the Emperor (since the gods would haue it so) vsed ordinarily to wear a plate of Lead to his breast, vnder which he would chaunt out lustily with a wide throat and strong voice, his filthy Sonnets and beastly Ballads: but he shewed thereby that Lead was a singular meane to maintaine a good voice. But to serue other vns in
Physicke,

A Physick, lead ought to be prepared and baked after this manner: take an earthen pan of potters worke, and lay one bed therein of brimstone finely powdered, vpon which, bestow another couch of thin leaues or plates of lead, and a third course ouer them of brimstone and yron file dust together, for to couer all: this being done, set the vessel into a furnace; but while these things are calcining, meet it is and necessary that the vessel or pan aforesaid be well luted and stopped close, that there be no venting or breathing hole at all; for otherwise the lead within the said pan would send forth a noisome vapour and peitilent, most dangerous to all that be within the sent thereof, but to dogges especially, whom it killeth out of hand: and verily, as this exhalation of lead is deadly vnto them, so the aire of all mettals in general, is aduerser and contrary vnto flies and gnats: which is the reason, that a man shall neuer see any of these insects in mines, forges, and bloome-smithies, where mettals be vsually tried. Now in the calcining of lead, some there be who chuse rather to take the dust of lead gotten off with a file, & to mix the same with brimstone: others think it better to vse ceruse rather than brimstone. Furthermore, lead doth yeeld from it selfe a certaine substance by way of luture, which is of right great and manifold vse in physicke: the making whereof is in this manner, They take a leaden mortar, they pun and stamp the same with a leaden pestill, casting in rainewater estloones; and thus they labour at it continually vntill such time as the water grow to some consistence and be thicker againe; this they permit to rest and settle: the pure and cleare portion that is aloft, they suck and soke away with sponges: the grossest part that is seled in the bottome, after it is dried, they reduce into trochisks. There be some who stamp in the same order, the file-dust which commeth of lead: others put thereto some lead ore among: and as there be many that vse vinegar or wine in this operation, so there are some againe who take grease or roses in lieu thereof. You shal haue those that for this purpose make choice of a stone mortar, especially of Thebaicke marble, but they take a leaden pestill rather than any other, to bray and pun withall: and by this means the medicinal lead will be the whiter.

Now as touching the lead calcined in manner aforesaid, it may be washed also after the order of Antimonie and Cadmia: and in this manner prepared, it is of power astringent, good to stop any flux or rheume, proper also to skin and make a final skar. Much vse there is of lead thus burnt and washed, in collicries or cie-salues, and principally if the cies either stand out too far, or be sunke in too deepe: also it is singular to repress the excrecence of flesh in vlcers, to heale the chaps in the face or fundament, to cure the running hæmorrhoids, and to disscusse or keepe downe the blind and swollen piles: and for all these accidents in general, the luture of lead aforesaid is most excellent. But the ashes of lead burnt and calcined, is more proper for the cure of corroding vlcers and filthy sores. And in one word, the same effects and operations it hath, that the ashes of paper. Also the manner of burning and calcining lead, is to put into a pan certaine little plates thereof, together with brimstone, turning the same euer and anon either with some yron rod or stiffe stalke and stem of Ferula plants, vntill such time as both the one and the other being liquefied, be conuerted & turned into ashes: the same, after that they be once cooled, ought to be punned and beaten againe, and reduced into a most pure and exquisite fine powder. Some there be who take file-dust of lead, put the same in an earthen pot or Greene potters clay, set the same into an ouen, and so let it calcine therein vntill such time as the pot be well and thoroughly baked: others againe there are, who mix with lead the like quantity of ceruse, or els of barly, and pun the same like crude lead vncalcined in manner aforesaid, for a luture; and when it is reduced thus into powder, they make more reckoning of it than of the Cyprian Spodium.

Ouer and besides, the drosse or refuse of lead is medicinal: and the best is that accounted, which commeth nearest to a yellow colour, without any reliques at all of the lead among; or else inclining to the hew of brimstone, and cleansed from all earthly substance: this also being braied and broken into small parcels, may be washed in manner aforesaid, and stamped with water in a mortar, vntill such time as the water looke yellow; then must it be powred forth into a pure cleane vessel; and this transuasion ought so long to be continued out of one vessel into another, vntill such time as it haue done casting any residue downward; for the sediment that resteth in the bottome is the best, working the self-same effect as lead doth, but with more acrimony. When I consider all this, mee thinks I cannot sufficiently admire the diligence of men, who haue made such experiments of all things in the world, sparing not so much as the very
Yy 2 ordure,

ordure, offall, and filthy excrements, but haue tried conclusions therein so many waies, and left G nothing vnattempted.

There is a kind of Spodium also made of lead in the furnace, after the same manner as I shewed before, of copper or Cyprian brasse: the order of washing whereof, is this; to put it in a course linnen cloth, and to lay the same in rain water, that the terrene substance may be separated from the rest that is transfused or passeth through the cloth with the water: and yet the same must be cribled or forced afterwards, and beaten to powder. Some thinke it better to wipe and scoure off the dust from the Calamine with wings, and then to beat it in a mortar with the most odoriferous wine they can get.

There is besides, a minerall named Molybdæna, which elsewhere I haue called Galæna; by which I meane in this place, the ore or veine that containeth within it, both siluer and lead: the better this is thought to be, the more that it inclineth to the colour of gold, and the lesse that it standeth vpon lead: the same also is brittle, apt to crumble, and in proportion of the quantity not very weighty in hand: the same, if it be boiled with oile, will in colour resemble liuer. There is a kind of Galæna likewise that sticketh to the furnaces of gold and siluer: but this (whereof I now speake) they call Metallica, that is to say, the Minerall: and verily the best of this kinde, is that which is found in Zephyrium: the marks whereof are these; it haue little or no earth in it, nor be any waies stony: the same is burnt, calcined, and washed, neither more nor lesse than the droffe Scoria. Much vsed this minerall is in those vnctuous liniments or salues called Liparæ, deuised as lenitive & refrigerant, for vlcers: also it entrench into plasters which are * not mordicant: but being applied to any sore in tender and delicate bodies, and in the softest parts, it doth I heale faire, and skin thoroughly. The composition of which plasters, is after this manner; Take three pound weight of this minerall lead Molybdæna, put thereto of wax one pound, and of oile three hemines, which done, incorporate all together (according to art) into the forme of an emplatre. Now if it so fall out that the patient be an elderly body, there would be an addition put thereto of the lees or mother of oile of liue. This minerall may be tempered also to right good purpose, with litharge of siluer, and the droffe of lead, and then it is a most excellent medicine (to be injected by a clystere) for the dysenterie or bloody flux, for the tinea also, which is an inordinat desire to the stoole without doing any thing; provided alwaies, that the belly be fomented besides with hot water.

There is another mineral besides, called Pismithum, which is al one with Ceruse: and this, X the furnace and mine of lead ore doth yeeld; but the best of this kind is brought from the Island Rhodes. The manner of making it is this: Take the finest pieces that are scraped from lead, let the same be hung ouer a vessell of the strongest and sharpest vinegar that possibly can be had, that they may distill therinto: and looke what of it is fallen into the said vinegar, must be dried afterwards, ground into powder, and seared; & then a second time it ought to be tempered with vinegar, and so reduced into seuerall trochiske. to be dried in the Sun during Summer. There is another way of making Ceruse besides this; namely, to put lead into certaine pots or pitchers of vinegar well and thoroughly stopped, that no aire go out, and therein to let it rest for ten daies space together: after which time, to take it forth, and scrape from it the mouldiness or vine- L wing that doth surer or gather about it: which done, to cast it in againe into the said vessels, con- tinuing so, untill such time as the lead be consumed to nothing. Now that which hath been thus scraped from it, they take and beat into powder, they seare it also very fine, calcin it ouer the fire in a pan, stirring and mixing it together with little slices or pot-sticks, untill such time as it wax red, and be like vnto Sandarach. After all this, they wash it in fresh water so long untill that all the grossenesse be scoured off: which when it is dry, in like manner as before, they digest into trochiskes. This Ceruse serueth to the same purposes that the rest abouemented (onely of al the other it is lightest in operation) and besides serueth to make an excellent blanch for women, that desire a white complexion: but deadly it is, being taken inwardly in drink, like as letharge also. This ceruse thus made, as white as it is, in case it be afterwards burnt againe, turneth to be reddish.

As touching Sandarach, I haue already shewed in manner all that concerneth the nature of it; howbeit, being it should be noted ouer and aboue, that it is found in the mines as well of liue; as of gold; the redder it is, and of a more strong and violent smell, the better men take it to be: such also is pure, clear, and brittle withal, or easie to crumble: mundificatiue it is and asitrit pent, heating

heating also and exceeding corrosiue: and the principal vertue that it hath, is to fret and putrifie whatsoeuer it worketh vpon: in a liniment with vinegar, it causeth the haire to come vp thicke againe in places despoiled thereof by any disease. It entrench into colleries or cie- salues: reduced into a lohoch with hony, it clensth the throat, and maketh a cleare shrill, and loud voice: eaten by way of a bole with turpentine, it is a gentle and pleasant medicine for those that be short-winded and troubled with the cough: a perfume also made with it and Cedar together, is good in the same cases, so that the smoke be receiued vp at the mouth. As for * Arsenicke, it is of the same fluffeth: that which is best of this kind, resembleth burnished gold in colour: the paler kind inclining to the colour of Sandarach, is thought to be the worse. A third sort there is, of a middle and medled color, compounded as it were of gold and Sandarach. These two later kinds be B skaly aloft: as for the first, which is dry and pure, it is full of small veins running here and there, whereby it is apt to cleaue as the veine goeth. Of the same operation is Arsenicke as the rest, but that it is more hot and biting; in which regard, it is vsed in potentiall cauteries, and depilatories: it taketh away the carnosities and apostemations about the nailes of the fingers: the superfluous flesh also within the nostrils: the bigs that hang forth of the fundament: and in one word, it eateth away any excrescence whatsoeuer. To conclude, much better it is and more powerful in operation, in case it be calcined in a new earthen pan, where it must torrifie so long vn- till it change the colour.

* Yellow orpi-
ment.

C



THE XXXV. BOOKE OF THE HISTORIE OF NATURE, WRITTEN BY C. PLINIUS SECVNDVS.

The Proem.

E



The discourse of Mines and Metals, wherein principally consisteth the wealth of the world: of other Minerals also growing to them, with the Natures, Operations, and effects of them all, is an argument so knit and annexed to Physicke, that the handling thereof, (which I haue already well-near performed) not onely discovereth a world of wholesome medicines profitable for the life and health of man, but also inferreth a number of hidden secrets, conched within the Apothecaries shops: yea, and openeth the way vnto the curious Art and subtill deuises of Grauers, Painters, and Diers, inducing me withall to take them also before me, and to treat thereof accordingly: which when I haue done, there remaineth yet for mee a new worke to take in hand; namely, to write of sundry kinds of Earth and Stone, and those linked together & carying with them a longer traine by far, than the former minerals. Concerning which, other authors, and the Greeke writers especially, haue so particularized, that of each one of them they haue written many volumes. For mine owne part, I meane not to follow their steps, but by way of compendious brevitie, to proceed as I haue begun, and yet to omit nothing that is necessary, profitable, and pertinent to Nature.

Y y 3

CHAP.

CHAP. I.

¶ The honour of flat picture in old time.



O begin then with that which remaineth as touching Picture and Painting, this would be knowne, That in times past it was reputed a noble and excellent art: in those daies I mean, when Kings and whole Sates made account thereof; and when those onely were thought innobled and immortalized, whom Painters vouchsafed to commend by their workmanship to posterity. But now, the marble and porphyrit stones haue put painting clean down: the gold also laid vpon them hath woon all credit from painters colours: gold I say, wherewith not only plain and entire walls are richly gilded all ouer, but also the polished works of marble engrauen vpon them after the manner of inlaid work and marquage of diuers peeces, resembling men, beasts, and floures, and all things else: for in these daies contented we are not with plaine squares and tables of marble, nor with the riches of mighty mountains, coucht vnder couert, & laid within our bed chambers in that sort as they grew, but come we are now to paint-stones. Deuised this was first in the daies of *Claudius Caesar*: but when *Nero* came to be Emperor, the inuention was taken vp, to giue those colours to stones in their superficiall outside, which they had not of their own, to make them spotted, which naturally were of one simple colour: by the helpe of mans hand, the * Numidian red porphyrit should be set out with white spots in * eg. fashion: the * Siniadian grey marble distinguished with marks and strakes of purple: as if our delicate wantons I shewed thereby how they could haue wised the stones to grow. Thus would they seem to correct the works of Nature, to supply the wants of mountains and quarries, and to make amends for the hills clouen in funder for gold, and hewed in peeces for marble. And what is the end of all this prodigious prodigality and wastfull superfluity? but that the fire when it commeth, may consume in one houre a world of wealth.

CHAP. II.

¶ The estimation and account that was made of Images in times past; represented by liuely pictures.

The manner was in ancient time, to continue and perpetuat the memorial of men, by drawing their pourtraitures in liuely colours, as like to their proportion and shape as possibly could be; but this custome is growne now altogether out of vse: in stead whereof we haue shields and scutcheons set vp of bras: we haue faces of siluer in them, without any liuely distinction of one from another: and as for our severities, the heads vpon them otherwhiles be changed one for another: which hath giuen occasion long since of many a jest and libel spread abroad in time and sung in every street. In such as all men now addayes are more desirous to haue the rich matter scene that goeth to the making of images, than to be knowne by their own personage and visage as it is: and yet every man delighteth to haue his cabinet and closet well furnished with antique painted tables: the statues & images of other men they think it enough to honor and adore, whiles they themselves, measuring worship by wealth, & thinking nothing honorable that is not sumptuous and costly, see not how by this meanes they giue occasion to their heires to break open their counters and make spoile of all, or els before that day come, entice a thiefe to be hooking or twitching them away with gins and snares. Considering then, that no man careth for a liuely picture, all the monuments that they leane vnto their heires, are images rather of their monies, than resemblances of themselves. Howbeit, these great men take pleasure to haue their owne wrestling places and halls of exercise, yea and the rooms where they are annoiued, beautified and adorned with the pourtraitures of noble champions: they delight also to haue the face of *Epicurus* in euery chamber of the house, yea and to carry the same about them vpon their rings whereouer they go: in the remembrance and honour of his natiuitie, they doe offer sacrifice euery 20 day of the Moore, and these moneth-minde they keep as holy-daies duly, which thereupon they call *Ieades*: and none so much as they who will not abide to be knowne another day by any liuely image drawne whiles they be alieue. Thus it is come to passe, that whiles artificers play them and sit still for want of worke, noble arts by the

means

A means are decayed and perished. But I marvel nothing hereat: for thus it is verily and no other wise, when we haue no respect or care in the world to leaue good deeds behind vs, as the Images of our minds, we do neglect the liuely portraitures and similitudes also of our bodies. In our forefathers daies ywis it was otherwise: their halls and stately courts were not set out with images and pourtraitures after this sort, there were not in them to be seene any statues or images wrought by artisan strangers, none of bras: they had, none of marble, their Oratories & Chapels were furnished with their own and their ancestors * pourtraitures in wax, and those liuely and expressely representing their vilages; these were set out and disposed in order, these were the images that attended the funerals of any that was to be interred out of that stock & linage. Thus alwaies as any gentleman died, a man should see a goodly traine of all those which were

B living of that house, accompanying the corps, causing also the images of their predecessors to march ranke by ranke in order, according to their seuerall descents: in which solemne hiew, the whole generation that euer was of that family, represented by these images, is there present, ready to performe that last duty and honour to their kinsman. Moreouer, wherefoeuer these images stood within the oratory and chappell before said, there were lines drawne from them vpon the wall, directing to the seuerall titles and inscriptions which contained their stile, their dignities and honors, &c. As for their studies and counting houses, full they were of books, records, and rols, testifying all acts done & executed by them both at home & abroad, during the time they were in place to beare office of state.ouer and besides those images within house, resembling the bodily shape & countenance, there were others also without dores, to wit, about the portals

C and gates of the house, which were the testimonies of braue minds & valiant hearts: there hung fixed the spoiles conquered and taken from the enemies, which notwithstanding any sale or alienation, it was not lawfull for the purchaser to pluck down: in such sort, as the house it self triumphed still and retained the former dignity, notwithstanding it had a new lord and master: and verily, this was to the master and owner a great spur to valour and vertue: considering, that if he were not in heart & courage answerable to his predecessor, he could neuer come in at the gates, but the house was ready to reproch and vpbraid him daily for entering into the triumph of another. Extant there is vpon record, an Oration or act of *Messala* (a great Orator in his time) wherein vpon a great indignation he expressely forbad that there should be intermingled one image that came from another house of the *Leuini*, among those of his owne name and linage, for feare

D of confounding the race of his family and ancestors. The like occasion moued and enforced old *Messala* to put forth and publish those bookes which he had made of the descents and pedigrees of the Roman houses: for that vpon a time as he passed through the gallerie belonging to *Scipio Africanus* his house, he beheld therein his stile, augmented by the addition of *Salutio* (for that was one of his surnames) which fel vnto him by the last will and testament of a certain rich man so called, who adopted him for his owne son: as being greatly discontented in his minde, that so base a name as that (to the shame and dishonor of the *Africanus*) should creepe into the noble family of the *Scipios*. But if I may speake without offence of these two *Messalas*, it should in my conceit be some token of a noble spirit and good mind that loucheth and imbraceth vertue, to entitle his owne name, although vntreuly, to the armes and images of others, so long as they be noble and renowned: and I hold it a greater credit for to doe, than to demean our selues so vnworthily, as that no man should desire any of our armes or images. And seeing that I am so far entered into this theme, I must not passe ouer one new deuise and inuention come vp of late,

E namely, to dedicate and set vp in libraries the statues in gold or siluer, or at leastwise in bras, of those diuine and heavenly men, whose immortal spirits do speak still and euer shall, in those places where their bookes are. And although it be vnpossible to recouer the true and liuely portraiture of many of them, yet we forbear not for all that to deuise one Image or other to represent their face and personage, though we are sure it be nothing like them: and the want thereof doth breed and kinde in vs a great desire and longing, to know what visage that might be indeed which was neuer deliuered vnto vs: as it appeareth by the statue of *Homer*. Certes, in my opinion there can be no greater argument of the felicity & happinesse of any man, than to haue all the world euermore desirous to know, what kinde of person hee was whiles he liued: This inuention of erecting libraries, especially here at Rome, came from *Africanus Pollio*, who by dedicating his Bibliothek, containing all the bookes that euer were written, was the first that made the wits and workes of learned men, a publique matter and a benefit to a Commonweale.

But

* These images were no other than their ge & best as to the shoul ders.

* Numidian.
* Orian.
* Siniadian.

* For they were so made that they might be taken off and set on againe.

*Ptolomæus,
*Vibladighius,
*Attalus.

But whether the kings of * Alexandria in Egypt, or of * Pergamus, began this enterprife before G (who vpon a certain emulation and strife one with another, went in hand to make their stately and sumptuous libraries) I am not able to aouoch for certain. But to returne againe to our flat images and pictures, that men in old time delighted much therein, yea, and were carried away with an ardent and extraordinary affection to them, may appeare by the testimony, not only of *Atticus* that great friend of *Cicero's* (who set forth a booke intituled, A Treatise of painted images) but also of *M. Varro*, who in all his volumes, whereof hee wrote a great number, vpon a most thankfull and bountifull mind that he carried, deuised to insert not onely the names of 700 famous and notable persons, but also in some sort to set down their physiognomy & resemblance of their visage: not willing as it might seem that their remembrance should perish, but desirous to preserve the shapies and portraits of foworthy personages against the injury of time, which H weareth and consumeth all things, indeuoring by this means, & as it were in a kind of emulation straining to do as much for them in this behalf, as the gods could do, not only in giuing them immortality, but also by dispersing those pourtraits into all parts of the world, to shew them personally in euery place to the eies of men, as if they were present.

CHAP. III.

¶ At what time scutchions and shields, with images engrauen in them, were first erected in publique place. Where they began to be set up in priuat houses. The originall of pictures. The first pourtrait that was of one single colour. Of the first Painters. How ancient the Art of Painting was in Italy.

AND this verily which *Varro* did, namely, to insert the names & counterfeits of famous men in his booke, was to gratifie strangers only. But of those who were desirous in this kinde, to honour Romans, I find in the Chronicles, that *Appius Claudius* was the first (him I meane, who in the 259 year after the foundation of the city of Rome, bare the Consulship with *Seruilus*, and namely, by dedicating in temples and publick places of the city, the shields of his predecessors by themselves alone. For within the chappell of *Bellona*, hee caused to bee set vp the scutchions and shields of his ancestors, taking great contentment to haue the armes of his predecessors seen on high, and the same accompanied with the titles of their honourable dignities K to be read. A goodly shew, no doubt, and a magnificent, in case there should be shewed withall a long descent of petty images representing a number of children, as it were the nest of a faire brood and off-spring: for who would not take great joy and pleasure to seee such a sight, who would not fauorably behold the armes of such a race and linage? After that *Appius Claudius* had given this precedent at Rome, there followed *M. Emilius*, companion in the same Consulship with *Q. Lutatius*, who not contented to haue the Armouries and coats of his Progenitors, to be advanced aloft in the stately hall and pallace *Emilia* only,ooke order, that they should stand also at home in his owne house: and this also was a matter of right great consequence, beeing done according to the pattern and example of the martiall worthies in *Homer*: for within these shields & scutchions, resembling those which were vsed in old time in the battels before Troy, L were represented the images of such as ferued with them, engrauen therein: for thereupon such shields took the name * *Clypeus*, chased and engrauen, not of the old word in Latine *clauus*, which signifieth to fight, or to be well reputed, as our thwarting Grammarians would with their subtile sophistrie seeme to etymologize and deriue it. Certes, this originall of shields and coats of armours, implied abraue mind and noble spirit full of vertue and valour, when euery mans shield shewed the liuely pourtrait of him that bare it in the warres. The Carthaginians were wont to make their targuets of beaten gold, and those likewise they caused to bee engrauen with their own portraits, & carried the same with them to the wars. And verily, *Q. Martius* that worthy warrior, and reuenger of the 2 *Scipio's* in Spain, hauing defeated the Carthaginians & taken many of them prisoners, found among other spoils and pillage, the shield of *Adribalus*, made in manner afore said: Which shield was erected & hung vpon the porch of *Iupiters* temple vpon Capitoll hill, and remained there vntill the first fire that consumed the temple. And seeing I am fallen vpon this poynt, namely, of erecting the armours woon from enemies, in publick place: I may not passe ouer in silence the securitie and carelesse regard that our forefathers had in this behalfe:

* *Clypeus*,
* *clauus*,
* *claudus*.

A behalfe which was so great, that *M. Aufidius*, who farmed and vndertook the custody or keeping of the Capitoll, the temple, and all therein, the same year wherein *L. Manlius*, and *Q. Fulvius* were Consuls, and which was from the foundation of the city of Rome 575 yeares, aduertised the Senat, That those shields there, which for so long together were appointed & assigned thither by the Censors, were not of brasle, as they had been taken for, but of siluer.

Concerning pictures, and the first originall of painters art, I am not able to resoluē and set downe any thing for certain: neither is it a question pertinent to my designe and purpose. I am not ignorant that the Egyptians do vauent thereof, aouaching that it was deuised among them, and practised 6000 yeares, before there was any talk or knowledge thereof in Greece: a vain brag and ostentation of theirs, as all the world may see. As for the Greeke writers, some ascriber the

B inuention of painting to the Sicyonians, others to the Corinthians. But they do all jointly agree in this, That the first pourtrait was nothing els but the bare poutriting and drawing onely the shadow of a person to his iust proportion and liniments. This first draught or ground, they began afterwards to lay with one simple colour, and no more: which kind of picture, after that they fell once to more curious workmanship, they called Monochromaton, a pourtrait of one colour, for distinction sake from other pictures of sundry colours: which notwithstanding, yet this plaine manner of painting continueth at this day, and is much vsed. As for the linearie portraying or drawing shapies and proportions by lines alone, it is said, that either *Phidolus* the Egyptian, or els *Cleantes* the Corinthian was the inuention thereof. But whosoever deuised it, certes *Arctius* the Corinthian, and *Telephanes* the Sicyonian, were the first that practised it: howbeit colours they vsed none, yet they proceeded thus far as to disperse their lines within, as well as to draw the pourse, and all with a coale and nothing els. And therefore their manner and order was to write also the names of such as they thus painted, and alwaies to set them close to the pictures. But the first that tooke vpon him to paint with colour, was *Clephanus* the Corinthian, who (as they say) took no more but a peece of a red potsherd, which he ground into powder, and this was all the colour that he vsed. This *Clephanus*, or some other of that name, was bewiso by the testimony of *Cornelius Nepos*, as I will anon shew more at large, accompanied *Demetrius* the father of *Targinius Priscus* king of Rome, when he fled from Corinth to auoid the wrongs of *Cypellus* the tyrant, who persecuted and oppressed him. But it cannot be so: for surely before this *Targuines* time, the art of painting was grown to some perfection, euen in Italy: for

C proofe wherof, extant there be at this day to be seen at Ardea within the temples there, antique pictures, and indeed more ancient than the city of Rome: and I assure you, no pictures came euer to my sight, which I wonder so much at, namely, that they should continue so long, fresh, and as if they were but newly made, considering the places where they be, so ruinated and vncouered ouer head. Semblably, at Lanuvium there remaine yet two pictures of lady *Atalanta*, and queen *Helen*, close one to the other, painted naked, by one and the same hand: both of them are for beauty incomparable, and yet a man may discern the * one of them to be a maiden, for her modest and chaste countenance, which pictures, notwithstanding the ruins of the temple where they stand, are not a whit disfigured or defaced. Of late daies, *Pomius* lieutenant vnder *C. Calpurnia* the Emperor, did what he could to haue removed them out of the place, and carried them away whole and entire, vpon a wanton affection and lustfull fancy that he cast vnto them: but the plastre or porger of the wall whereupon they were painted, was of that temper that would not abide to be firred. At Cere there continue certaine pictures of greater antiquity than those which I haue named. And verily, whosoever shall well view and peruse the rare workmanship therein, will confesse, that no art in the world grew sooner to the height of absolute perfection than it, considering that during the state of Troy no man knew what painting was.

CHAP. IIII.

Of Romanes that were excellent Painters. When the art of painting came first into credit and estimation at Rome. What Romans they were that exhibited the pourtraits of their owne victories in pictures. And about what time painted tables made by strangers in forreine parts, were accepted and in great request at Rome.

Amongst the Romanes also this Art grew betimes into reputation: as may appeare by the Fabry, a most noble and honourable house in Rome, who of this science were dymaned Pictures,

Pictores. j. Painters: & the first who was intituled with that addition, painted with his own hand G the temple of *Salus*; and this was in the 450 yeare after the foundation of our city: which painting continued in our age, even vnto the time of *Claudius Caesar* the Emperour, in whose daies the temple it selfe with the painting, was consumed with fire. Next after this, the workmanship of *Pacuvius* the Poet (who likewise painted the chappell of *Hercules* in the beaſt-market at Rome) was highly eſteemed and gaue much credit to the art. This *Pacuvius* was *Ennius* the Poets ſiſters ſonne: and being as he was a famous Tragickian beſides, and of great name vpon the ſtage, the excellency of his ſpirit that way, much commended at Rome his handy-work and painting aforeſaid. After him, I doe not finde that any perſon of worth and quality tooke penſill in hand and praſticed painting, vneſſe haply a man would nominat *Turpilus* a gentleman of Rome in our time, and a Venetian born, of whole workmanship there be many faire parcels of paynting extant at this day in Verona: and yet this *Turpilus* was altogether left-handed, and painted therewith; a thing that I doe not heare any man did before him. As for *Acerius Labeo*, a noble man of Rome, late Lord Pretour, and who otherwiſe had been vice-conſull in Gallia, Narbonenſis or Languedoc, who liued to a very great age and died not long ſince, he praſticed painting; and all his delight and glory that he tooke, was in fine and ſmal works of a little compaſſe: howbeit he was but laughed at, and ſcorned for that quality, and in his time the handicraft grew to be baſe and contemptible. Yet I thinke it not amiſſe to put downe for the better credit of painters, a notable conſultation held by certaine right honourable perſonages as touching the Art, and their reſolution in the end. And this was the caſe: *Q. Padius*, the little nephew of *Q. Padius* who had bin Conſull in his time and ended Rome in triumph, him I mean whom *C. Caesar* Dictator, made co-heire with *Augustus*, hapned to be born dumb; and *Messalla* the great Oratour, out of whoſe houſe the grandmother of this child was deſcended, being careful how the boy ſhould be brought vp, after mature aduiſe and deliberation, thought good that hee ſhould by ſignes and imitation be trained vp in the art of painting, which counſell of his was approoued alſo by *Augustus Caesar*. And in truth, this young gentleman being apt thereto, profited maruellous much therein, and died in his youth. But the principall credit that painters attained vnto at Rome, was, as I take it, by the means of *M. Valerius Maximus*, firſt ſurnamed *Messalla*, who being one of the grand-ſeigneurs of Rome, was the firſt that propoſed to the view of all the world, and ſet vp at a ſide of the ſtately hall or court Hoſtilia, one picture in a table, wherein hee cauſed to be painted that battell in Sicily wherein himſelfe had defeated the Carthaginians and *K. Hiero*, which happened in the yeare from the foundation of Rome 490. The like alſo, I muſt needs ſay, did *L. Scipio*, and hung vp a painted table in the Capitol temple, containing his victory and conqueſt of *Aſia*, whereupon he was ſurnamed *Aſiaticus*. But (as it is ſaid) *Africanus* although hee were his owne brother, was highly diſpleaſed therewith: and good cauſe he had to be angry and offended, becauſe in that battell his owne ſon was taken priſoner by the enemy. The like offence was taken alſo by *Scipio Emilianus*, againſt *Lucius Hoſtilius Mancinus*, who was the firſt that entered perforce the city of Carthage; for that hee had cauſed to be ſet vp in the market place of Rome a faire painted table, wherein was liuely drawne the ſtrong ſituation of Carthage; and the warlike means vſed in the aſſaulting and winning of it, together with all the particulars and circumſtances thereof: which *Mancinus* himſelfe in perſon ſitting by the ſaid picture, deſciended from point to point vnto the people that came to behold it; by which courteſie of his hee woun the hearts of the people, inſomuch, as at the next election of Magiſtrates, his popularitie gained him a Conſulſhip. In the publicke plaies which *Claudius Pulcher* exhibited at Rome, the painted clothes about the ſtage and Theatre (which repreſented building) brought this art into great admiration: for the workmanship was ſo artificiall and liuely, that the very rauens in the aire, deceived with the likeneſſe of houſes, flew thither apace for to ſettle thereupon, ſuppoſing verily there had been tiles and ereſts indeed. And thus much concerning Painters craft, executed in Rome.

To come now to forraign pictures, *Lu. Mummius*, ſurnamed *Achaicus* (for his conqueſt of *Aſia*) was the firſt man at Rome, who made open ſhew of painted tables wrought by ſtrangers, and cauſed them to be of price and eſtimation: for when as in the port-sale of all the bootie and pillage gotten in that victory, king *Attalus* had brought one of them, wrought by the hand of *Arſtides*, containing the picture only of god *Bacchus*, which was to coſt him * fix thouſand Seſterces, *Mummius* wondering at the price, & ſuppoſing that this table had ſome ſpeciall and ſecret

A cret proprietie in it more than himſelfe knew of, brake the bargain, called for the picture again, & would not ſuffer it to be caried away, notwithstanding *Attalus* complained much at the hard meaſure offered vnto him; and ſo he brought it with him to Rome, and dedicated it in the chappell of *Ceres*. And verily this I take to be the firſt painted table of a forreiners making, that euer was ſet vp in publick place at Rome. But after hee had once begun, I ſee it was an ordinary thing to adorn and beautifie euen the common place alſo with ſuch like: for vpon this occaſion aroſe that pretty ſcoffe which was giuen by *Craſſus* the Oratour, as hee pleaded vpon a time vnder the * old Roſtra: for when there was a Witneſſe produced to depole againſt him, whom hee would ſeeme to challenge and reprove, whereupon the party replied again and vrged him inſtantly in theſe termes, Speake out *Craſſus*, and in the face of all this Court ſay, what kinde of perſon you would make me to be? Mary (quoth he again) I take thee to be ſuch an one (pointing directly to a table hanging there by, wherein was painted a certain Frenchman yawning and jelling out his tongue full ſaſſaſorily.) In the ſame Forum or Grand place at Rome there ſtood ſometime the picture of an old ſheephead leaning vpon his crooke, as touching which (for that as it ſhould ſeem it was very workmanlike made) when a certain Dutch Embaſſador who beheld it, was demanded, at what price hee eſteemed it, answered ſhort & quick, What a queſtion is that? I would not haue ſuch an one (were hee aliuie, as I ſee he is but painted) though he were giuen me for nothing. But if I ſhould ſpeake at once, who it was that gaue the greateſt countenance vnto ſuch tables in open view, I muſt needs ſay it was *Caſar* dictator, who ſtrained the pictures of *Ajax* and *Medea* in no meaner place than before the temple of *Venus Genetrix*. Next after him came *M. Agrippa*, a man by nature inclined rather to ruliſticke than to delights, and more like a rude peſant than a ciuill gentleman. But ſurely there is extant a worthy Oration of his, and beſeeming the principall perſon of a whole city, as touching the open ſale of all painted tables, ſtatues, and images, that were in the hands of priuat men, and the ſetting of them vp in publicke places for to adorn the city: which no doubt had bin far better than to haue them baniſhed (as it were) and ſent as they be into the country, to beautifie maners and retyring houſes of pleaſure: howbeit as ſterne and grim a ſir as he was, hee could find in his heart to beſtow vpon two tables with the pictures of *Venus* and *Ajax*, 12000 ſeſterces, which hee paid vnto the *Cyzicenes* for them. Alſo hee had cauſed to be ſet in marble ſtone inſeaſed, within the hotteſt part of his baths, many rich pictures of a ſmall making, and couched in ſmall tables, the which were taken away but a little before the ſaid baths were repaired. But about all that euer were, *Caſar Augustus* the Emperour of famous memory, did ſet vp in the moſt frequented or perſpicuous place of his Forum or ſtately hal, two excellent painted tables, one containing the liuely portrait of War, the other of Triumph. He alſo dedicated the pictures of *Caſtor* and *Pollux*, beſides others, whereof I will write in my catalogue of Painters: which hee hung vp all within the temple of *Iulius Caesar* his father. The ſame *Augustus Caesar* incloſed within the wall of that Curia, which hee erected and conſecrated in the common place called Comitium, two Tables painted; the one reſembling the Forreſt Nemea, in habit of a woman ſitting vpon a lion, the carrieth in her hand a date tree; and there ſtandeth by her an old man reſting vpon his ſtaffe, our whoſe head there was a pretty tablet hanging down as a label, from a chariot drawn by two horſes with this inſcription, *Nicias me inſiſſit*. *Nicias* inamelled or wrought me with fire: for that verb [*inſiſſit*] it pleaſed him to vſe. As for the other table, the admirable workmanship therein was this, An old grey-beard accompanied with his ſon, a youth exceeding like his father, ſaue onely for the difference in age; which appeared in the yong down that ſprung vpon his cheeks and chin. A deuſe there was beſides of an Eagle flying over their heads, clapping a dragon within her talons: and as it appeared by the ſuperſcription, *Philochares* was the workman. By which one table (if there were no more but it in the whole world) a man may make an eſtimate of the infinite power that is in this art, which could cauſe the Senat & people of Rome to take ſuch pleaſure for many yeares together to look vpon *Glaucon* and his ſon *Arſtippus*, perſons otherwiſe moſt baſe and contemptible, onely in reſpect of *Philochares* who painted them. As for *Tiberius Caesar* the Emperour, albeit hee was a prince of all other leaſt courteous and affable, yet he delighted to hang vp thoſe painted tables within the temple of *Augustus Caesar*, whereof I mean to write hereafter.

CHAP.

* *Seuotribus*, which ſome interpret *Tavernis*.

* *Quintilianus* reporteth this otherwiſe.

CHAP. V.

¶ The art and manner of Painting: the Colours that Painters vse.

Thus far forth may suffice to be spoken of the antient dignitie of that art, which begins already to decay and die. What were the colors also that the first painters vsed in old time, when they drew their portraicts with one simple colour, I haue written already in my treatise of Mines & Minerals, where I discoursed likewise of painters colours. Touching those that named certain kind of pictures Monochromata, as also who enriched them with more colours, who inuented this or that for the bettering and perfecting of them, and at what time each of these additions accrued thereto, I mean to referre vnto my catalogue of painters: for the order and consequence of my work requireth, that I should first set down the nature of euery colour.

First and formeſt therefore this is to be noted, That in proceſſe of time the artificeer who began with one bare colour, found out the difference himſelfe between * light and shadow, & deniſed by this diſtinction to ſet vp and deſaie the one and the other alternatiuely, and the ſame more or leſſe according to his ſeuerall intentions. After theſe lights and ſhadowes were inuented a kind of luſtre or glosſe, different from the light aforeſaid, which becauſe it is of a mean nature between the ſhade and the light, and participates of both, they called by a Greeke word Tonos. As for the apt coherence of one colour with another, the ioint as it were between, and the paſſage from one to another, they named it Harmoge.

CHAP. VI.

¶ Of Painters colours, naturall and artificiall.

All colors be either ſad or liuely, and thoſe be ſo either naturally, or by artificiall mixture. Liuely or gay colors be ſuch as the * maſter deliuerſ to the painter by weight & meaſure: as namely * Vermilion, * Verd d'Azur, * Sang-dragon, * Verd de terre, or Borrax, * Indico, and * Roſet. The reſt be ſad or duſkiſh, and as wel the one as the other be all either naturall or artificiall. Among the naturall of this ſort (to wit the ſad colours) I reckon the * common bole Armin, * Ruddel or red ſtone, * Paretonium, * Melinum, * Erretia, and * Orpin. The reſt of theſe kinds be artificiall, & principally thoſe which I haue already ſpoken of in the treatiſe of mines. Moreouer, of the baſer ſort are Ocre and Ruddel, burnt Ceruſſe or Spaniſh white, Sandix mineral, and Scyricum, Sanderacha, Vitriol, or Black. As for Sinopis or common bole Armin, found out firſt it was at Sinope, a maritime town in the kingdom of Pontus, whereof it took that name; it groweth alſo in Egypt, the Balear Islands, and Africk; but the beſt is found in the Iſle Lemnos, and in Cappadocia, digged out of certain caues and holes. That which ſtucke faſt vnto the rocks excelleth all the reſt. The pieces of this earth if a man do breake, ſhew the owne naturall colour which is not mixed, without-forth they be ſpotted. And this earth in old time was vsed for to giue a luſtre vnto other colours. Of this Sinopis or Bole Armin common there be three kindes, the deepe red, the pale or weake red, and the meane between both. The beſt Sinopis is eſteemed worth * thirteene denarij Roman by the pound: this may ſerue the painters penſill, yea or in groſſer work, if a man liſt to colour poſts, beams, or wood: as for that which cometh out of Africk, it is worth eight aſſes euery pound, and this they call Cicicrulum: that which is redder than the reſt ſerueth better for painting of tablements: as for that which is moſt brown and duſkiſh, called in Latine Preſſior, it is of the ſame price that the other, and employed in the baſes and feet of ſuch tablements. And thus much for the vſe in painting. Touching Phyſicke and the medicinale properties thereof, milde it is of nature, and in that regard of gentle operation, whether it enter into hard emplaiſtres of a dry compoſition, or into immolitiue plaiſters that are more liquid, and principally ſuch as are deuſed for vlcers in any moiſt part, as the mouth or fundament. This earth, if it be inſected by a ciſtre, Roppeth a laſke: and being giuen to women in drinke to the weight of one denarius, i. a dram, it ſlayeth their immoderate fluxes of the matrice. The ſame burnt or calcined drieth vp the fretting roughneſſe of the eies, principally if it be applied with vineger. This kinde of red earth ſome would haue to be counted in a ſecond degree of Rubrica for goodneſſe, for they alwaies reckoned that of Lemnos to be the

A chiefe & ſimply beſt, as coming next in price to Minium, i. Vermilion. And in truth, this Terra Sigillata or Lemnia, was highly accounted of in old time, like as the Iſland Lemnos from whence it comes: neither was it lawfull to ſell any of it before it was * marked or ſealed, & thereupon they vsed to call it Sphragis. The painters ordinarily lay a ground of this vnder their vermilion, and ſophiſticate it many waies. In phyſick it is holden to be a ſoueraigne thing: for if the eies be annoiſed round about therewith in manner of a liniment, it repreſſeth the flux of rheumattick humors and doth mitigat the pains incident to them: the ſiſtulous ſores likewiſe about the angles or corners of the eies, it drieth vp that they ſhall not run as they vſe to doe. Inwardly alſo it is commonly giuen in vineger, to ſuch as caſt vp blood at the mouth. It is taken alſo in drinke, for the opilations and other accidents as wel of the ſpleen as kidneys: and beſides, B to ſtop the exceſſive fluxes that be incident to women. Singular it is againſt any poiſon or venomous ſting of ſerpents, either vpon land or ſea; and therefore is a familiar ingredient into all antidots or counterpoiſons. Of all other ſorts of red earth, the ruddel of Egypt and Africke is fitteſt for Carpenters, for if they ſtrike their line vpon timber with it, they ſhall be ſure that it will take colour and be marked very well. Moreouer, another ſort there is of this red earth mineral, found with yron ore, and the ſame is good alſo for painters. There is a kind of ruddel alſo made of ochre burnt and calcined in new earthen pots well luted all ouer: and the greater fire that it meeteth withall in the furnace, the better it is. In general, any ruddel whatſoeuer is exiccative, in which regard it agreeth wel with ſalues and healing plaiſters, and is very proper for to repreſſe ſingles & ſuch cutaneous wild-fires that wil ſtand in drops. Take of Sinopis or Bole Armin common that cometh out of Pontus * halfe a pound, of bright Sil or ochre 1 pound, of the Greeke white earth Melinum 2 pound, pun them all together, and mix them wel, ſo as they may ferment 12 daies together: and hereof is made Leucophorum, i. a kind of gum or ſize to lay vnder gold-ſoile for to guild timber.

Touching the white earth Parætanium, it carieth the name of a place in Egypt from whence it cometh: and many ſay, that it is nothing but the ſome of the ſea, incorporat and hardened together with the ſlime & mud of the ſhore: and therefore there be winkles and ſuch ſhell-fiſhes found therewith. It is ingended alſo in the Iſle Candy, and the country of Cyrenæ. At Rome they haue a deuſe to ſophiſticate it, namely by boiling fullers earth vntil it be of a faſt & maſſie conſiſtence: the price of the beſt is after 6 denier, the pound. Oal white colors it is the fatteſt, and for that it runs out ſmooth in the working, it is the fatteſt parget to ouercaſt walls withall.

As for the earth Melinum, white it is likewiſe; but the beſt is that which the Iſle Melos doth yeeld, whereupon it took that name. In Samos alſo it is to be found, but painters vſe it not, becauſe it is ouer clammy and vntuous. The Iſlanders are wont to creep on all foure and to lie along at their work when they dig it forth of the rocks, for ſearch it they muſt among the veins that run therein. The ſame * operation it hath in phyſicke that the earth Erretia alſo, if a man touch it with the tongue, he ſhal find it aſtringent and drying; howbeit, a depilatory it is in ſome ſort, and fetcheth away haire, or els cauſeth it to grow thin. A pound of it is worth a Seltreze.

There is of white colors a third kind, and that is Ceruſſa or white lead, the reaſon & making whereof, I haue ſhewed in my diſcourſe of minerals: and yet there was found of it in the nature of a very earth by it ſelfe at Smyrna, within the land belonging to one Theodorus, wherewith in old time they vsed to color and paint ſhips. But in theſe daies we haue no other ceruſſe or Spaniſh white but that which is artificiall, made of lead & vineger, in manner aforeſaid. As touching ceruſſe burnt, the inuention thereof came by meere chance, vpon occaſion of a ſtroke fire happening in the harbor of Piræum, which caught the pores and boxes wherein the Athenian dames that dwelt by the ſaid harbor kept their blanch of ceruſſe for complexion: and this ceruſſe thus calcined, the firſt that vſed in picture was Nicias, of whom I haue already ſpoken. The beſt that we haue in theſe daies comes out of Aſia, and for that it inclineth to a purple colour, they call it Purpurea: a pound of it is ſold for 16 deniers Roman. This alſo is made in Rome, namely by caſting Sil or ochre mineral, which ſtandeth much vpon marble, and then quenching it with vineger. Such vſe the painters make thereof thus burnt, that no ſhadowes will do well without it.

Concerning Erretia, another kind of white earth, it takes the name of the place from whence it cometh, *Erretia* or *Parafus* vsed this colour much. In Phyſick, it is found to be cooling and emollient. Being burnt or calcined, it is an excellent incarnatiue: ſingular good for to drie any ſore; proper alſo to be applied to the forehead for the headach; like as, to diſcover any ſeſting

* With the image of a goat, as Diocletian, or of Diana, according to Galen.

Thus, Dalmatian, reads this place according to Plutarch, out of Dioſcorus, and Theophrastus, Plutarch, others read Sicily.

* To launch blood.

1 Because they be rich and costly.
2 Minium.
3 Armenium.
4 Cinabaria.
5 Cryſocolla.
6 Indicum.
7 Lactaria cum carule.
8 Purpurillum.
9 Sinopis.
10 Rubrica.
11 A white kind of ſtreak earth like plaiſte.
12 A white earthlike chalker.
13 A whitish earth or all colour white.
14 Auripigmentum.
15 Or rather three denarij, for otherwise there were no proportion betweene it and the other of that kind.

or rankling matter that lieth secret within: for if a place be anointed therewith, when it is reduced into a liniment with water, in case it wax not dry, be sure there is some suppuration vnderneath

As touching Sandarach and Ochra, *K. Iuba* writeth, that they are to be found in Tapazus, an Island within the red sea; but that which we haue, was neuer brought from thence. How Sandarach is ingendred, I haue said already in the discourse of mines. There is an artificiall and sophisticated Sandarach, made of ceruse burnt in a furnace. The colour of Sandarach ought to be fiery like a flame: a pound thereof is bought for 5 Asses, halfe a denier. Calceine this and Ruddle together, and of both, being concorporat in equall quantity, you shall haue the color called Sandyx. Howbeit, I do obserue in *Virgil*, that he took Sandyx for an herb, as may appear by this verse:

Sponse sua Sandyx pascentes vestire agnos.
A ruddie fleece shall Sandyx yeeld,
To lambs, as they do graze in field.

This Sandyx to be bought and sold, carrieth but halfe the price of Sandarach: neither be there any colours more weighty than these in the ballance.

Among the artificiall and made colors, I reckon Scyricum, which as I haue already said, serueth for a good ground to take vermillion. The manner of making it, is to mix the best ruddle Sinopis and this Sandyx together.

Painters black [called in Latine *Atramentum*] I count an artificiall colour, although I know there is a viatrioll or copose going vnder that name, which is mineriall, and is ingendred two manner of waies: for either it issueth and cooeth out of the mine in manner of a salt humor or liquor; or els there groweth an earth it self of a brimstone colour, which serueth for it, that it may be drawn out thereof. Some painters haue bin knowne, who for to get black, haue searched into sepulchres for the coles there, among the reliques and ashes of the dead. But in mine opinion, all these be but new deuises, and foolish irregular toies without any reason; for a man need seek no farther but to foot, and that made many waies, by burning either of rosin or pitch: in which regard, many haue built places and forges of purpose to burn them in, without any emissaries, tunnels, or holes, that the said foot or smoke may not get forth: but the best black in that manner made, comes of the smoke of torchwood. This fine foot is sophisticated with grosse foot that doth gather and ingender in forges, furnaces, & stoups: and this is that inke wherewith wee use to write our books. Some there be who take the lees or dregs of wine, and when it is dried, boile it thoroughly; and they asseme, that if the wine were good whereof those lees came, the said inke or black will make a colour like Indico. And in truth, *Polygnetus* and *Mycon* (two as renowned painters as euer were) vied no other black at all, but that which they made of the mare or refuse of grapes after they be pressed, & this they call Tryginon. *Apelles* deuised a way by himself, to make it of yuorie or the elephants tooth burnt, and this they named therupon Elephantinum: as touching the black called Indicum, it is brought from India: but as yet I know not the manner either of the making or the ingendring of it. A kind thereof I see the diers do make, of that black Rorie which sticketh to their coppers. Also, there is a black made of torchwood burnt, & the coles that come of it panned to powder in a mortar. And here commeth to my mind the wonderful nature of Cuttle fishes, which do yeeld a black humor from them like to inke: howbeit, I do not find that painters or writers make any vse thereof. But all blacks whatsoever they their perfection by sunning: if it be writing inke, with gum (Arabicke); if to colour paretting or walls, with glew among; and looke what black is dissolved and liquified in vineger, the same will hold well and hardly bewashed off. And thus much of the ordinary colours low prized.

Of all the colours besides, which (as I said once before) for their high price the poore painters be serued with from their masters hands who fer them on worke, the rich roset or purple red that is made of Tripolie or goldsmiths earth, is simply the best: for this Tripolie is commonly died together with purples; and no silk, wooll, or cloth, will so soon take that tincture as it. The principal is that, which hauing had the floure of a fat, hath drunk the fl as it were, whiles the liquor is yet boiling, and the drugs within the caudron be in their verdure and haue not lost the heart. When this first Tripoly thus deeply died, is cast vp and taken forth, that which is put in next into the said liquor, is counted the second in goodness, & so consequently by degrees; for the former euer taketh the higher die, & the oftner you dip therein, the weaker will the tincture be: which is the reason that the roset or purple red of Puteoli, is more commended, than either

the Tyrian, Getulian, or Lacedemonian, nor withstanding from thence come the most rich and precious pearls. The reason is, because the Tripoli in Puteoli is died most with the iuice of the Magaleb berries among, which yeelds the gallant red, & besides, is forced to drink the tincture of Mader. That roset which is made at Canusium is the worst of all other, and carieth the lowest price: a pound of roset costeth vially * 30 deniers Roman. Painters or complexioners, when they would counterfeit a lustre or glosse of vermillion, lay a ground first with Sandyx, and then charge roset vpon it with the white of an egg; but if they be desirous to make a purple colour, the first course or ground is azur; and fravities they come vpon it with * roset and the white of an egg aboue said. After this rich and lively roset or purple red, Indico is a colour most esteemed: out of India it comes, wherupon it took the name; and it is nothing els* but a slimy mud cleaving to the fume that gathereth about canes and reeds: while it is panned or ground it looketh black, but being dissolved, it yeelds a wonderfull louely mixture of purple and azur. There is a second sort of it found swimming vpon the coppers or vats in purple Diers worke-houses: and in truth, nothing els but the very fume or steam that the purple casts vp as it boileth, in manner of a storey. Some there be that do counterfeit and sophisticate Indico, selling in stead thereof pigeons dung, Selenian earth, and Tripoli, died and deeply coloured with the true Indico: but the prooffe thereof is by fire; for cast the right Indico vpon liue coles, it yeeldeth a flame of most excellent purple, and while it smoketh, the fume senteth of the sea; which is the reason that some do imagine it is gathered out of the rocks standing in the sea. Indico is valued at 20 denarij the pound. In physicke there is vse of this Indico, for it doth assuage swellings that doe stretch the skin: it represseth violent rheums and inflammations, and drieth vlcers.

The land of Armenia doth furnish vs with the colour verd d'azur, and of that country it is named Armenicum: a stone it is that is likewise died before it can die, in manner of Borrax or verd d'terre: the best is the greenest, & yet withall it doth participat the colour of azur, in which regard it may properly be called Verd d'azur. In times past a pound of it was held at 300 Sesterces: but since there was found in Spain a kind of sand that would take the like tincture and do as well, the price hath bin well abated, and is come downe to six deniers. All the difference between this colour and azur is this, for that it stands more vpon the white, which causeth this colour to be lighter and weaker. The only vse that it hath in physick, is to nourish hairs, & especially those of the eie lids. Outier and besides all these colours aboue named, there be two more newly come vp, and those beare but a very low price; to wit, the green called Appianum, & oft times it is taken for Borrax or Verd d'terre, as if there were not other things enough that did counterfeit and resemble it. Made it is of a certain Greene chalky earth, & is worth but one Sesterce a pound. The second new colour is a white, called Anulare, being that which in womens pictures gives a lightfom carnation white: this also is made of a kind of chalk, & certain glassy gems or bugles, which the common sort vse to weare in rings, & thereupon is called Anulare.

CHAP. VII.

¶ What Colours refuse to be layd vpon some grounds: with what colours they painted in old time: and when the sight of sword-fencers was first propoed to be seen at Rome.

OF all colours, Rolet, Indico, Azur, Tripoli or Melinum, Orpiment, white lead or Ceruse, Ioue not to be laid vpon plaister-work or any ground, while it is moist, & yet wax will take any of these colours aboue said, to be employed in those kind of works which are wrought by fire (so it be not vpon plaister, parget, & wals, for that is impossible) whether they be inameld or damasked yea and in their painting of ships at sea, as well hulks & hoies of burden, as gallies and ships of war: for now wee are come (forsooth) to inameld and paint those things that are in danger to perish & be cast away euery houre: so as we need not maruel any longer, that the coffin going with a dead corps to a funerall fire, is richly painted: and we take a delight when wee mind to fight at sea, to sail with our fleet gallantly dight & enriched with colours, which must carry vs into dangers, either to our own death, or to the carnage of others. And when I consider so many colours, & those so variable, as be now adades in vse, I must needs admire those artificers of old time, and namely of *Apelles*, *Echin*, *Melanthius*, and *Zeuxippus*, most excellent painters, and whose tables were sold for as much apiece, as a good town was worth; and yet none of these used aboue foure colours in all those rich and durable workes. And what might those be?

ould G

CHAP.

535

A

As for *Parafins* before named, borne hee was at Ephesus, and inuented also diuers things of himselfe to the aduancement of this art: for the first he was that gaue the true symmetrie to a portraiture, and obserued the iust proportions: he first exactly kept the sundry habits and gestures of the countenance: he it was, that first stood vpon the curious workmanship of couching and laying the haire of the head in order: the lovely grace and beauty about the mouth and lips, he first exactly exprefed: and by the confession of all painters that saw his worke, he wonne the praise and praife from them all in making vp the pourfils and extenuities of his liniaments, which is the principall point and hardest matter belonging to the whole art: for to draw forth the bodily proportion of things, to haue also, yea, and to fill within, requireth (I confesse) much labour and good workmanship; but many haue bin excellent in that behalfe; many to pourfille wel, i. to make the extremities of any part, to mark duly the diuifions of parcels, & to giue enery one their iust compass and measure is exceeding difficult; and few when they come to the doing of it, haue been found to attaine vnto that felicity. For the most edge of a worke must fall round vpon it selfe, and fo knit vp in the end, as if it shadowed somewhat behind, and yet shewed that which it seemeth to hide. In this so curious and inexplicable a point, *Antigonos* and *Xenocrates* both, who wrote as touching this art, haue giuen him the honour of the best; not onely confessing his singular gift herein, but also commending him for it. Many other plots and projects there doe remaine of his drawing, pourtraied as well in tables as vpon parchment, which serue as patterns (they say) for painters to learn much cunning by. And yet for inward works, and to expresse the middle parts of a portraiture, he seemeth not so perfect, nor answerable to himselfe otherwise. There is a notable picture of his making, which he called * *Demon Athenienfium*, that is to say, * the Athenians, the common people of the Athenians; the deufewherof was passing full of wit, and verie inuictive: for his intention was in one and the same portraiture, and vnder one object of the eye to expresse the nature of the people, variable, wrathfull, vnjust, and vnconstant; the same also he would haue to appeare exorable, milde, and pittifull; haughtie, glorious and proud, and humble, lowly, and submissie; fierce and furious, and the same coward-like, and ready to run away: all these properties, I say, he represented vnder one cast of the eye. This workeman painted also *Thefens*, which stood sometimes in the capitoll of Rome; a certaine Admirall likewise of a

* Grace melius
μεμνησται τις
μὴ λαοι, ἢ μνησ-
ται: which
Iambick verse
some attribute
to Apollodorus.

naue armed with a corselet. In one table also which is at Rhodes, he depainted *Melager*, *Hercules*, and *Perseus*. This table was thrice blasted with lightning, howbeit, the pictures were not defaced, but remained whole and entire as at the first: a miraculous thing, and that which maketh much for the credit of the picture. *Archigalus* was of his painting; a picture that *Tiberius* the Emperor took great pleasure in; and as *Euclo* mine author doth testify, he esteemed it worth 60000 sesterces, and inclosed it within his bed-chamber. Moreover, he counterfeited one *Cressus* a source, with her infant in her arms: he portraied *Philisus*, and god *Bacchus* with the goddesse *Venus* standing by him: also two boies, on whom a man might see most liuely resembled, the carelessnesse and simplicity of that age; likewise a priest, attended vpon with a pretty boy, holding a censur in his hand, and a coronet.ouer and besides, two pictures there be of his handiwork, going vnder the name of *Hoplites*; i. armed: the one running in his armour in battel-wise, he soas he seemeth all in a sweat: the other disarming himself, all wearied, so as a man would think his wind were gone, or that he drew it very short. Great praise there is of one table of his, wherein are depainted, *Aeneas*, *Castor*, and *Pollux*; also of another, which contained *Telephus*, *Achilles*, *Agamemnon* & *Phylis*. An artisanfull of work, & who would euer be doing one thing or other, but so arrogant withall, as no man euer shewed more insolency than he, in regard that hee was cunning and well thought of: which he knew well enough, and no man needed to tell him. In this proud spirit of his, he would take vpon him diuers titles and additions to his name: among others, he would call himselfe * *Abradatus*: and other words he vsed, whereby hee would make himselfe known that he was prince of painters, and the art by him made perfect and accomplished. But it exceedeth how vaine-glorious he shewed himselfe, in that hee gaue out, hee was in I right line descended from *Apollo*: also that the portrait of *Hercules*, which is in a table at *Lindos*, he drew from the very person of *Hercules* himselfe, answerable in all points to the proportion and lineaments of his body; who (by his saying) had appeared to him oftentimes in his sleep of purpose, that he might paint him liuely as he was. In this veine of vanity, being vpon a time put down by *Timanthes* the Painter at *Samos*, where, by the iudgement of all that were present, his picture representing *Ajax*, and the awarding of the armor of *Achilles* from him to *Pylax*, was not thought comparable to another of *Timanthes* his making: I am ill appaied (quoth he) and forry at the heart, for this noble knight and braue warrior *Ajax*, whose euill hap it is thus to be foiled once againe by so vnworthy a weight, and a far meaner person than himselfe. He delighted also to paint small pictures in pretty tables, and those representing wantonnesse and lecherie: X and this hee did (as he was wont to say) for his recreation, and as it were to breath himselfe when hee had laboured hard at greater workes.

As for *Timanthes*, an excellent fine wit he had of his owne, & full he was of rare inuentions: he it was that made the famous picture of *Iphigenia*, so highly commended by eloquent orators: and to say a truth, his conceit therein was admirable: for when hee had deuised that the poor innocent lady should stand hard at the altar, ready to be slain for sacrifice, and had painted those that were present about her, with beauey and sad countenance, weeping & wailing all for the infant death of this young princeesse, and her vnckle *Menelaus* about the rest, full of sorrow and lamentation, and shewing the same as much as possibly might be: hauing by this time spent in them all the signes that might testifie the hearts griefe, and that he was come to pourtray her own father *Agamemnon*, he represented his visage couered with a veil, for that he was not able to expresse sufficiently the extraordinary sorrow about the rest which he had to see his own daughter sacrificed, and her guiltlesse blood spilt. Other pieces of worke there be, patternes all of singular wit: among the rest, he deuised within a very small table, Cyclops lying a sleep; and yet because he would seeme even in that little compasse to shew his giant-like bignesse, hee deuised withall to paint little eluif Satyres hard by, and those taking measure of one of his thumbs with long perches. In sum, so inuentiue he was, that in the workes which passed through his hand, a man shal euer conceiue & vnderstand some hidden thing within more than is painted without: for albeit a man shal see in his pictures as much art as may bee, yet his wit went alwaies beyond his art. Moreover, his picture of a prince was thought to be most absolute; the majesty whereof is such, that all the art of painting a man, seemeth to be comprised in that one portrait. This piece of worke remaineth at this day within the temple of *Peace*, in *Rome*.

In this age flourished *Eusevidas*, and taught *Arifides* his cunning, who proued afterwards a singular workman, *Eupompus* also trained vp *Pamphilus* the painter vnder him, whose apprentice

was

A was *Apelles*. There is a fine picture of *Enpompus* his making, to wit, one who had obtained the victorie at the publique Gynnicket exercises of aitiuitie, painted naked as hee performed his deuoir, holding in his hand the branch of a date tree. This *Enpompus* was of such authoritie, that whereas before his time there were but two kinds of pictures, to wit, *Helladicum*, i. the Greekish; and *Asiaticum*, i. Asiatick, he brought in a new diuision, and made 3 distinct members thereof: for in loue of him, because he was a Sicyonian borne, the foresaid *Helladicum* being parted in twain, there arose three feuerall sorts, the Ionian, Sicyonian, and Attick.

As for *Pamphilus*, renowned he was for painting a confraternity or kindred, the battel fought before *Philus*, and the victorie of the Athenians: seembably, of his making is the picture of *Vlysses* in a punt or small bottom. Himselfe was a Macedonian borne, but of all painters, the first that gaue his mind to other good literature, and especially to Arithmetick & Geometry; without the insight of which two sciences, hee was of opinion, that vnpossible it was to be a perfect painter. He taught none his cunning vnder * a talent of siluer for 10 yeares together: and thus much paid *Apelles* and *Melanibius* vnto him for to learn his art. His authoritie brought to passe, that ordained it was at Sicyone, and so consequently throughout all Greece, that gentlemen the art *Diagraphice*, that is to say, the skill to draw and paint in box tables: and for the credit of Painters he brought to passe, that the art should be ranged in the first degree of liberrall Sciences. And verily this craft of painting hath bin alwaies of that good respect and so honored, that none but gentlemen and free-borne at the first beginning medled therewith, yea, and afterwards honorable personages gaue themselves to the practise thereof, with this charge from time to time, to teach no slauie the mysterie of painting, who by a first and perpetual edict were excluded from the benefit thereof. Neither shall you euer heare of any piece either of picture or graverie and embossing, that came out of a seruile hand.

Furthermore, about the 170 Olympias there flourished *Echion* and *Therimachus*, two renowned painters: as for *Echion*, ennobled he is for these pictures, god *Bacchus*, a Tragedie and a Comedie, represented by painting: also *Semiramis*, who of a bond-maiden came to be a queen; an ancient woman carrying a torch or lamp, going before a yong wife newly wedded, and leading her to the bride-bed, who followeth with a modest, shamefast, and bashfull countenance most apparant to the eie.

D But what should I speake of these painters, when as *Apelles* surmounted all that either were before, or came after. This *Apelles* flourished about the 112 Olympias, by which time hee became so consummate and accomplished in the art, that hee alone did illustrate and enrich it as much, if not more, than all his predeceffors besides: who compiled also diuers bookes, wherein the rules and principles, yea and the very secrets of the art are comprised. The speciall gift that hee had was this, that he was able to giue his pictures a certain louely grace inimitable: and yet there were in his time most famous and worthy painters, whom he admired, whose workes when hee beheld hee would praise them all, howbeit not without a but: for his ordinarie phrase was this, Here is an excellent picture, but that it wants one thing, & that is the *Venus* it should haue; which *Venus* the Greeks call *Charis*, as one would say, the grace: and in truth he would confesse, that other mens pictures had all things els that they should haue, this onely excepted; wherein hee was persuaded that he had not his peere or second. Moreover, he attributed vnto himselfe another propertie, wherein hee gloried not a little, and that was that hee could see to make an end when a thing was well done. For beholding wisely vpon a time a piece of worke of *Protagenes* his doing, wherein he saw there was infinite pains taken, admiring also the exceeding curiositie of the man in each point beyond all measure, he confessed & said, That *Protagenes* in euery thing else had done as well as himselfe could haue done, yea and better too. But in one thing hee surpassed *Protagenes*, for that he could not skill of laying worke out of his hand when it was finished well enough. A memorable admonition, teaching vs all, That double diligence and ouermuch curiositie doth hurt otherwhiles. This painter was not more renowned for his skill and excellencie in art, than he was commended for his simplicitie and singleness of heart: for as he gaue place to *Amphion* in disposition, so hee yielded to *Astleiodorus* in measures and proportion, that is to say, in the iust knowledge how far distant one thing ought to be from another. And to this purpose impertinent it is not, to report a pretty occurrent that fell between *Protagenes* and him: for being very desirous to be acquainted with *Protagenes*, a man whom hee

had

* Iustice, delicate and sumptuous: for he would be in his purple, or his golden chaplets, his staffe, tips with gold, and his shooebuckles of the same.

* Minus tamen annis de-
cem: yea hee had
his scabbard an-
nua telusis
decem, ten ta-
lents by the
yeare.

eld H

* *i. Oriam mari*
i. rising out of
the sea.

pleased

pleased the painter. Among other principall pieces of worke, some pictures there be of his making, resembling men and women lying at the point of death, and euen ready to gasp and yeeld vp the ghost. But of all the pictures & portraitures that he made, to say precisely which be the most excellent, it were a very hard matter: as for the painted table of *Venus*, arising out of the sea (which is commonly knowne by the name of *Anadyomene*) *Augustus Caesar*, late Emperour of famous memory, dedicated it in the temple of *Iulius Caesar*, his father, which hee enriched with an Epigram of certaine Greeke verses, in commendation as well of the picture, as the painter. And albeit the artificiall contriuing of the said verses went beyond the worke, which they seemed to albeir the artificiall contriuing of the said verses went beyond the worke, which they seemed to praise, yet they beautified and set out the table not a little. The nether part of this picture had caught some hurt by a mischance: but there neuer could be found that painter yet, who would take in hand to repaire the same and make it vp again as it was at first: so as, this wrong & harme done vnto the worke, and continuing still vpon the same, turned to the glory of the workman. This table remained a long time to be seen, untill in the end for age it was worm-eaten and rotten in such sort, as *Nero* being Emperour was faine to set another in the place, wrought by the hand of *Dorastheus*. But to come againe vnto *Apelles*: he had begun another picture of *Venus Anadyomene*, for the inhabitants of the Island *Colos*, which hee minded should haue surpassed the former: howbeit, before he could finish it, surprised he was with death, which seemed to enuie for perfect workmanship: and neuer was that painter knowne to this day, who would turne his hand to that piece of worke, and seeme to go forwarde and begun. One picture he drew of *K. Alexander* the Great, holding a thunderbolt and lightning in his hand, which cost twentie talens of gold, and was hung in the temple of *Diana* at Ephesus. And verily, this deuise was so finely contriued, that as *Alexanders* fingers seemed to beare out higher than the rest of the work, so the lightning appeared to be cleane without the ground of the table, and not once to touch it. [But before I proceed any farther, let the readers take this with them, and alwaies remember, that these rich and costly pictures were wrought with foure colours and no more.] And for the workmanship of this picture, the price thereof was paid him in good gold coine by weight and measure, and neuer told and counted by tale. Of his handy worke was the picture of a Megabyzus or gilded priest of *Diana* in Ephesus, sacrificing in his pontificall habits & vestiments accordingly. Also the counterseit of prince *Clytus*, armed at all pieces (saue his head, mounted on horse-back and halting to a bartell, calling vnto his squire or hexnman for his helmet, who was *K. Alexander* and his father *Philip*, were but losse of time, and a needlesse discoufse. But I cannot omit the painted table, containing the pourtrait of *Abron* that wanton and effeminate person; which piece of worke the Samians so highly extoll and magnifie: ne yet another picture of *Alexander* the Great, *K. of Caria*, that he made for the Rhodians, and which they so much admire. Neither must I forget the counterseit of *Anteus*: of *Gorgophanes* the Tragedian, which he made at *Alexandria*: or while he was at Rome, one table containing *Castor* and *Pollux*, with the image of *Victorie*, and *Alexander* the Great: Likewise another representing the counterseit of *Warre* in person, bound with his hands behind at the backe, and *Alexander* the king mounted in a charriot triumphant: in both which tables *Augustus* late Emperour of immortal memory, had dedicated modestly, and in simplicity of heart caused them to be hung vp in the most conspicuous places of his Forum or hall that he built: but when *Claudius Caesar* came to weare the diademe, he thought it more for the honour of *Augustus*, to scrape out the face of *Alexander*, as well in the one as in the other, and to set in the place the liuely image of the said *Augustus* to be seen. It is thought likewise, that the full pourtrait of *Hercules*, painted in a table, standing now in the temple of *Antonina*, was of the most exquisite piece of worke no doubt, for notwithstanding that the backe part stand his doing: an exquisite piece of worke no doubt, for notwithstanding that the backe part stand toward them that looke vpon it, yet it sheweth the entire visage, which is an exceeding hard matter: man that beholdeth this *Hercules*, would think that the picture it selfe turned the face to be seen, which the painter seemed by the rest of the work to hide from the eie. Of his painting there is a prince or worthy knight all naked, in which picture he seemed to challenge Nature: and to haue pourtraied euery part so well, as shee her selfe could not haue framed the same better. There is or was at leastwise, a horse of his painting: which he pourtraied, to set against other horses painted by diuerse workemen, with whom he was entred into contention for the victory: in which triall, he appealed from the sentence of men to the iudgement of foure-footed beasts, euen

A cūen liuing horse in deale: for perceiuing that his concurrents were in fauor too mighty for him and that they were like to carry away the prize by corrupting the iudges and vmpires, he caused liuing horses to be brought vp into the place, and hauing presented before them the pictures of his concurrents horses one by one, they seemed not to joy nor make toward them: but no sooner had he shewed * that of his owne pourtraying, but they fell all to neigh, as taking it for one of their fellows; which experiment serued euery after for a rule, to know indeed a good piece of workmanship in that kind. Moreover, he made a picture representing *Neopolemus* the sonne of *Achilles*, in habit of a man of armes, sitting on horsebacke and riding against the Persians: like wife another, resembling *Archelaus* with his wife and little daughter: also *K. Antigonus* armed before with a cuirace, & marching on foot with his horse of seruice led by him. Howbeit those painters that are counted more skilfull and cunning than others, presterre before all other pieces doth represent the goddesse *Diana*, among a confort or company of other virgins at sacrifice; whom he deapointed to artificially in this table, that he seemeth to haue surmounted *Iomer* the Poet, who eftsom in his poems describeth the same maiden *Diana* with her traine of yong damocels. What would you haue more? he would seeme to pourtray those things which indeed cannot be pourtraied, crackes of thunder, leames or flashes of lightning, and thunderbolts: all which pictures go vnder the name of *Brontes*, *Astrapa*, and *Ceraunoboles*: his inuentions serued as precedents and patterns for others in that art to follow. One secret he had himselfe, which no man was euer able to attaine and reach vnto, and that was a certain blacke vermil which hee vnto lay vpon his painted tables when he had finished them: which was so finely tempered, and withall driuen vpon the worke so thin, that by the repercutiō thereof it gaue an excellent glosse and pleasant lustre to the colors; the same also preferred the picture from dust and filthinesse: and yet a man could not perceiue any such thing at all, vnlesse he held the table close at hand, and looked very neere. And great reason hee had besides to vse this vermil, namely, lest the brightnesse of the colours without it, might offend and dazzle the eyes, which now behold them as it were as farre off through a glasse stone; and withall, the same gaue a secret deeping and sadnesse to those colours which were too gay and gallant. And thus much may suffice for *Apelles*.

D In his time liued *Arifides* the Thebane, a famous painter. This *Arifides* was the first that would seeme to paint the conceptions of the mind, and to expresse all the inward dispositions and actions thereof, which the Greeks call *Ethe*: yea, the very perturbations and passions of the soule he represented in picture: howbeit, his colours were vnpleasant and somewhat too harsh: He represented in a table the winning of a towne by force, wherein was pourtraied most liuely a little infant winding it selfe and making pretty means to creep vnto the mothers pap, who lay dying vpon a mortall wound receiued in her breast; but it passed, how naturally the poor womans affection was exprest in this picture; for a man might perceiue in her, very sensibly, a certaine sympathie and tender affection yet, vnto her babe, albeit he were now in her deadly pangs and going out of the world, tearing euen then, least the child should meet with no miske when she was dead, but in stead of sucking it, fall to lick her bloud, and doe it selfe hurt and injurie: this painted table *K. Alexander* the Great translated from Thebes to Pella, the city where himselfe was borne. The same *Arifides* painted the counterseit of a battell betweene the Greeks and the Persians: in which table, he comprised an hundred fighting men: his bargain was to haue of *Masdon* the tyrant or *K. of Elate*, for euery personage that hee made * ten pounds of siluer. Hee pourtraied the running in a race of charriots drawn with foure steeds, so liuely, that a man would haue thought he saw the wheels running about. And as for an humble suter or suppliant, he deapointed him so naturally, making his petition and following it with such earnestnesse, that he seemed in manner to cry with an audible voice from the very picture. He counterseit in a painted table, hunters with their venison that they had taken. *Leontion* also the painter, and a woman vnder the name of *Anapomene*, dying for kind heart and the loue of her brother: likewise prince *Bacchus*, and lady *Ariadne* his wife, which be pictures much looked vpon at Rome in these dayes within the temple of *Ceres*; a plaier besides in a tragedy, accompanied with a boy (& these are to be seen in the chappell of *Apollo*) howbeit, this table hath lost the beauty which it first had, through the folly of an vnskillfull painter, vnto whom it was put forth to be scoured and refreshed, by *M. Innis* the Pretor, against the solemnitie of the Apollinar games. Moreover, there was

* Of this picture *Apelles* was wont to say, That there were two *Alexanders* who one begotten by *Philip*, who was *Anteus*: & the other painted by *Apelles*, and he was *Anteus*.
* The manner was to expresse lightning, by three shafts bound together in the middle.

* Some thinke he meant *Hercules* and *Leander*: and they read it *Leander* in *Plinius*.
* The painted *Hercules* and *Leander*.

* *Peter Mar.* reports, that he painted a mare.

Alexander the Great and *K. Darius*, which for exquisite commeth not behind any other whatsoever. One picture there is of his doing, wherein he would seeme to depaint lascivious wantonnesse, which he portrayed by 3 drunken Sylenes making merry and banquetting together. He gaue himselfe also to the speedy workmanship of his master before him, and for that purpose inuented other compendious means of greater breuitie to make riddance and quick dispatch with his pencill.

With these may be sorted *Nicophanes* also, a proper, feat, and fine workman, whose manner was to take out all pictures and paint them new againe, thereby as it were to immortalize the memory of things: a running hand hee had of his owne, and besides, was by nature hasty and furious: howbeit, for skill and cunning there were but few comparable vnto him. In all his works hee aimed at lofsinesse and grauity: so that a man may attribute the stately port that is in this Art, H vnto him and no other.

As touching *Perseus* apprentice to *Apelles*, & who wrote a booke to him of the very art) he came far short both of his master & also of *Zeuxis*. As for *Aristides* the Theban, who also liued in this age, he brought vp vnder him his two sons, *Nicerus* and *Aristippus*. This *Aristippus* portrayed a Satyre crowned with a chaplet, and carrying a goblet or drinking cup: he taught *Antionides* and *Euphranor* his cunning; of whom I will write anon: for meet it is to annex vnto the rest, such as haue bin famous with the pencill in smaller works and lesse pictures; among whom I may reckon *Pyrcius*, who for art and skill had not many that went before him; and verily of this man, I wot not well, whether he debased himselfe and bare a low sale, of purpose, or no? for surely his mind was wholly set vpon painting of simple and base things: howbeit, in that humble & lowly carriage of himselfe, hee attained to a name of glory in the highest degree; hee had a good hand in pourtraying of poore asses, with the victuals that they bring to market, & such homely stuffe: where-by he got himselfe a by-name, and was called *Rhympographus*. Howbeit, such rude and simple toies as these were so artificially wrought, that they pleased & contented the beholders, no thing so much. Many chapmen he had for these trifling pieces, and a greater price they yielded vnto him, than the fairest and largest tables of many others. Whereas contrariwise, *Serapion* vsed to make such great and goodly pictures, that (as *M. Varro* writeth) they were able to take vp & fill all the stals, bulks, and shops, jutting forth into the street vnder the old market place *Roftra*; this *Serapion* had an excellent grace in pourtraying tents, booths, stages, and theaters, but to paint a man or woman, he knew not which way to begin. On the other side, *Dionysius* was good at painting els, and therefore he was commonly called *Anthropographus*. Moreover, *Callicles* also occupied himselfe in smal works; and *Calacae* set his mind especially vpon little tables and pictures which were to set out comedies and interludes; but *Antiphris* practised both the one and the other, for he pictured the noble ladie *Hesione*, *K. Alexander the Great*, and *Philip* the king his father, with the goddesse *Minerva*: in which tables hang in the Philosophers schoole or walking place within the stately galleries of *Ostia*, where the learned clerks and gentlemen fauourers of learning, were wont to meet and conuerse. Within the galleries also of *Philippus*, there are to be seen, the picture of prince *Bacchus*, the portrait of *Alexander* in his childhood, and of *Hippolitus* the young gentleman, affrighted and astonished at the sight of a monstrous bull let loose and ready to encounter him. Likewise in the gallerie of *Pompey*, the counterfeits of *Cadmus* and *Europa*, all pictures of *Antiphris* his making. Of this handy worke, there is a fool with his bel, cockcomb, bable, and in other ridiculous habit, going vnder the name of *Gryllus*, deuised for the nones to make sport and pastime; wherupon all such foolish pictures be called *Grylly*. Himself was born in Egypt, howbeit he learned all his cunning of *Ctesidemus*. In this bed-roll of painters, I should not do well to passe ouer in silence, the workman that painted the temple of *Iuno*, at *Ardea*, especially seeing that he was enfranchised free burgeois of that city, and honored besides with an Epigram or Tetrastrichon, remaining yet to be read in the mids of his pictures in these foure Hexameter verses following;

*Dignis digna loca pictur is condecorauit,
Regina Iunonis supremi coniugis templum
Marcus Ludius Elosas Etolia oriundus;
Quem nunc, & post semper ab artem hanc Ardea laudat.*

This

This stately Church of *Iuno* Queen, with pictures richly dight,
Whom wife to mighty *Iupiter*, and sister, men do call;
Commends the hand of *Marke Ludius*, *Elosas* also hight,
Etolian born: whom *Ardea* doth praise, and euer shall.

These verses are written in antique Latine letters. By occasion of whose name, I must not de-
fraud another *Ludius* of his due praise and commendation, who liued in the time of *Augustus*
Cesar Emperor of happy memory: for this *Ludius* was he who first deuised to beautifie the wals
of an house with the pleasantest painting that is in all varietie, to wit, with the resemblance of
manners, farms, & houses of pleasure in the country, hauens, vinets, floure-work in knots, groues,
woods, forests, hills, fish-pooles, conduits, and drains, riuers, riuersets, with their banks, and what-
soeuer a man would wish for to see: wherein also he would represent sundry other shewes of peo-
ple, some walking and going to and fro on foot; others sailing & rowing vp and down the stream
vpon the riuier, or els riding by land to their farms, either mounted vpon their mules and asses,
or els in wagons and coaches; there a man should see folk in this place fishing and angling, in
that place lauking and fouling: some hunting here, the hare, the fox, or deere both red and fall-
ow; others busie there in haruest or vintage. In this manner of painting a man should behold of
his workmanship faire houses standing vpon marihes, vnto which all the ways that lead be tie-
d klich and full of bogs; where you should see the paths so slipperie, that women as they goe are
afraid to set one foot afore another; some at euery step ready to slide, others bending forwards
with their heads as though they carried some burdens vpon their neck and shoulders, and all for
C feare lest their feet failing vnder them, they should catch a fall and a thousand more deuises and
pretty conceits as these full of pleasure and delight. The same *Ludius* deuised wals without
dores, and abroad in the open aire to paint Cities standing by the sea side. All which kinde of
painting pleaseth the eie very well, and is besides of little or no cost. Howbeit, neither hee nor
any other in this kinde (howsoever otherwise respected) grew euer to be famous and of great
name, that felicitie they only attained vnto, who vsed to paint in tables; and therefore in this re-
gard, venerable antiquitie we haue in greater admiration; for painters in old time loued not to
garnish wals for to pleasure the master only of the house, ne yet to bedeck houses in that maner
which canot stir out of the place, nor shift and saue themselves when fire commeth, as painted
D tables may, that are to be remoued with ease. *Protogenes*, as excellent a painter as he was, conten-
ted himselfe to liue within a little garden in a small cottage, and I warrant you no part ther-
of was painted. *Apelles* himselfe might well haue the wals of his house rough cast or finely plai-
stered, but neuer a patch thereof had any painting: they tooke no pleasure, nay they had no lust
at all to paint vpon the whole wals, and to work vpon them from one end to another, al their skill
and cunning attended vpon the publique seruice of states and cities: and a painter was not for
this or that place only, but imploied for the benefit indifferently of all countries and nations.

But to returne againe to our particular painters: there flourished at Rome a little before *Augu-
stus* *Cesars* dayes, one *Arellius* a renowned painter, but that he had one notable foul fault that mar-
red all and discredited his art; giuen he was exceedingly to wenching, and sure hee would be to
E haue one woman or other all times in chase: which was the reason hee loued alie to be painting
of goddesse, which were euer drawn by the pattern of his sweet-hearts whom hee courted. A
man might know by his pictures, how many queens he kept, and which were the mistresses or ra-
ther goddesse whom hee serued. Of late daies wee had among vs here at Rome one *Amulius* a
Painter, he carried with him in his countenance and habit grauitie and severity, howbeit hee lo-
ued to make gay and gallant pictures, neither scorned he to paint the most trifling toies & me-
anest things that were. The picture of *Minerva* was of his making, which seemes to haue hereie
ful directly vpon you, looke which way soeuer you will vpon her. Hee wrought but some few
hours of the day, and then would hee seem very graue and antient, for you should neuer find him
out of his gown and long robe, but very formall, though hee were close set at work & euen lockt
as it were to his frame. The golden house or palace of *Nero* caught vp all the workes hee made,
where they remained as it were in prison, and neuer came abroad, which is the reason that none
of his pictures els be extant. After him succeeded *Cornelius Primus*, and *Adrius Priscus*, two Pain-
ters of good reputation, who painted the temples of *Honour* and *Vertue* for *Vespasianus Augustus*
the Emperor, when he caused them to be re-edified: but of the twaine, *Priscus* in his workman-
ship came neerer to the painters of antient time.

Aaa 3

CHAP.

¶ The manner how to make Birds silent, and to leaue their chattering and singing. Who first deuised with fire and pencill to enamel and paint the arched roofes and embowed ceilings of houses. The admirable price of pictures inserted here and there among other matters.

Since I haue proceeded so far in the discourse of Painters and their art, I must not forget to suffer down a pretty jest, which hath bin reported by many as touching *Lepidus*: It hapned during the time of his Triumvirat, that in a certain place where he was, the magistrates arrested him to his lodging enuironed as it were with woods on euerie side: the next morrow *Lepidus* took them vp for it, and in bitter tearmes and minatorie words chid them, for that they had laid him where he could not sleepe a wink all night long, for the noise and singing that the birds made about him. They being thus checked and rebuked, deuifed against the next night to paint in a peece of parchment of great length a long Dragon or serpent, wherewith they compassed the place where *Lepidus* should take his repose: the sight of which serpent thus painted so terrified the birds, that they had no mind to sing, but were altogether silent. By which experiment at that time, it was known afterwards, that birds by this means might be filled,

at that time, it was known afterwards, that birds by this means might be defiled.
As touching the feat of letting colours with wax, and * enamelling with fire, who first began
& deuic'd the fame, it is not known. Some are of opinion, that the invention thereof came from
Aristides; and that *Prasitelles* practised the same, & brought to an absolute perfection. But surely
there were pictures wrought by fire a good while before *Aristides* daies; and namely by *Polyg-*
natus, *Xicanor*, and *Arcefallus* of Paros. *Lysippus* also in his painted tables that he made at *Ægina*
vied to entitle them with this inscription, *Αντικτα πυρός, i. Lysippus* painted that with fire: which
verily he neuer haue done, if the art of painting with fire (called Eneustiche) had not bin
before deuic'd. Moreover, *Pamphilus*, master to *Apelles*, is reported not onely to haue himselfe
practised this painting with vernish, and to inamel by the means of fire, but also to haue taught
it vnto *Panofius* the Sicyonian, who was the first that excelled in this kinde, and caried away the
name from all others in his time. This *Panofius* was the son of *Brietas*, and apprentice also to his
father in the beginning: he ved also the plaine penill, wherewith he wrought vpon the walls at
Thefpie; which hauing been in times past painted by *Polygonotus*, were now to be refreshed
painted new again by his hand: howbeit in comparison of the former worke he was thought to
come a great way short of *Polygonotus*; and the reason was, because he dealt in that kind of work
which was not indeed his proper profession. He it was that brought vs first the device of pain-
ting vaulted roofes; for neuer was it the manner to adorne and garnish embowed feeling ouer
head with colours, before his time. His delight naturally was to be painting little tables, and
therein he loued to portray little boies. His delight naturally was to be painting little tables, and
his gaue it out, that he made choice of this kind of work, because such painting went but flow-
ly away, and required no quickie and nimble hand. Whereupon *Panofius*, to disprove his aduer-
saries, and withall to gett himselfe a name, as well for celeritie and expedition, as for his art and
skill otherwise in these small pieces, began and finished in a table the picture of a boy, within
one day, and thereupon it was called *Hemeresios*. In his youthfull daies he fell in fancie with a
woman in the same towne where he dwelt, named *Glyceria*: a fine wit the lad of her owne, and e-
specially in making chaplets and gurlands of floures, she was full of inuention. *Panofius* by his
acquaintance with her, and striving to imitate with his pensill her handiworke, and to expresse
that variety of floures which she gathered and couched together full artificially in her Co-
ronets, enriched his owne pictures also with a number of colours, and brought the art to wonder-
full perfection in that point. In the end he painted *Glyceria* also his loue, sitting, with a Chap-
let of floures her hand: and certes this is the most excellent peece of worke that euer went out
of his shop: this table with the picture was thereupon called by some, Stephanoplocos, i. [A
woman] plaiting and twisting a garland: by others, Stephanopolis,. Selling gurlands: so
that this *Glyceria* got a poor liuing by making chaplets, and had no other good means to main-
tain her selfe. The counterfeite taken from this table and made by it (which kind of pattern the
Greekes call Apographon) *E. Lucullus* bought of *Dionysius* a painter of Athens, and it cost him
fifty thousand drachmes. *E. Panofius* made faire and great pictures also; and

*781 lib. 5 sh. *two talents of silver. Furthermore, this *Pausias* made table and grew *Pausias* namely,

of Plinies Naturall Historie.

A namely, one of his making which doth represent a solemne sacrifice of oxen, is to be seen at this day within the stately galleries of *Pompeius*: and verily, this manner of painting, the solemnity of a sacrifice he first inuented; but no man cuer after could attaine to his dexteritie in that kinde: and notwithstanding many gaue the attempt, and seemed to imitate him, yet they came all short of him: about al, he had a singular gift to work by perspective, for when he was minded to paint a boeuf or ox, to shew the full length, he would not portray him long or slank, but afront; by which means the beast is best represented, not only how long, but also how large and big he is every way. Again, whereas all other painters, when oxen they would raise their work, & make any thing seeme eminent and high, vnto to colour the same white and bright, and the better to make their perspective, do shadow or deep the same with black: this man in lieu thereof, would paint the ox all of a black colour, and cause the body as it were of the shadow to arise out of it selfe. And verily so excellent he was in this perspective, that a man would say, his euen, plaine, and flat picture were embossed and raised work, yea and imagin where fractures were, that al was found and entire. This man liued also at Sicione, and verily for a long time this city was reputed the native country that bred painters, and the onely place stored with excellent pictures. But during that time wherein *Scantius* was *Aedile* at Rome, all the rich tables which were in the publick places of that city, whether in the market places, temples, or common halls, were seized vpon and brought to Rome, for to satisfie great sums of money wherein the Sicyonians stood indebted.

C After *Parafus*, there arose one *Euphranor* the Isthmian, whom flourished about the 104 Olympiads, far surpassing all other painters of his time. This *Euphranor* is hee whom I haue named among the famous imagers and founders. Of his workmanship there be Colloffes of brasse, statues of marble stone, yea and faire drinking cups chased and engrauen. Of an excellent capacity he was, and apt to learn any thing, studious with all, and painfull aboute all others, and whatsoeuer he gaue his mind vnto, therein he excelled: and in one word, a general man hee was like him, selfe till, that is to say, his craftsmaister in all, and as good in one thing as another. This is hee who seems to haue expressed first the port and maiestie that is in princes and great states, and to haue obserued symmetrie and proportion: & yet he was not without his imperfection, for commonly as he made the bulk of the body too slender, so the joints and heads were somewhat with the biggest; howbeit he wrot books touching symmetrie and proportion, as also of colours. Among other works of his, there are reckoned these, to wit, the portraiture of a batell or skirmish of horsemen, the twelue chiefe gods and goddesses, also the liuely picture of *Thesus*, of whom he was wont to say, That the *Thesus* of *Parafus* painting was fed with roses, but this *Thesus* of his with good fish. There be excellent tales of his making at Ephesus, to wit, *Phyx* feigning himselfe mad, and in that fit coupling an ox and a horse in one and the same yoke: also diuers personages in their clothes and mantles after the Greekish fashion, musing and in a deep study, likewise a captain putting vp his sword into his scabbard.

At the same time lived *Cydus*, he who in a table represented the * Argonauts, for which *Hortensius* the Orator was content to pay 144000 Sesterces. This picture he shined in an Oratorie or chappell built of purpose for it, in a house of pleasure that he had at Tusculum.

As for *Antidotes*, apprentice he was to *Euphranor*: of his handiwork there is a picture at Athens resembling one with a shield ready to enter into combat or fight, also a wrestler and a plaier vpon the fife or hautbois, which is a piece of work highly commended, and few comparable vnto it: more curious and precise he was in the secrets of the art, than obseruant of symmetry & proportion, being otherwise giuen to vse fad and dusky colours. The greatest name that he had, was for bringing vpon *Nicias* the Athenian, who of all others painted women most excellently. For lights and shadowes in perfectiue he was excellent: also a passing great care and regard he had for to raise his worke, as that it seemed to be embossed and higher than the boord of his table: the pictures of *Nemea*, which out of Asia were transported to Rome by *Syllanus*, and hung vpon in the Senat house, as I haue shewed heretofore, of prince *Bacchus*, within the temple of *Concord*, of *Hyacinthus*, which *Augustus Caesar* vpon a special liking to it brought with him to Rome, after hee had forced and sacked Alexandria; (in which regard *Tiberius Caesar* his successeur, feeling what affection *Augustus Caesar* had vnto it in his life time, dedicated it in the Temple of the said *Augustus*) and lastly of the goddesse *Diana*, were all proofes of his skill and workmanship. Moreover, at Ephesus the Sepulchre of *Megalyses* one of the Priests of the Ortus de:

* I. Diuers valiant knights,
whoe accompanied prince Iago
in his voyage to Colchos
for the golden fleece,

this very piece remained in the bairns of Corinth safe, untill *Mummius* destroyed the city. Howbeit, writers there be who affirme, That *Rhacus* and *Theodorus*, both of the Isle Samos, were the first inuentors of this feat of forming shapies in cley, long before the expulsion of the * *Bacchiades* out of Corinth. And by their saying, when *Demetrius* was faine to fīe out of that city, and to retire himselfe into Tuscan (where he begat *Tarquinius*, afterwards surnamed *Priscus*, & king of Rome) there accompanied him from Corinth *Eucher* and *Engamnius*, two Imagurs in cley, and they taught in Italy the art of Potterie and Imagerie in that kind. As for *Dionades* before, said, the inuentor he was not of his craft, but indeede he deuised to vse with other cley and earth, a ruddle, or els to colour the white cley with madder. His inuention it was to let vp Gargils or Antiques at the top of a Gauill end, as a finial to the creft tiles, which in the beginning he called * *Protypa*. The same man afterwards deuised other counterfeits, and those be termed *Eclypta*: Hence come the louters and lanterns reared ouer the roofs of temples, which are so curious, and toly wrought in earth. In sum, this man gaue the original name *Plastica* to the craft, and *Plaste*, to the craftsmen in this kind. But *Zysiftratus* of Sicione, and brother to *Zysippus*, of whom I haue written before, was the first that in plaster or Alabaſter represented the shap of a mans visage in a mould from the liuely face indeed; and when hee had taken the image in waxe, which the forehead mould of plaster had giuen, vsed to form and fashion the same more exactly. This man staid not there, but began to make images to the likenesse and resemblance of the person: for before him euery man studied only to make the fairest faces, and neuer regarded whether they were like or no. *Zysiftratus* also inuented to make counterfeits in cley, according to the images and statues in brasse, already made. And in the end, this feat of working in cley grew to such height, that no images or statues were made without moulds of cley: wherby it may appear, that the skill and knowledge of Potterie is more ancient than foundrie or casting brasse. To come now to Imagurs in cley, *Damophilus* & *Gorgasus* were counted most excellent & principal of all others, and they were good painters besides; as may appear by the temple of *Ceres* in Rome, that standeth at the greatest shew-place, called *Circus Maximus*, which these two workmen enriched both with pictures, and also with earthen images: for in the said temple there be certaine Greek verses set vp, which testifie, That all the work on the right hand was wrought by *Damophilus*, & on the left hand by *Gorgasus*. Before this temple was built, *M. Varro* saith, that all Rome was furnished with images, of Tuscan work, and no other: but of this church, when it was re-edified, the pictures vpon the wals were esteemed so rich, that people thought them worthy to be cut out in great cruſts and flakes out of the said wals; and for to saue them, they bestowed cost to set them in frames fair crested about the edges: also (by his report) the images wherewith the festeries & louters of the said church stood adorned, were dispersed into diuers parts of the city, as singular pieces of work, and well was he that could haue one of them. Moreover, I read, that *Chalcosthenes* made diuers pieces of work in raw cley at Athens, and the place called *Ceramicos* took the name of his work-houſe. And *M. Varro* writeth, that himselfe knew at Rome a certaine man named *Poſis*, who was wont to make of cley, clusters of grapes, and fishes, foliately, that whoſeuer looked vpon them, could hardly haue discerned them by the eye from grapes and fishes indeed. The same author doth highly extoll and magnifie one *Arceſtilas*, a very familiar friend of *Lu. Lucullus*, and whom he loued very well, whose * moulds were commonly fold dearer euery to workmen themselves, than the workes of others after they were finished. And hee saith, that the image of *Venus Genetrix*, which standeth in the Forum of *Caſar*, was of his making: but before hee had fully finished the same, for haſte of dedication, it was let vp vnperfect. After which time (as he affirmeth) *Lu. Lucullus* bargained with him to make the image of *Felicitie*, for which he was to haue threecore thousand ſeſterces, howbeit, the death both of the one and the other, was the cause that the worke was neuer finished. As for *O. Baſinus*, a knight of Rome, being minded to make a fair ſtanding cup, hee paid to him for the mould in plaſter one whole talent. The same *Varro* praiſeth also *Praxiteles*, who was wont to say, that the craft of Potterie and working in cley, was the mother of Foundrie, and of all workes that are cut, engrauen, chased and embossed: who, albeit hee were an excellent founder and imagour in brasse, and knew how to carve, graue, and chase paſſing well, yet would he neuer goe in hand to make any piece of worke, but he would forme it first in cley, in a mould of his own making. Moreover, this art (by his saying) was much practised in times paſt, in Italy and Tuscan eſpecially: from whence, and namely out of the city *Fregelle*, king *Tarquinius Priscus* ſent for one *Turrianus*, to no other purpose in

A the world, but to agree with him for to make the image of *Iupiter* in earth to set it vp in the capitoll: for ſurely, no better he was than made of clay, and that by the hand of a porter; which was the reaſon, that they vsed to colour him ouer with vermilion: yea and the chariots with foure horſes which ſtood vpon the lanterns of the ſaid temple, were of no other ſtuffe; concerning which, I haue ſpoken in many places. The same *Turrianus* also made the image of *Hercules*, which at this day retaineth ſtill in the city that name, which teſtifieth what matter he is made of. Lo, what kind of images there were in thoſe daies made in the honour of the gods by our anceſſors, for the moſt excellent! neither haue we cauſe to be aſhamed of thoſe our noble progenitors, who worſhipped ſuch and no other. As for ſilver and gold, they made no reckoning thereof, either about themſelves or the very gods whom they worſhipped; and verily, euery at this day there continue ſtill in moſt places, ſuch images of earth. As for the feſtiers and lanterns of temples, there be many of them both within the city of Rome, and also in diuers burrough townes vnder the Empire, which for curious workmanſhip (as it were chased and engrauen) are admirable; and for continuance of time more laſting and durable, than our louters of gold; and for any harme they do, leſſe ſubiekt I am ſure to iniurie. Certes in theſe daies, notwithstanding the infinite wealth and riches that we are growne vnto, yet in all our diuine ſeruiſe and ſolemne ſacrifices, there is no aſſay giuen or taſt made to the gods out of Caſſidine or criſtall bolts, but only in earthen cups. If a man conſider thoſe things aright, & weigh them duly in particular, he ſhall find the bounty and goodneſſe of the earth to be inenarrable, though he ſhould not reckon her benefits that the hath beſtowed vpon mankind, in yeelding vs ſo many ſorts of come, wine, apples, and ſuch like fruits, herbs, ſhrubs, trees, medicinable drugs, mettals, and mineralls, which I haue already treated of: for euery in theſe workes of earth and pottery, which we are glutted with (they be vsuall and ordinary) how beneficiall is the earth vnto vs, in yeelding vs conduits pipes for to conuey water into our bairns, ſtyles flat yet hooked and made with crochets at one end to hang vpon the ſides of the rooſe, chamfered for to lie in gutters to ſhoot off water, curbed for creſts to claſp the ridge on both ſides; brickets to lie in wals aforent for building, and thoſe otherwhiles to ſerue as binders in parpine worke with a face on both ſides; to ſay nothing of the veſſels that be turned with the wheele and wrought round; yea and great tuns and pipes of earth deuised to contain wine and water aloſt in regard of which ſtone and earthen veſſels, *K. Numa* ordained at Rome a ſeuenth confraternitie of potters. Ouer and beſides, many men there haue bin of good worth and reputation; who would not be burnt to aſhes in a funeral fire after they were dead, but choſe rather to haue their bodies beſtowed entire within coſſins of earth, lying among leaues of myrtle, oliue, and blacke poplar, after the Pythagorean faſhion: in which manner, *M. Varro* tooke order for to be interred. And if we looke abroad into the world, moſt Nations vnder heauen do vse theſe earthen veſſels; and euery ſtill, thoſe that be made of Samian earth and come from that Iſle, are much commended for to eat our meats out of, and to be ſerued to the board; and Eretum here in Italy, retaineth yet the name for ſuch veſſell: but for drinking-cups, onely Surrentum, Aſia, and Pollentia, within Italy, Saguntum in Spaine, and Pergamus in Aſia, be in credit: Tralleis alſo a city in ſclautonia, and Modenna (to goe no farther than Lombardie in Italy) there is made much faire veſſell of earth, appropriat vnto thoſe places: for euery in this reſpect, ſome nations are innobled and growne into name. This earthen ware is of that price beſides, that it is thought a commodity worth the transporting too and fro ouer land & ſea, by way of merchandiſe. But if we ſpeak of that kind that is wrought by turners craft with the wheele, the daintieſt veſſels come from Erythrae. And in very truth, ſuch may the earth be, that much art and fine workmanſhip is thewed therein: in teſtimony whereof, there be two ſtone veſſels or earthen (call them whether you wil) within the principal temple of that city to be ſeen at this day, thought worthy to be conſecrated there, in regard of their cleane worke and their thinneſſe beſides, which a maſter and his prentiſe wrought in a ſtriſe and contention, whether of them could driue his earth thinneſt: howeuer it be, they of the Iſland Cos are moſt commended for the faireſt veſſels of earth; and yet thoſe of Hadria beare the name to be more durable, and of a more faſt and firme conſtitution. And ſince I am entred thus far, I will obſerue vnto you ſome examples of ſeueritie not impertinent to this diſcourſe: I find vpon record, That *Q. Cæponius* was condemned and fined for an ambitious man, onely for this, becauſe hee had ſent an earthen * amphor of wine as a preſent vnto one who was to giue him his voice when he ſtood for an office. And that you may certainly know that veſſels of earth haue in ſome ſort

been in request among riotous gluttons and wastfull spendthrifts, listen what *Fenestella* saith as touching this point, the greatest exceeding quoth he, and gaudiest fare at a feast, was serued vp in three platters, and was called *Tripatinum*: the one was of Lampreys, the second of Pikes, the third of the fish *Myxon*: whereby it may appeare, that even in those daies men began at Rome to grow out of order, and to giue themselves to riot and superfluity: yet were not they so bad, but we may prefer them euen before the Philosophers of Greece: for it is written, that in the sale of *Aristotiles* goods, which his heirs made after his decease, there were sold 60 platters, which were wont ordinarily to go about the house. As for that one platter of *Esop* the plaier in tragedies, which cost fix hundred sesterces, I doubt not but their stomackes rise thereat when they reade thereof in my treatise as touching birds. But this is nothing (I assure you) to that charger of *Vitellius*, who whiles he was Emperor caused one to be made and finished that cost a million of sesterces, for the making whereof there was a furnace built of purpose in the field; the which I rather note, because they should see the monstrous excess in these daies, that vessels of earth should be more costly than of Cassidonia. Alluding to this monstrous platter, *Musianus* in his second Consulship (when he rissed vp in a publicke speech, the whole life of *Musianus*, now dead) ybraided the very memoriall of him in these very terms, calling his excessive that way, *Patinarum paludes*, i. platters as broad as pools. And verily (saith he) that platter of *Vitellius*, came nothing behind another, which *Cassius Senerus* reproched *Aspinus* withall, whom he accused bitterly, and said, that the poison of that one platter had killed an 130 persons who had tasted thereof.

* *Dieter* sesterces, according to *Budens* but if you read according to *Histomanius*, ducentis, it is twenty times as much more. * This platter he called, the targuer of *Misurus*, and hee got himselfe thereby a name to be called *Patinarum Sessator*.

Furthermore, there are certaine townes that are in good account by reason onely of this vessel made therein, and namely Rhegium and Cumæ.

The priests of *Cybele* the mother of the gods, who are called Galli, vse to guald themselves with a sheard of Samian earth; and they be of opinion, that if it be done with any thing els, they shall die thereof, if we may beleue *M. Calius*, who whetted that tongue of his (which shortly after was in that sort to be cut out) against *Vitellius* which turned to his great reproch and infamie, for that himselfe euen then railed vpon *Vitellius* in so bad termes, and lost his tongue for his labour.

But to conclude, what is it, that Art and the wit of man hath not deuised; for there is a means found to make a strong kind of mortar or cement by the broken (heards of potters vessell, if the same be ground into powder and tempered with lime; and the ordering of it in this manner, k causeth it to be more firme and last the longer, and such they call *Signina*. And hereby also men haue found out certain durable pavements of that kind.

CHAP. XIII.

¶ The varietie of sundry kinds of earth: of the dust or sand of *Puteoli*: and of other sorts of earth which will harden as a stone.

Over & besides the cement aboue named, there be other percells that the earth it selfe doth afford, fit to be laid in pauing worke: for who can sufficiently wonder at this, namely, L That the worst part of it (which thereupon is called dust and sand, as it were the very excrement thereof) should be of that nature vpon the side of the hills of *Puteoli*, as being opposed against the waues of the sea, and continually drenched & drowned therewith, should become a stone so compact and vnited together as it were into a rock, that it scorneth all the violence of the surging billows; which are not able to vndermine and pierce the same, but hardeneth euery day more than other; euen as it were tempered with the strong cement of *Cumes*. Of the same property is the earth within the country about *Cyzicum*: onely this is the difference, that not the dust or sand there, but the earth it selfe cut out into what parcels you will, in case it be drenched in the sea water a certaine time, is taken forth againe a very hard stone. The same (by re- port) happeneth about the citie *Cassandria*: as also about *Gnidus* in a fontaine of fre (by water, M wherein if earth do lye, within the space of eight monthes it will turne to be a stone. Certes, all the way as a man goeth from *Oropus* as farre as to *Aulis*, what ground soeuer is beaten vpon by the water, changeth into rockes and stones. There is found also in *Nilus* a certaine sand, whereof the finest part differeth not much from that of *Puteoli* before said: not in regard that

A that it is so strong as to breake the force of the sea-water & to beat back the waues, but to subdue and crush the bodies of our yong gentlemen, and therefore serueth well in the publicke place of wrestling for those that be giuen to such exercises: and for this purpose verily was it also, that *Leonatus*, *Cratus*, and *Melager*, who were great captains vnder *Alexander* the Great, and followed his court, were wont to haue this sand carried with them, with other baggage belonging to the camp. But I mean not to write any more of this argument, no more verily than of the vse of earth in those places where our youth annoieth their bodies against they should wrestle; wherein our youths addit themselves so much to the exercise of the body, that they haue spoiled themselves otherwise, and lost the vigor of the mind.

CHAP. XIII.

¶ Of mud walls: of Bricke walls, and the order and manner of making them.

W Hat shall we say? See we not in Africke and Spaine both, certain walls of earth, which they call * *Formacei*, of the forme and frame that is made of planks and boords of each side, between which a man may say they are rather infarced & stuffed vp, than otherwise laid and reared orderly; but I assure you, the earth thus in farced, continueth a world of yerres and perisheth not, checking the violence of raine, winde and fire, no mortar and cement so stiffe and strong. There are yet to be seene in diuers parts of Spaine, the watch-towers of *Amnibal*, the high turres and sconces also reared vpon the tops of hills, made all of earth: and hereof we haue our turres, which naturally are so proper not only for the rampiers and fortifications of a camp, but also for wharfs, banks, and buttresses, to breake the violence and inundation of riuers. As for the manner of making walls, by dawbing windings and hurdles with mud and clay, also of rearing them otherwhiles with vnbacked bricke, who is so ignorant that he knoweth it not howbeit, for to make good bricke, they ought not to be made of any soile that is full of sand and grauell, much lesse then of that which standeth much vpon grit & stones, but of a greyish marle or whitish chalkie clay, or at leastwise a reddish earth: but in case we bee forced to vse that which is giuen to be sandy, yet we must chuse that kind of sand which is tough and strong. The best season to make these bricke or tyles, is in the spring time; for in the mids of Summer they will cleaue and be full of chinkes; but if you would haue good bricke for building, they ought to be two yeares old at the least. Now the batter or lome that goeth to the making of them, ought to be well steeped and soked in water, before it be fashioned into bricke or tyle. Bricke are made of three sizes: the ordinarie bricke that we vse, is called *Didoron*, which carrieth in length one foot and a halfe, and in breadth a foot: a second sort is named *Tetradoron*, i. three foot long; and the third, *Pentadoron*, of three foot and nine inches in length: for the Greeks in old time, called the span or space of the hand from the thumbe to the little fingers end stretched out, *Doron*; which is the reason that gifts and rewards be called in their language, *Dora*, for that they were presented by the hand. You fee therefore, how according to the length that they E carrie, either of foure or five spans, they haue their denomination of *Tetradora*, or *Pentadora*; for the breadth is one and the same in them all, to wit, one foot ouer. Now there beeing this difference in the size, in Greece the manner is to employ the smaller sort in their priuat buildings, but the bigger serueth for greater publicke works. At *Pitana* in Asia, and in *Massia* and *Calentum*, cities of low Spaine, the bricke that be made, after they are once dried, will not sinke in the water, but float aloft, for of a spongeous and hollow earth they be made, resembling the nature of the pumish stone, which is very good for this purpose, when it may be wrought. The Greeks haue alwaies preferred the walls of bricke, before any others, vntill it be in those places where they had flint at hand to build withall: for surely such bricke wals, if they be made plump upright & wrought by line and leuell, so as they neither hang nor batter, be cuerlasting; & therefore such bricke serue for wals of cities and publick works; their roiall pallaces likewise be built therewith. After this sort was that part of the wall at Athens laid and reared, which regards the mount *Hymettus*: so they built also at *Patrae*, the temples of *Iupiter* & *Hercules*, although all the columns, pillars, and architraues round about them, were of softer stone: thus was the pallace of *K. Attalus* built at *Tralleis*; likewise that of *K. Craesus* at *Sardis*, which afterward was conuerted

* Some write *formacei*, i. baked walls.

therwith, it hardeneth them against the violence of fire. I have said already, that they were wont in old time to vernish their images with bitumen: it hath bene vsed in mortars also in stead of lime, and with that kind of cement were the walls of Babylon laid, and the stones sodered together. Iron-smiths also haue much vse of bitumen, and namely, in fanguining or colouring their ironworkes, and nailers especially about their naile heads; many other waies likewise it serueth their turne.

As touching Alume, which we take to be a certain salt substance or liquor issuing out of the earth, there is no lesse vse therof than of bitumen, and the employment is not much vnlike. Of alume there be many kinds: in the Island Cypresse there is found alume which they call White, and another named Blacke: and albeit the distinction in the colour be but small, yet it is occupied to farre different vses; for the cleare alume which they name the white, is proper for to colour wooll with any bright tincture; contrariwise, the blacke serueth for sad, darke, and browne colours. The foresaid black alume is occupied much by goldsmiths, to purge and purifie their gold: and yet all these alumes the one as well as the other, be engendered of water & flimie mud, that is to say, of a certaine sweat that the earth naturally doth yeeld: it is suffered to run and gather together into a place, during winter; and in the heat of summer, it fermenteth and taketh the perfection: that which commeth soonest to concoction and ripenesse, the same is alwaies the whitest and purest. As touching the mines of alume, they grow naturally in Spaine, Ægypt, Armenia, Macedonia, Pontus and Affricke, which be all countries of the continent: in the Islands likewise it is found, namely in Sardinia, Melos, Lipara, and Strongyle. The best simply is that which commeth out of Ægypt, and in the next place is that accounted of Melos. In sum, I alume may be reduced into two principall kinds; for either it is pure and cleare, or els thick and grosse: as for the former kind, it may be knowne whether it be good and naturall, if it be bright like water, & white as milk, not offensive to their hands that rub it, & yet participating in some sort of a fiery heat; this they call Phormion; but in case it is sophisticated, you may soon find it by the iuice of a pomegranat, for that which is true and the right kind, is no sooner mixed therewith, but it waxeth black. The second sort is of a pale color, and besides naturally rugged in the hand, and lightly it will stain like gall nuts; which is the reason that the Greeks call it Paraphoron. The vertues of the cleare alume, be astringent, hardning, and fretting; if it be tempered with hony, it healeth the cankers or sores in the mouth: wheals and itch it likewise cures in any part of the body: but this inunction must be vsed in abaine; and regard ought to be had of it in the proportion, namely, that there be two third parts of hony to one of alume. The ranke smell of the arme-holes it doth allay, and represseth sweat and the stinke therof: it is taken in pills, for the obstructions and schirrosities of the spleene; and in that sort, it drieth away an itch & sendeth forth corrupt blood by urine; made into an vnguent with Sal-nitre and Nigella Romana, it healeth the bleach or scabs. Of alume that is thick, hard, and massiue, there is one kind which the Greeks call * Schistos, and the nature thereof is to cleaue along into certaine filiments or threads like haire, of a greenish colour; which is the reason that some haue given it rather the name of Trichitis: howeuer it be named, it commeth of a certaine marquet stone, whereupon also they call it Chalcitis, so as it may be counted a very sweat of the said stone, gathered together or congealed into a fume. This kind of alume is exsiccatiuue; howbeit, not so good as the other to repress any offensive humors in the body: but surely it is singular for the ears, either infused, or applied as a liniment: it helps also the sores of the mouth, if a man let it melt together with the spittle or moisture of the mouth: for eyecleues likewise it serues fitly among other ingredients, and is very appropriat for the accidents befalling to the secret parts of either sex, as well men as women: but before it be vsed, it would be boiled vpon a pan ouer the fire, till it giue ouer to melt. There is another sort of alume, that is weaker in operation, which the Greeks call Strongyle: and this likewise is found of two sorts; the one is hollow and light in manner of muthrons, easie to be melted in any kind of liquor; and this is altogether rejected as good for nothing: the other is hollow also and light in manner of a pumish stone, full of holes too, but resembling the pipes rather of sponges; the same is round in forme, and inclining to a white colour; a certaine vntuositie or fatnesse it carrieth with it, apt to breake and crumble, and yet without sand, neither will it colour and staine the fingers blacke in the handling: this must be calcined by it selfe vpon cleare burning coales, vntill such time as it be reduced into ashes. But would you know the best and principall alume of all the sorts that are? it is that (no doubt) which

* Sometime this for Alume de plume: others, for the stone Amistim.

A which (as I haue said before) is brought out of the Island Melos, and therefore called Melinum. Certes, there is not an Alume more astringent, nor more proper to harden: none more firm and thicker than it. It doth subtiliat the roughnes of the eies: and being calcined, it is the better sort to repress the fluxion of humors into the eies: and in the same sort prepared, it killeth the itch in any part of the body: generally, wherefoever it is applied outwardly, it stauncheth blood: being vsed in a liniment with vinegre vnto any place where the haire hath been plucked vp, it causeth that which commeth again to be but soft and in manner of a downe. There is no kind of it, but the same is exceeding astringent, whereupon it took the name in * Greek. In regard of which stypticities, they are all very good for the accidents of the eies. Alume incorporated with some greafe or fat, is singular to repress the flux of blood: very proper also for the red gum incident to children: and in some sort staith such vlcers as tend to putrefaction, yea, it drieth vp the firmities of the eares; in which sort it doth amend the ruggednesse of the nailes, the hardnesse and nodocitie of cicatrices or skars, the excrecence and turning vp of the fleshe about the naile roots, and the kibes of the heeles. With vinegre, or calcined with the like weight of gall nuts, it is excellent for cankers and inflammation of such vlcers as be corrosiue. Tempered with the iuice of Beets or Coleworts, it cleanseth the leprosie. Incorporated with two parts of salt, it healeth those sores which are given to eat and spread farther: and mingled with water it riddeeth away nits, lice, and such vermine breeding in the head; in which manner it healeth burnes and scalds. But with pitch and the floure of Erules, it scoures away dandruffe and scurf in any part of the body. In a clystire, Alume is soueraigne for the bloudie flux. It serueth likewise for the vula in the mouth, and the inflammation of the Amygdales. In one word, for all those purposes which I haue said, other sorts of Alume are good for, we must alwaies thinke, that the Alume brought from Melos, is the best and most effectual. As touching other vses besides Physicke, wherein it is employed necessarily, and namely in dressing of skins and colouring wooll, of what reckoning it is, I haue shewed already. It remaineth now to treat of all other kinds of earth respectively, as they serue in the vse of Physicke.

CHAP. XVI.

D ¶ Of the diuers sorts of earth, to wit, of Samia, Eretria, Chia, Selinusia, Pignitis, and Ampelisia, together with their medicinable properties.

FROM the Isle Samos there be brought two kinds of earth: whereof the one is called by the Greekes Syropicon, the other Aster. As for the former, the commendation of it, is to be fresh, light, and cleauing to the tongue: The other, is white and of a more compact constitution: but both the one and the other, before they be vsed, ought to be calcined and washed. Some there be who preferre the former: but both be very good for those that spit blood. They enter into emplastrs, which are deuised and made for to exsiccat: and they are mingled also with eie salues.

E Touching the earth Eretria distinguished it is likewise by two kindes, for some there is of it white, other of ash colour: and this for Physick is held to be the better. It is known to be good; if it be soft in hand, and if vpon a piece of brasse it draw a line of purple colour. What power it hath, and how it is to be vsed in Physicke, I haue shewed already in my discourse of painters colours. But this is a general rule in all kinds of earth (for I will put it off no longer) that are to be washed, first to let them lie well steeped in water, then ought the same to be dried in the Sun; which done, it ought once againe to be braied in water, and let to rest vntill they be settled, that they may be digested and reduced into trochiskes. But for the burning and calcining of these earths, it ought to be done in certaine pots, and estoones followed and plied with shaking and stirring.

Among the sorts of earth that be medicinable, there is reckoned that which commeth from Chios, & the same is white, hauing the same effects that the earth of Samos; but our dames vse it most for to embellish & beautifie the skin. To which purpose, the earth of Selenus likewise is employed: White this earth is as milke, and of all others, will soonest resolue in water, which if it be tempered with milke, serues to whiten and refresh the pargeting and painting of walls.

The earth called * Pignitis, is very like vnto Eretria before named, only it is found in greater

* Some treade clots.



THE XXXVI. BOOKE OF
THE HISTORIE OF NATURE,
WRITTEN BY C. PLINIUS
SECVNDVS.

The Proem.

CHAP. I.

¶ The natures and properties of Stones: The excessive expence in columnes and build-
ings of Marble.

NT remains now to write of the nature of stones, that is to say, the principal point of all enormous abuses, and the very height of wastfull superfluities, yea though we should keep silence, and say nothing either of precious stones and Amber, or of Chryttall and Cassidonie. For all things els which we haue handled heretofore euen to this Booke, may seem in some sort to haue been made for man; but as for mountaines, Nature had framed them for her owne selfe; partly to tame the violence of great riuers, & to break the force of surging waues and inundations of the sea; and in one word, by that substance and matter whereof they stand, which of all others is most hard, to restraine and keep within bounds that vnruely element of the water. And yet notwithstanding, for our wanton pleasures and nothing els, we cut and hew, we load and carry away those huge hills and inaccessible rocks, which otherwise to passe only ouer, was thought a wonder. Our Ancestors in times past reputed it a miracle, and in manner prodigious, that first *Amibal*, and afterwards the *Cimbrians*, surmounted the Alps: but now, euen the same mountaines wee pierce through with pickaxe and mattocke, for to get out thereof a thousand sorts of marble; wee cleaue the capes and promontories: we lay them open for the sea, to let it in; downe we goe with their heads, as if we would lay the whole world euen, and make all leuell. The mightie mountaines set as limits to bound the frontiers of diuers countries, and to separate one Nation from another, those wee transport and carrie from their natie seat: ships wee build of purpose for to fraught with marble; the cliffes and tops of high hills they carrie too and fro, amid the waues and billowes of the sea, and neuer feare the danger of that most fell and cruell element: wherein verily wee suffer the madnesse and vanitie of those, who search as high as the clouds for a cup to drinke our passe the madnesse and hollow the rocks that in manner touch the heauen, and all to drinke out of * yce. Now let euery man thinke with himselfe what excessive prices of these stones hee shall heare anon, and what monstrous pieces and masses he seeth drawne and carried both by land and sea; let him consider withall, how much more faire and happy a life many a man should haue without all this, and how many cannot chuse but die for it, whensoever they go about to doe, or if I out all this, and how many cannot chuse but die for it, whensoever they go about to doe, or if I should speake more truly, to suffer this enterprise: also, for what vse else, or pleasure rather, but one, that they might lie in beds and chambers of stones that forsooth are spotted, as if they neuer regarded how the darkness of the night bereaue them the one halfe of each mans life of these delights and ioyes. When I ponder and weigh these things in my mind, I must needs thinke great shame, & impute a great fault to our forefathers that liued long since, & blash in their behalfe. Lawes were enacted, and prohibitions published by the Censors, and those remaining vpon record,

* y^e habitur
glacie for
they held
Chryttall
to be a kinde
of yce.

A cord, forbidding expressly, That neither the kernelly part of a Bore neck, nor dormice, & other smaller matters than these to be spoken of, should be serued vp to the boord at great feasts: but as touching the restraint of bringing in marble, or of sailing into forraine parts for the same, there was no act or statute ordained.

CHAP. II.

¶ Who was the first that steeled Marble stones in Columnes, or any publicke workes at Rome.

BVt some man haply might reply againe vpon me, and say: what need was there of any such Ordinance, considering there was no marble in those daies brought in from strange countries? Vnto whom I answer, That it is a meere vntuith, for euen our progenitors, of whom I speake, saw well enough how in that yere when *M. Scaurus* was Edile, there were not fewer than 360 pillars of marble transported to Rome, for the front and stage of a Theater, which was to continue a small while, and scarcely to be vsed one moneth to an end: and yet no law there was to checke and controule him for it. But it may be infered againe, the Magistrats winked heretofore, because he did all this for a publicke pleasure to the whole citie, during the plaies exhibited by him in his Edileship: marrie that is it that I would haue, What reason I pray you had they so to doe? By what means more doe abuses and inormities creepe into a citie or state, than by a publicke president giuen? for I assure you it was nothing else but such examples at the first that brought those other things, I mean, yvorie, gold, jewels, and precious stones, to be vsed by priuar persons, so commonly as they be, in their houses, plate, and ornaments. And what haue we lest and referred at all for the very gods to haue, since that we lay so much vpon our selues? but say that in those daies they did tolerat this excess in *Scaurus*, because of the pastimes he did exhibit to the whole city, What were they silent also and made no words, when the said *Scaurus* caused the biggest of all these columnes (yea those that were fortie foot high within twain, and the same of Lucullean black marble) to be erected and placed in the court before his owne house in mount Palatine? And least any man should say, that this is done in secret and hucker mucker, know he, That when these pillars were to be carried vp into the mount Palatine where his house stood, the Baillife that had the charge of the publick sines vaulted vnder the ground, dealt with *Scaurus* for good securitie, yea, and demanded cautions and sureties for satisfiing of all harmes and dammages that might be occasioned by their carriage, so huge and heauie they were. Considering then this bad example, so prejudiciall to all good manners, and so hurtfull to posterity, had it not bin better for the city to haue cut off these superfluities by whole some laws and edicts, than thus to permit such huge and proud pillars to be carried vnto a priuat house vpon the Palatine mount, euen vnder the nose of the gods, whose images were but of earth, and hard by their temples that had for their couers and louers no better than such as were made of porters cley?

CHAP. III.

¶ The first man who had at Rome for his owne vses, pillars of Marble brought from forraine Lands.

Neither can it be alledged for excuse of this tollerance in *Scaurus*, that hee tooke the vantage and spied his time when the city of Rome was not ware of any such matter toward, as hauing not been acquainted beforetime with the like, and therefore he stole vpon them with these superfluous pompes, as doubting nothing lesse than such new deuises, and therefore hauing no time to prevent and stay them: for long before this, *L. Crassus* that great Orator, who was the first that enriched his house (within the same Palatine) with pillars of outlandish marble, although they were but of the Quarry in Hymettus hill, and neither more in number than six, nor carying in length about 12 foot apiece, was reproued and reproched for this pride and vanity by *M. Brutus*, who among other hot words and biting terms that passed interchangeably between them, taunted him by the name of *Venus Palatina*. Certes, considering how all good orders and customs otherwise were trodden vnder foot, we are to presume thus of our predecessors, That when they saw other injunctions and prohibitions as touching diuers abuses crept in, take

no effect, but daily broken, they thought it better policy to make no lawes at all for restraint of such columns, than to haue them infringed, or at leastwise, not obserued when they were made: yet are we in these daies in better order than so, and I doubt not but the age and generation fol- yet are we in these daies in better order than so, and I doubt not but the age and generation fol- lowing will iustifie and approue of vs in comparison of them: for where is there one in Rome at this day, who hath in the portaille or entrie of his house any columns, that for bignesse and pride come near to those of *Scamurus*? But before that I enter farther into this discourse of marbles and other rich stones, it shal be good to speak somewhat of the men that haue excelled in the cutting thereof, and whose workmanship hath carried the greatest price. First therefore I wil go through with the artificers themselves.

CHAP. IIII

¶ The first Imaginers that were in name for cutting in Marble, and in what ages they flourished.

The first that were renowned for graving and caruing in marble, were *Dipannus* and *Scyllis*, both Candiots borne: who during the Empire and Monarchie of the Medes, and before that *Cyrus* began his reigne in Persia, liued in great fame; and that was in the fiftieth Olympias or thereabout. These men went together vnto Sicyone (a city, which I may truly say was for a long time the very native country that brought forth the excellent workemen in all kinds of mettals and minerals.) It fortuned at the same time, that the magistrats of Sicyone, had bargained with them for certain images of the gods to be made at the publicke charges of the city; but these artificers, who had undertaken the thing, agrieved at some wrongs offered to them, departed in *Ætolia* before they had finished the said images, and so left them vnperfected. Presently vpon this, there ensued a great famine amongst the Sicyonians, by occasion that the earth failed to yeeld increase: the citizens therefore full of sorrow and heauinesse, fearing vter desolation, had recourse to the Oracle of *Apollo Pythius*, to know what remedy for this calamity, and this answer was deliuered vnto them from the said god, I hat according to their petition, they should finde meanes for to be eased of this plague, in case *Dipannus* and *Scyllis* had once finished the images of the gods, which they begun; and this was performed accordingly, but with much difficulty, for they were faine to pay whatsoever they would demand: they were glad al- so to pray vnto them with cap in hand. And what images mought these be? Euen *Apollo*, *Diana*, *Hercules*, and *Minerva*: and this last named, was afterwards smitten and blaisted with fire from heauen.

CHAP. V.

¶ Of singular pieces of worke, and excellent artificers in cutting and graving Marble, to the number of 126. Of the white Marble of Paros, and of the stately sepulchre called Mausoleum.

Long time before *Dipannus* and *Scyllis*, there had been in the Island Chios one *Melares* a cutter and grauer in marble: after whom, his son *Micciades* succeeded, and he likewise left a sonne behind him, named *Anthermus*, of the said Isle, a cunning workman: whose two sons *Bupalus* and *Anthermus*, proued also most skillfull Imaginours. These flourished in the daies of *Hippanax* the Poet, who (as it is well knowne) liued in the 60 Olympias. Now, if a man will calculate the times, according to the genealogie of these two last named, and count backward in ascent no higher than to their great grandfire, he shall find by the ordinary course of Nature, that the art of cutting and graving in stone, is equal in antiquity to the original and beginning of the Olympiades. But to proue that these two, *Bupalus* and *Anthermus*, liued in the daies of *Hippanax* Olympiades. But to proue that these two, *Bupalus* and *Anthermus*, liued in the daies of *Hippanax* Olympiades, recorded it is, That the said Poet had a passing foule & ill-favored face of his own: above named, recorded it is, That the said Poet had a passing foule & ill-favored face of his own: and these Imaginours could find no better sport, than to counterfeit both him and his visage; as liuely as possibly might be in stone; and in a knauery to see the same vp in open place where merry youths met in knots together, and so to propose him as a laughing stock to the whole world. *Hippanax* could not indure this indignitie, but for to be reuenged vpon these companions, that pined his style or pen against them, and so coursed them with bitter rimes & biting libels, that as some do thinke and verily beleue, being weary of their liues, they knit their necks in halters, and

A and so hanged themselves. But sure this canot be true, for they liued many a faire day after, yea and wrought a number of Images in the Islands adiacent to Chios, and namely in Delos; vnder which pieces of their worke they subscribed certain arrogant verses to this effect, That the Island of Chios was not only enobled for the vines there growing which yielded so good wine; but renowned as well for *Anthermus* his two sons, who made so many fine and curious images. The Islanders also of Ialus haue to shew the image of *Diana*, their handiwork: within the Isle of Chios their native country, there was likewise another *Diana* of their making, whereof there goeth much talke, and which standeth aloft in a temple there; the visage of which *Diana* is so disposed, that to as many as enter into the place it seemes sad and heauy; but to them that goe forth it appeareth pleasant and merry. And in very truth there be certain statues at Rome of B these mens doing, to wit, those which stand vpon the lanterns of *Apollo's* Temple in the mount Palatine, and almost generally in all those chappels which *Augustus Caesar* Emperor of glorious memory erected. Moreover, their father *Anthermus* left behind him certain images both in Delos, and also in the Island Lesbos. As for *Dipannus*, his workes were rife in *Ambracia*, *Argos*, and *Cleone*, in which cities a man should not see a corner without them. But all the race of these, both father, grandfire, sons, & nephewes, wrought only in white marble digged out of the Island Paros; and this stone men began to call *Lychnites*, that is to say, the candle marble, not for the lightsome white colour which it caried (for many quarries were found afterward of whiter and brighter marble, and namely of late daies in those about Luna in Tuscane) but as *Varro* mine Author saith, for that the pioners vndermined the ground for that stone, and laboured in hewing it continually by candle light. But here cometh to my remembrance a strange thing that is recorded of the quarries in the Island Paros; namely, That in one quarter thereof there was a vein of marble found, which when it was clouen in twain with wedges, shewed naturally within, the true image and perfect portraiture of a *Silenus* imprinted in it. Neither must I forget to note, That this art of graving images in stone is of greater antiquitie by farre, than either painters craft, or foundrie and casting (statues); for both painters and also imaginours in mettal began with *Phidias*, about the 83 Olympias, which falleth out to be 332 yeares after *Malas* the first grauer in stone of name. This *Phidias* (though otherwise a painter at the beginning, and a caruer in *Ivorie*) was himselfe also a grauer in marble, and the image of *Venus*, which now stands among the stately buildings of *Constantinople*, was (as they say) of this cutting, a braue piece of worke, and in beauty surpassing. This is knowne for certain, That *Alcamenes* the Athenian, a most excellent grauer in stone, learned his skill vnder him, of whose workmanship there be a number of statues to be seene at Athens, within the sacred temples. Besides, one image there is of *Venus* most exquisitely wrought, standing without the wall of the city, and is knowne by the name of *Aphrodite* * in *Paros*. [i. *Venus* in the gardens;] and as it is said, *Phidias* with his own hands finished this *Venus*: who also had another pretifse vnder him, named *Agoracritus* of Paros, whom he loued also for his sweetly youth; in regard of which affection it is said, that many braue pieces of his own handiwork he was content should passe vnder his name, which hee dedicated to the immortal memorie of *Agoracritus*. Now these two apprentices of his stroue a-vie, whether of them could make the statue of *Venus* better? and so it fell out, that *Alcamenes* won the victorie, not in regard of finer and more cunning workmanship, but for that the city of Athens in fauor of their own countryman, gaue sentence on his side against *Agoracritus*, a stranger and Parian borne: who tooke this repulse and disgrace in such displeasure and indignation, that (by report) when he sold the said *Venus* of his owne making, he would by no meanes passe it away, but with this condition, That it should neuer stand in the city of Athens; and withall he named it *Agnesis* [i. Vengeance;] and therefore set vp it was at *Rhamnus*, a village so called within the territorie of Attica. Which image of *Venus*, *M. Varro* preferred before all other statues whatsoever. Within the foresaid city of Athens, and in the chappell dedicated to the honor of *Cybele* the great mother of the gods, there was another most excellent statue or image wrought by the hands of *Agoracritus*.

As touching *Phidias*, no man doubteth but he was the most excellent grauer that euer was, as all nations will confesse who euer haue heard of that statue of *Iupiter* * *Olympius*, which his own hands wrought; but that all others also may know (who neuer saw his work nor the statues that vnder-

Ccc

hee

By this accident, *Olympias* was but the space of four yeares completed, though it be taken for due yare. Somerday *Agnesis*, which without the citie. Out of yore which when he had finished, heing demanded after what pattern he had made the said image, and how he was vp on heaues for to take it forth. Aswered out of his mouth, I haue not knowne it, but I haue heard it was by the name of *Agnesis*, who say hee finished that he had made him according as Homer the poet portraied and described in his verses.

with all her sweet children, and standeth in the temple of *Apollo* surnamed *Sofianus*, whether *G Scopas* or *Praxiteles* made it: no more than father *Ianus*, which *Augustus Caesar* brought out of Egypt and dedicated in his owne temple, is knowne out of whose shop it came; notwithstanding now it be guided all ouer: semblably, there standeth in the courtly pallace of *Octauia*, the image of *Cupid* holding a thunderbolt or lightning in his hand, ready to shoot; but it is a question who was the maker of him: And yet this is affirmed, That the same *Cupid* was made by the liuely partner of *Alcibiades*, who at that age was held to be the fairest youth that the earth did beare. In the same place, and namely in the schoole or gallerie of learned men, there be many more images highly commended, and yet no man knoweth who wrought them: As for example, four that resemble *Satyres*, of which one seemeth to carry on his shoulders prince *Bacchus* attaiied like a resemble *Satyres*, of which one seemeth to carry on his shoulders prince *Bacchus* attaiied like a girl in a fide coat or gown; another likewise beareth yong *Bacchus* in the same order, clad in H robe of his mother *Semelle*, the third maketh as though he would still the one *Bacchus* crying like a child: the fourth offereth the other a cup of drink to allay his thirst: furthermore, there be two images in habit and form feminine, representing gales of wind, & these seem to make faile with images in habit and form masculine, representing gales of wind, & these seem to make faile with their owne clothes. As doubtfull also it is, who made the images within the railed inclosure in *Mars* field named *Septa*, which do represent *Olympus*, *Pan*, *Chiron*, and *Achilles*; and yet so excellent pieces they be, that men esteeme them worthy to be kept safe, & satisfaction to be made with no lesse than their death, vnder whose hands and custody they should miscarrie. But to returne againe vnto *Scopas*; he had concurrents in his time, and those that thought themselves as good workmen as himselfe, to wit, *Bryaxius*, *Timotheus*, and *Leochares*, of whom I must write jointly hereafter, because they joined all foure in the grauing and cutting of the stately monument I

Maufoleum.

This Maufoleum was the renowned tombe or sepulchre of *Maufolus*, a petty king of *Caria*, which the worthy lady *Artemisia* (sometime his queene, and now his widow) caused to be erected for the said prince her husband, who died in the second year of the hundredth Olympias; and it verily so sumptuous a thing it was & so curiously wrought, by these artificers especially, that it is reckoned one of those matchlesse monuments which are called the * seven Wonders of the world: from North to South it carrieth in length, 63 foot; the two fronts East and West, make the breadth, which is not all out so large, so as the whole circuit about, may containe four hundred and eleven foot: it is raised in height five and twenty cubits, and inuironed with six and thirty columns: on the East side, *Scopas* did cut; *Bryaxius* chose the North end; that front which K regardeth the South, fell to *Timotheus*; and *Leochares* engraued at the west side: but Queene *Artemisia* (who caused this rich sepulchre to be made for the honour and in the memoriall of her husband late deceased) hapned her selfe to depart this life before it was fully finished: howbeit these noble artificers whom she had set a worke, would not giue ouer when she was dead and gone, but followed on still and brought it to a finall end, as making this account, that it would be a glorious monument to all posterity, both of themselves and also of their cunning: and in a pointed brochin the top whereof, there is pitched a coach with foure horses wrought curiously in marble; and this was the worke of *Pythis* for his part. * So that reckoning this charriot with the sharp spire, the Pyramis vnder it vnto the battlements, and the body of the sepulchre founded vpon the bare ground, the whole worke arose to an 140 foot in height. But to come to some particular works of *Timotheus* before said: his hand wrought that statue of *Diana* in marble which standeth at Rome in the chappell of *Apollo*, situate in mount *Palatine*: and yet the head belonging thereto, which now this image carrieth, *Aulianus Evander* set vnto it in place of the former.

As touching *Menestratus*, men haue in high admiration *Hercules* of his making; as also *Hecatomus*, which standeth in a chappell at *Ephesus* behinde the great temple of *Diana*: the sextons or wardens of which chappell, giue warning vnto those that come to see it, that they looke not too long vpon it for dazling and hurting their eyes, the lustre of the Marble is so radiant and resplendent.

I can

- A I cannot range in a lower degree vnto these, the three *Charites* or *Graces*, which are to be seen in the Bassic court before the Citadell of *Athens*, the which * *Socrates* made; I meane not that *Socrates* whom I reckoned among painters, although some thinke he was the same man. As for *Myro* (whom I commended for a singular imaeur in brasse) there is in marble his por-
traying and ingrauing an old woman drunken, which he made for them of *Smyrna*; a piece of worke as much esteemed and spoken of, as any other. And here I cannot but thinke of *Polio A-frius*, who (as he was a man of a stirring spirit and quick conceit) delighted to haue his librarie and monuments to be enriched with such antiquities as these: for among them, a man shall see the Centaurs carry behinde them vpon their croup, the Nymphs, which *Arceftus* wrought; the Mules named *Thedipides*, of *Cleomenes* his cutting, *Oceanus* and *Iupiter*, done by the hand of *Ento-*
ches; the statues on horse back resembling women called *Hippiades*, which *Stephanus* wrought; joint Images of *Mercurius* and *Cupid*, called *Hermerotes*, the workmanship of *Tauriscus* (I meane not the grauer, of whom I spake before, but another *Tauriscus* of *Tralleis*;) *Iupiter* surnamed *Xe-minus* or *Hospitalis*, which came out of the hands of *Pamphilus* an apprentice to *Praxiteles*: as for the braue piece of worke, to wit, *Zetus*, *Amphion*, *Dirce*, the Bull, and the bond wherewith *Dirce* was tied, all in one enter stone, which was brought from *Rhodes* to *Rome*, it was done by *Apol-lonius* and *Tauriscus*; these men made question of themselves, who should be their fathers? pro-fessing in plaine termes, that *Menocrates* was taken and suppled their father, but indeed *Art-mi-dorus* begat them, and was their father by nature; & in the same place among other monuments, the statue of father *Bacchus* made by *Eutychedes*, is much commended. Moreover, neare vnto the
C gallerie of *Octauia*, there is the Image of *Apollo*, wrought by *Phyliscus* the *Rhodian*; and hee standeth in a chappell of his owne. Item, *Latona*, *Diana*, the nine Mules, and another *Apollo* naked. As for that *Apollo*, who in the same temple holdeth in his hand a harp, *Timarchides* was the work-man of it; but in the precinct or cloister of the said gallerie, and in the chappell of *Iuno*, there is the goddesse her selfe curiously made in marble, the handy worke of *Dionysius* and *Polycles*; but the image of *Venus* in the same place, *Phyliscus* wrought: all other statues there, came out of *Praxiteles* his hands. Moreover, *Polycles* and *Dionysius*, the sons of *Timarchides*, made that *Iupiter* which is in the next chappell, the images of *Pan* and *Olympus*, wrestling together in the same place, were the workmanship of *Heliodorus*; and this is one of the fairest images coupled together as
D wrestlers, that are knowne in the world; as for *Venus*, bathing her selfe, he also made her; but *Dadalus* standing by, *Polycharmus*. As touching one piece of worke that *Lyfias* made, it may appear how highly it was esteemed, by the honourable place wherein it stood: for *Augustus Caesar* late Emperor of happy memorie, to the honour of *Octavianus* his father, dedicated it in mount *Palatin* ouer the triumphant arch there, and placed it within a shrine or tabernacle adorned with columns; but what might this worke be? surely nothing else but a charriot with foure horses set vnto it, *Apollo* and *Diana*, all of one entire piece. Within the gardens of *Seruilis*, I finde there is great praise of *Apollo* made by *Calamis*, that singular grauer in metall: the religious priests and prophetes also of *Phaeus*, called *Pythex*, done by *Dactylis*; and *Callisthenes* the Historiogra-
phers statue, wrought by *Amphistratus*.
- E Moreover, many cunning workmen there were, whose fame notwithstanding is obscured, by reason that albeit many singular pieces & those vnmatchable, haue passed through their hands, yet for that many haue ioined in the workmanship together, the number hath bin a checke and barre to the excellency of some that went beyond their fellows, for neither is there one among them that goeth away cleare with the honor from the rest: nor many together can well be named for one thing; and this may be seene in the image of *Laocon*, which remaineth within the pallace of Emperor *Titus*, a piece of worke to be preferred (no doubt) before all pictures or cast images whatsoever; and yet we know not what one artificer to praise for it. *Alexander*, *Polydorus*, and *Athenodorus*, *Rhodians*, most excellent workmen all, agreed by one generall consent to expresse liuely in one entire stone, *Laocon* himselfe, his children, and the wonderful intricate winding of the serpents, clasping and knitting them about: semblably, the houses *Palatine* of the
F *Caesars*, a man shall see fully furnished with right excellent statues, which *Craxus* and *Pythidorus*, *Polydectes* and *Hermolus*, another *Pythodorus* also ioyned with his fellow *Athenon*, wrought together; as also those that *Apbrodisius Trallianus* alone himselfe, did cut. As for the temple called *Pantheon*, which *Agrippa* built, *Diongenes* of *Athens* enriched it with marble images. The Vir-gins also going vnder the name of *Caryatides*, erected vpon the chapters of the columns in that

* Some take this for the wife Philofo-phos for Iamaus.

temple are commended, as few like vnto them for workmanship: like as the other images which G
be aduanced vp to the very top of the lantern of the foresaid temple, are thought to be excel-
lent pieces; howbeit, for that they stand to high and cannot well be discerned, lesse speech there
is of them. As touching that *Hercules*, in the honour of whom the Carthaginians were won eue-
ry yere to sacrifice the flesh of mankind, it is an image not regarded; for he hath no place in any
temple or chappell, neither is he erected vpon pillar, no nor so much as vpon a base, but standeth
vpon the bare ground, just ouer-against the entrie to those galleries in Rome, called * *Ad Nati-*
ones; howbeit, the workmanship of this *Hercules* is not to be despised. There stood also beneath,
the nine Muses called *Thepiades* under the temple of *Felicitie*, and as *Varro* saith, one *Innius Pif-*
centius (by place a gentleman of Rome) was enamored vpon one of them, so beautifull they were
made: and yet to this day, *Pasiteles* cannot look enough thereupon, but hath the same in great ad- H
miration: who also wrote hue books, comprising all the famous and principall pieces of worke
that are to be found in the world. This *Pasiteles* was borne in the marches and coasts of Italy cal-
led *Gracia*, and together with the townes of that tract, was made a *Romane* free denizen, being
himselfe also a good cutter in stone, hee made that image of *Iupiter* in *Yvory* which standeth in
the chappell of *Marsellus*, in the way which leadeth into *[Mars]* field. It happened vpon a time,
that being about the *Arsenal*, where certaine wild beastes were, newly brought out of *Affricke*,
hee looked in at a grate to behold a *lyon*, and to take out the counterfeite of him; but as hee was
ingrauing in stone according to the pattered, behold, out of another cage a panther brake loose,
to no small danger of that most curious and painfull workman: it is said, that hee made many
works, but in particular which were of his doing, it is not precisely set down. Moreover, *M. Var-*
ro doth highly magnifie *Aretefilus*, of whose handy worke hee saith that hee had a lionesse in
marble, and certaine winged *Cupids* playing with her: of which, some seemed to hold her fast
bound, others forced her to drinke out of a home others againe would seeme to snooe her with
their sockes; and all this prettie anticke worke was of one entire stone. The same *Varro* writ-
teth, that *Coponius* made the images of the foureteen Nations, which are about the galleries or
theatre of *Pompeius*. I finde also by my reading, that *Canachus* (whom I commended for a good
founder or imageur in brasse, in my catalogue of such artificers) wrought in marble likewise and
cut many faire statues: neither is it meet, that *Samos* or *Barachus* should be forgotten, who
wrought the chappels that are within the clofe or cloister belonging to the galleries of *Ossa-*
ria, notwithstanding they were themselves *Lacedæmonians* borne. Some also are of opinion,
that they were exceeding rich men, and that of their owne purfes they defraied the charges of
building those chappels, hoping to haue had the honour to be immortalized with the inscrip-
tions in the forefront thereof: which being denied them, yet in another place and after another
sort, they made meanes to eternize their names; for they deuided in the foot or base of every pil-
lar (as it appeareth yet at this day) to cut the forme of a * *frog* and a *lizard*, to represent thereby
their owne names. Moreover, I cannot conceale from you one pretty thing to be obserued, and
which we all know to be true, That in one chappell of *Iupiter*, all the pictures therein, as also all
the ceremoniall seruice, thereto belonging, are respectiue altogether to the feminine sex: the
which happening at first by meere chance, continued afterwards: for when the temple of *Iuno* L
was finished, the porters who had the carriage of the images ordained there to stand, mistooke
their markes and carried thither those which were appointed for the chappell of *Iupiter*; and
contrariwise those for *Iuno*, into the chappell of *Iupiter*; which being once done, was not
altered againe, but taken for a presage, and religiously euer after kept, as if the very gods them-
selues had so ordered and appointed it, and made a counterchange: which is the reason also,
that in the foresaid chappell of *Iuno*, there is that kinde of seruice which was meant for *Iu-*
piter.

To conclude, there haue been certaine workmen that haue growne to great name, by cutting
and grauing in small pieces of marble; and namely, *Myrmecides* deuided to inchafe in marble, a
charriot and foure horses, and a man to driue the same, in so small a roome, that a poor flie might
couer all with her little wings. As for *Callicrates*, he cut in stone the similitude and proportion M
of pismires in so narrow a compasse, that a man cannot easily discern the feet and other parts
of the body.

CHAP.

CHAP. VI.

¶ When first began Marble stones to be vsed in building of priuie houses. Who began at Rome to
parquet and couer walls with thin leaves of Marble. In what ages each kinde of
Marble came into use and request. Who inuented cutting of
Marble into thin plates: the deuise and manner
thereof. Of sand proper for building.

Thus far forth haue I discoursed of the cutters and ingrauers of marble, and of those excel-
lent artificers, who haue bin most renowned. In which treatise I remember wel, that the dis-
apred and spotted marble all this while was of no regard: for all the antique pieces
which I haue rehearsed, were made of the marble of *Thalos*, of the Islands *Cyclades*, as also of
Lesbos; and yet this inclineth to a blackish or blewish colour somewhat more than the rest. As
for marble spotted in sundry colours, as also of the ordering, workmanship and vse of any kinds
of marble in building, *Menander*, who in his time was most curious of all others in discussing
all such superfluitie, dealt first therein, but seldom medled heewithall. Howbeit, true it is, that at
length pillars of marble were taken vp to be vsed in temples, not vpon any pride, brauerie, or
magnificence (for as yet they knew not what such things meant) but for that it was thought, that
they could not be erected nor beare vpon any thing stronger: and in that manner was begun the
temple at Athens of *Iupiter Olympias*, out of which, *Sylla* brought those columns which serued
C for his house and pallace in the Capitoll. Howbeit, euen in *Homers* time a difference there was
made betweene ordinary stone and marble: for this Poet saith plainly, that *Paris* caught a rap
vpon the mouth with a marble stone: and yet when *Poet* he extolled and setteth out in the
highest degree the most stately pallaces of kings and princes, he neuer makes mention of any o-
ther matter to adorne them withall, but of *Brasse*, *Gold*, *Electrum*, *Siluer*, and *Yvory*, and not
one word of Marble. But as I take it, the first time that these marbles of sundry spots and colors
were discovered, was in the quaries of the Islanders of *Chios*, by occasion that they digged for
stone to fortifie their city with walls; whereupon *M. Cicero* plaies merily vpon them with a plea-
sant conceit, for when they made shew to all that came, and among the rest, to him, what walls
they had built of marble, and seemed to take great pride in their sumptuous and magnificent
building, What ado is here (quoth *Cicero*) I would haue marvelled much more at your wall, and
thought you had done a greater deed, if you had built it out of the quarry of *Tyburturn*. Certes,
if marble had bin of any name and credit in old time, painters had not bin so highly honored as
they were, nay, had there bin (thinke ye) any reckoning made of them at all?

As touching the manner of flitting marble into thin plates, therewith to couer and feel as it
were the outsidcs of walls, I wot not well whether the inuention came from *Caria*, or no. The pa-
lace of *Mausolus* K. of *Caria*, built at *Halicarnassus*, is the antientest building that I can find in
any record, garnished, set out and enriched with marble of *Proconessus*, notwithstanding all the
walls were reared of brick. This prince changed his life in the second yere of the 100 Olympias
which fel out to be the 302 yere after the foundation of the city of Rome. As for our Romans,
E *Cornelius Nepos* writeth, That *Mamurra*, borne at *Formia*, a gentleman of Rome, and sometime a
Prouost ouer the Pioners, Masons, Smiths, and Carpenters vnder *Cæsar* in France, was the first
who couered all the walls throughout his house which he had vpon mount *Coelius*, with leaves
of marble. Now when I speak of *Mamurra*, you must not be offended, and think that I ascribe the
invention hereof to a mean person; for I tell you, this is that *Mamurra*, whom the Poet *Catullus*
my countryman of Verona, so tainted and reuiled in his verses; this is the man, whose house be-
foresaid, testified better by prooffe and effect, than *Catullus* could by his Poetic expresse, That
he had laid vpon it and gathered into it all the riches of *Gallia Comata*: which was as much
to say as all France, saue only *Prouance*, *Languedoc*, *Sauoy*, and *Dauphine*. And well it might
be so, for *Cornelius Nepos* before named addeth moreover and faith, that he was the first man, who
caused the pillars of his house to be of marble, schad not one of other matter, neither were the
F sleight and slender, but solid & masse, euen hewn out of the quaries either of *Carythus* or *Luna*.
But after him, in proceffe of time, *M. Lepidus* who was ioined companion in the Consulship to
Catullus, was the first man known to lay the flis, lintels, & cheeks of his doores thorowout his house
with Numidian marble; being Consul in the 666 yere, reckoning from the foundation of Rome:
but

* So named,
by occasion of
the statues of
14 nations there
erected, as ap-
peareth a little
after.

* For in Greek
Batrachus is a
frog, and *Sau-*
ros a lizard.

but well shent and rebuked he was for his labor. And verily, this was the first Numidian marble G as far as I can find by any mention or token at all, brought ouer to Rome; not to serue in pillars only and pannels in the feeling of walls, as *Mamurra* imploied his Carystian marble, but in * middle workes, and in the basest of all, namely, in dore sils, lentils, and jambes. After this, *Lepidus* some foure yeares, succeeded *Consull L. Lucullus*, who, as it should seeme by that which fell out, gaue the name to Lucullan marble, for that he was so much delighted therien: he brought it first to Rome, and had a speciall fancy thereto, notwithstanding it were blacke otherwise: whether as all other men esteemed better of other coloured marble, or els spotted. This marble growes in an Island lying within the riuer Nilus, and no marbles (as many kinds as there be) took name of him that loued them, but it alone. But among these men that were giuen to build with marble, *M. Scavrus* was the first man, as I take it, that for the stage and forefront of his Theatre, made the walls of marble: but whether the same were of slit and sawne marble, or laid with good found square ashler or no (as the temple of *Iupiter Tonans* in the Capitoll hill, is at this day built) I am not able to say for certaine: for as yet I do not reade or find by any sign, that Italy knew how to slit marble into leaues. But surely, whosoeuer deuised that inuention, to saw marble stone, and to slit it into leaues for to serue the turne of riotous and waitul persons, had a perillous head of his own, and a shrewd. But would you know the cast of slitting marble? It is done with a kind of sand, and yet a man would think that it were the saw alone that doth the deed; for when there is an entree once made by a very smal line or trace, they strew the said sand aloft al the length ther of: then they set the saw to it, and by drawing it to and fro, the sand vnder the teeth thereof, maketh way downwards still, & so the stone, as hard as it is, they cut through in a trice: now for this purpose the *Ethiopian* sand hath no fellow: and to this passe forsooth we are come, that we cannot haue marble to serue our turns, vnlesse we send as far as into *Ethiopia*. nay, we must bee provided of sand to slit our marble with, out of *India*, from whence in times past, during the antient discipline of Rome, it was thought too much and a shamefull thing, to fetch rich pearles. And yet this *Indian* sand is commended in a second degree; but the *Ethiopian* is the softer and better simply, for that sand cutteth smooth and cleane as it goeth, and leaues no race at all in the work; the *Indian* maketh not so euery and neat plates, howbeit, they that polish marble, fit themselves with this sand when it is burnt and calcined, for if they rub their leaues and plates therewith, it will make them slick & fair, for otherwise, if it be not calcined to a fine powder, of it self it is churlish and rugged, which is the fault likewise of the sand that cometh from *Naxos* and *Coptis*, which commonly is called the *Egyptian* sand; for these sands verily were vsed in old time to the cutting of marbles. Afterwards they met with a sand as good as the best, and went no farther than to a certain bay or creek in the *Adriatick* sea or *Venice* gulf, which being left bare when the tide is gone, they may at a low water easily discern to haue bin cast vpon by the flood, And now adde our sawyers of marble, make no more ado, but take the first sand they come by, (it makes no matter out of what riuer it be) this serues their turne well enough, and thus they abuse and deceiver the world, although few chapmen there bee that know what losse there is by their marble leaues sawne in that sort: howbeit, such grosse sand as that, first makes a wider slit in the main stone, and by consequence spendeth and consumeth more of the marble; again, there is more work and labour about the polishing thereof, the saw and sand before said leaue the faces of the stone so rugged and vneuen: and by this means the plates become sleight and thin before they can be imploied. To conclude, the sand from *Thebais* in high *Egypt*, is very good to polish withall: like as the grit that cometh of grauelly stones or pumish ground, serueth very well for the said purpose.

CHAP. VII.

¶ Of Whetstones and Grindstones, coming out of *Naxos* and *Armenia*. Of diuers kinds of Marble.

FOR polishing of statues and images made of Marble, for cutting, filing, and trimming of precious stones, *Naxium* serued a long time, and was commended before any other stone: for by this word *Naxium* I vnderstand the whet-stones and grinde-stones that come out of the Island *Cyprus*. but afterwards, those which were brought from *Armenia*, wone the name from them, and were esteemed better.

As

A As for the sundry sorts of Marble and their colours, to discourse of them in generall, were needlesse, they are so well and easily knowne: and to reckon them all in particular, were endless, they be in number to many and infinit: for what corner of the world is there, where you shall not find one marble or other different from the rest? And yet in my Cosmography, I haue already written of the best and most excellent kinds of marble, as I had occasion to speak of the nations and countries where they be found. Howbeit, this would be noted, that all sorts of marble bee not found in quarries and rocks, that stand vpon veines thereof: for much you shall meet with, lying ebbe in the ground, and the same scattering by pieces here and there. But the green marble that cometh from *Lacedæmon*, is esteemed most precious, and to be more gay and pleasant than all other. As touching the marbles called *Augulum* and *Tiberium*, they were found in *Egypt* first after that sort lying loose and scattered, during the time that *Augustus* and *Tiberius* were Emperors of Rome, of whom they took their name. And albeit these marbles bee flecked and spotted, yet they differ from the *Serpentine* marble called *Ophites*; for that the speckles in *Ophites*, do resemble those in a serpents skin, whereupon it took that name: whereas the other two be distinguished with spots after a diuers sort: for *Augulum* hath veines curled, after the manner of waues, running round as it were like whirle pooles; and *Tiberium* spreadeth rather a broad in strakes, winding yet and turning after the order of whittish haire. Neither be there any pillars found of the foresaid *Serpentine* marble, vnlesse they be very small. And of this marble there be two kinds: the white, which is gentle and soft: the blacke, which is churlish and hard. Both of them are said to ease the head-ache, and to cure the sting of serpents, if they be but carried about one in pieces, either hanging at the neck, or otherwise tied to any part. Some there be who prescribe the whiter kind to be applied accordingly for the phrensie and lethargy: howbeit against serpents, there be who commend especially about the rest, that which of the colour of ashes they commonly call * *Tephria*. As touching the marble of *Memphis* or great *Caire* in *Egypt*, named thereupon *Memphites*, it is of the nature of these * precious stones, rather than of quarries. The vser hereof is to be ground into powder, & with vineger to be reduced into a liniment, for to be applied to those parts that are to be cauterized or cut: for it so astonieth and benect. The *Porphyrite* marble, which also comes out of *Egypt*, is of a red colour: of which kinde, look which hath white spots or streaks running among, is called thereupon *Leucostictos*: and D quarries there be in *Egypt*, standing wholly vpon this marble, which yield so sufficient, cut and hew therout as big and as huge pieces as you will. *Triarius Pollio*, Procurator general vnder *Claudius Caesar*, in the prouince of *Egypt*, brought for the Emperor certain statues of this *Porphyry*, out of *Egypt*: which new deuise of his was not very well liked and accepted, for no man tooke example by him afterwards to do the semblable. The *Egyptians* also found in *Ethiopia* another kind of Marble, which they call *Basaltes*, resembling yron as well in colour as hardness: and thereupon it took the name. The greatest piece of this marble that euer was found, *Vespasian Augustus* the Emperor dedicated in his temple of *Peace*, and it was a statue resembling the riuer *Nilus*, with 16 little children playing about it, whereby is signified the number of cubits, to which height the said riuer riseth when it is at the highest. It is said also, that within the temple of *Serapis* in *Thebes*, a city of high *Egypt*, there is another statue not vnlike to this marble *Bazaltes*, and many think it was made for *Memnon*, & by report, euery day at the Sun-rising, so soon as the raies or beames do beat thereupon, it seemeth to cracke or cleaue. As for * *Onyx*, our antient writers were of opinion, That it was found in those daies vpon the mountains of *Arabia*, and no where els: yet *Suides* saith, that it is gotten in *Germany*. *Cornelius Nepos* affirmeth, That there was at first great wonder made at the drinking cups of this stone: and afterwards, at the feet of tables and beds, of chaires and stools likewise thereof: howbeit, afterwards (quoth he) *Lentulus Siper* shewed at Rome wine vessels, as big as good barrels, such as came out of the *Isle Chios* with wine: but within five yere after by his saying, hee saw pillars also, and those 32 foot long, all of *Onyx* or *Chalcedonie*. But in proceesse of time this stone altered and varied much F for *Cornelius Balbus* brought foure small pillars thereof, and shewed them in his Theatre for a strange and miraculous sight. And in my time I haue seen of them about thirty, much fairer and bigger, which went to the making of a Summer parlour for pleasure, that *Calpurnius*, one of the enfranchised slaues of *Claudius Caesar* (a man well known for his exceeding riches and power) built for his owne selfe.

Here Pliny remembereth himselfe, and makes third kind of *Ophites* as *Disfor*, did before him, * *Disfor* saith it is no bigger than a little pebble or grauel stone

or rather *Onyx*, chies *Calcedonie*

CHAP. VIII.

¶ Of the stone called Alabastrites: likewise, of Lygdinus and Alabandicus.

G

THis Onyx stone, or Onychitis aforesaid, some name Alabastrites; whereof they vse for to make hollow boxes & pots to receiue sweet perfumes and ointments, because it is thought that they will keepe and preserve them excellently well, without corruption. The same being burnt and calcined, is very good for diuers plaisters. This Casidony or Alabafter is found about Thebes in Egypt, and Damascus in Syria: and this Alabafter is whiter than the rest: Howbeit, the best and principall simply is that which cometh out of Carmania: next to it in goodnesse is that of India: and then the Alabafter of Syria and Asia. The least esteemed of all other, is brought out of Cappadocia, and no beauty or lustre it hath at all. In sum, come it from what country it will, those pieces which stand most of a yellowish colour, like hony, spotted also in the head and nothing transparent, goe for the best. And generally throughout, look where you meet with any in colour white, or resembling horne, is rejected for naught, like as whatfoeuer, of it is like glasse.

As touching the stones Lygdinus, found in the mountaine Taurus, many are of opinion, that they be well neare as good as the former, for to keepe odoriferous ointments: and those for bignesse and capacity, exceed not bowls and good board platters: passing faire and white they be: and in times past were wont to be brought only out of Arabia. Moreover, there be two kinds I besides of Marble, well esteemed both, and in great price, notwithstanding in nature they be very contrary: the one is called Coralliticus, found in Asia, you shal not light vpon any about two cubits long: in whitenesse they come passing neare vnto yvorie, and otherwise also they haue a certaine resemblance vnto it. The other called Alabandicus, after the name of the country that yeeldeth it, is contrariwise blacke: howbeit, there is of it to be found growing in Miletus, but not altogether so blacke, for it inclineth or declineth rather to a purple colour. This stone of Miletus will resolu in the fire, and commonly they vse to melt it for drinking cups, in manner of glasses. To come now to the Thebaicke marble, marked it is with certain drops here and there of a golden colour: and naturally it is found growing in that part of Africke, which confineth vpon the Egyptians, and lyeth vnder their iurisdiction. A peculiar proprietie it hath by K a secret in Nature, respectiue vnto the eyes, to serue for to grinde collyries with, that is to say, those powders which are appropriat to the diseases of that part. But about Syene, in the province of Thebaies, there is a marble (thereupon called Syrenites) which sometime they named Pyrihopocilos: the kings of Egypt in times past (as it were vpon a strife and contention, one to exceed another) made of this stone certaine long beames, which they called Obeliskes, and consecrated them vnto the Sun, whom they honoured as a god: And indeed, some resemblance they carry of Sun-beames, when they are made to the forme of Obeliskes, and the very Egyptian name implieth so much. The first that euer began to erect these Obeliskes, was *Mitres*, king of Egypt, who held his royall seat and court in Heliopolis, the cite of the Sunne; where hee was admonished in a dreame by a vision, so to doe: and thus much may appeare by the inscription of certain letters engrauen vpon the said Obeliske: for those Characters, figures, and forms that we doe see incised in them, be the verie * letters that the Egyptians vse themselves. After him, other princes also set vp more of these Obeliskes in the about named cite: and namely king *Sochis* for his part, foure in number, those carrying in length eight and fortie cubits apiece. And *Ramses* (in whose reigne Troy was woon by the Greeces) erected an Obeliske fortie cubits long, in the same city: but being departed from thence (for that he took pleasure in another city, where hee founded the royal pallace of king *Menevis*) he pitched on end

another Obeliske, which carried in length * a hundred foot wanting one, and on euery side foure cubits square.

CHAP.

CHAP. IX.

¶ Of three Obelisks. The first of Thebes in high Egypt: the second of great Alexandria in Egypt: and the third which standeth at Rome in the large Cirque or Show-place.

IT is said, that *Ramses* the abouenamed kept 20000 men at work about this Obeliske. The King himselfe in person, when it should be reared on end, fearing lest the engins devised to raise it, and hold the head thereof betwixt heauen and earth, in the rearing should faile and not be able to beare that monstrous weight, because hee would lay the heavier charge vpon the artificers that were about this enterpryse, vpon their vtmost perill, caused his own foote to be bound to the top thereof; imagining withall, that the care of the enginers who vnderooke the weighing vp this Obeliske, ouer the young prince, for feare of hurting him, would induce them also to be the more heedfull to preserve the stone. Certes, this Obeliske was a piece of work so admirable, that when *Cambyses* had woon the city where it stood, by assault, and put all within to fire and sword, and burnt all before him, as far as to the very foundation & vnderpinning of the obelisk, commanded expressely to quench the fire: and so in a kind of reuerence yet vnto a masse and pile of stone, spared it, who had no regard at all of the city besides. Other Obeliskes there be twaine, the one erected by *K. Smarres*, the other by *Euphris*, both without characters, and the same are 48 cubits in height apiece. At Alexandria, *K. Ptolomeus* (surnamed *Philadelphus*, let vp another obelisk 80 cubits high, the which king *Nectabis* had caused to be hewed out of the quarry, plaine without any work: but much more difficulte there was in carving it from the quarry, & setting it vp right, than there had bin labor in the hewing: some write, that *Satyrus* a great architect & enginer, conueied it to Alexandria by means of flat bottoms or sleds. But *Calixtus* saith, that one *Phanis* did the deed, who caused a trench to be cut from the riuer Nilus, and to be carried with water as far as to the place where the obelisk lay along: then hee devised two broad barges, prepared & well fraught with final squares of the same stone, a foot euery way, to the double poise or weight of the Obelisk it selfe in proportion, by reason whereof the vessels hauing their full load, might come vnder the Obelisk iust, as it lay hollow ouerthwart the head of the fosse, with either end resting vpon the banks: which done he began to discharge the vessels vnderneath, & to throw out the stones werewith they were laden, by means whereof, as they were lightened, they rose vp higher and higher to the very Obelisk, and receiued the charge ordained for them. He writes moreover, that there were six other like to it hewed out of the same mountain, & the workmen who cut and squared them had fifty talents for a reward. But the foresaid Obelisk was afterwards by the abouenamed king erected in the haue of *Arsinoe*, in testimonye of loue to *Arsinoe* his wife and sister both. But for that it did hurt to the ship-docke there, one *Maximus* a gouernor of Egypt vnder the Romans, remoued it from thence into the market place of the said city, cutting off the top of it, intending to put a filiall thereupon gilded, which afterwards was forelet and forgotten. Two Obeliskes more there were in the haue of Alexandria neere to the temple of *Cesar*, which were hewed out of the rocke by *Mesphes* king of Egypt, being 42 cubits high. But about all other difficulties, it passeth, what a do there was to transport them by sea to Rome: and verily, the ships prepared of purpose therefore were passing faire and wondrous full to see to. As for one of the said ships which brought the former Obelisk, *Augustus Cesar* the Emperor of famous memorie, had dedicated it vnto the harbor or haue of *Puteoli*, there to remaine for euer as a miracle to behold, but it fortune to be consumed with fire: the other, wherein *Cesar* had transported the second Obeliske into the riuer, after it had bin kept safe for certaine yeares together, to be seen (for that it was the most admirable Carriack that euer had bin known to floate vpon the sea) *Claudius Cesar* late Emperor of Rome caused it to be brought to Ostia, where for the safetye and securitie of the haue hee sunk it, and thereupon, as a sure foundation, he raised certaine piles or bastions like turrets or sconces, with the sand of *Puteoli*: which being done, a new care and trouble therewas to bring the Obeliske vp the riuer Tiberis to Rome. Which being effected, it appeared well by that experiment, that vpon the riuer Tiberis a vessel draweth as much water full as Nilus. As touching the said Obelisk which *Augustus Cesar* late Emperor erected in the great show-place or cirque at Rome, it was first cut out of the rock by

* *Smarres*.

* Whom some
take to be
Mafius.

* *Semnefericus* King of Egypt, in the time of whose reign *Pythagoras* sojourned in Egypt, & the G same contains 125 foot nine inches, besides the foot or bale of the said stone. As for the other, standing in *Mars* field, being 9 foot lower than it, hewed and squared it was by commandement from *Sesoftris* K. of Egypt. In the characters ingrauen in both of them a man may fee all the philosophy and religion of the Egyptians, for they contain the interpretation of nature.

CHAP. X.

¶ Of that Obelisk at Rome which standeth in *Mars* field, and serveth for a Gnomon.

And as for that Obelisk which standeth in *Mars* field, *Augustus Cæsar* devised a wonderful means that it should serve to mark out the noontide, with the length of day and night, according to the shadowes that the Sun doth yeeld by it: for hee placed vnderneath at the foot of the said Obelisk, according to the bignes and length thereof, a pavement of broad stone, wherein a man might know the sixth houre or mid-day at Rome, when the shadow was equall to the Obelisk; and how by little and little, according to certain rules (which are lines of brasse inlaid within the said stone) the daies do increase or decrease. A thing no doubt worth the knowledge, and an invention proceeding from a pregnant wit. *Manilius* a renowned Mathematician & Astronomer, put vnto the top of the said Obelisk a gilded ball, in such sort, that all the shadow which it gaue fell vpon the Obeliske, and this cast other shadowes more or lesse, different from the head or top of the Obeliske asforesaid. The reason whereof (they say) was vnderstood from the sundry shadowes that a mans head yeelds. But surely for these thirty yeares past, or thereabout, the vse of this quadrant asforesaid hath not been found true: and what the reason of it should be I know not, whether the course of the Sun in it self be not the same that heretofore, or be altered by some disposition of the heauens; or whether the whole earth be somewhat removed from the true centre in the midst of the world (which I heare say is found to be so in other places) or that it proceed by occasion of the earthquakes which haue shaken the city of Rome, and so haply wrested the Gnomon from the old place: or lastly, whether by reason of many inundations of Tyber, this huge and weighty Obelisk hath suted and sunk down lower (and yet it is said, the foundation was laid as deep vnder ground as the obelisk it selfe is aboue ground.)

CHAP. XI.

¶ Of the third Obelisk in the Vatican.

There is a third Obelisk at Rome, standing within the cirque or shew-place of the two Emperors *C. Caligula* and *Nero*: and this is the only Obeliske known to haue bin broken in the rearing. This was hewn and erected in Egypt by *Nuncorcus* the son of *Sesoftris*; which *Nuncorcus* caused another to be set vp of 100 cubits high, and consecrated it vnto the Sun, after hee had recovered his sight vpon blindness, being so aduertised by the Oracle, which remains at this day.

CHAP. XII.

¶ Of the Egyptian Pyramides, and of *Sphinx*.

Having thus discoursed of the Obelisks, it were good to say somewhat of the Pyramids also in Egypt; a thing I assure you that bewraith the foolish vain-glory of the Kings in that country, who abounding with wealth, knew not what to doe with their money, but spent it in such idle and needlesse vanities. And verily most writers doe report, That the principall motives which induced them to build these Pyramids, was partly to keepe the Common people from idleness, partly also because they would not haue much treasure lying by them, lest either their heirs apparant, or other ambitious persons who aspired to be highest, should take occasion thereby to play false and practise treasons. Certes a man may obiect the great follies of those princes herein, That they began many of these Pyramids, and left them unfinished as

A may appeare by the tokens remaining thereof. One of them there is within the territory vnder the jurisdiction of *Asynoe*; two within the province that lieth to the government of Memphis, not far from the Labyrinth, whereof also I purpose to speake: there are other twaine likewise in the place where sometimes was the lake *Meris*, which was nothing else but a mighty huge fort intrenched by mans hand in manner of a mote or poole; but the Egyptians (among many other memorable and wonderful works wrought by their princes) speake much of these two * *Pyramides*, the mighty spires and steeples whereof (by their saying) do arise out of the very water. As for the other three which are so famous throughout the world (as indeed they are notable marks to be kenned a far off by sailers, and directions for their course) these are situate in the marches of Affrick vpon a craggy and barren mountaine, betwene the city Memphis and a certain Island or diuision of Nilus (which as I haue said before) was called *Delta*, within foure miles of Nilus and six from Memphis, where there standeth a village hard vnto it named *Bustis*, wherein there be certaine fellows that ordinarily vie to clime vp to the top of them. Ouergainst the sayd Pyramides there is a monstrous rocke called *Sphinx*, much more admirable than the Pyramides, and forsooth the peisants that inhabit the country esteemed it: no lesse than some diuine power and god of the fields and forreits: within it, the opinion goeth, that the body of *K. Amasis* was intombed; & they would bear vs in hand, that the rock was brought thither, all and whole as it is: but surely it is a meere ciag growing naturally out of the grounds; howbeit wrought also with mans hand, polished and very smooth and slippery. The compass of this rocks head (resembling thus a monster) taken about the front, or as it were the forehead, containeth one hundred and two foot, the length or height 143 foot: the height from the belly to the top of the crowne in the head, ariseth to 62 foot. But of all these Pyramides, the biggest doth consist of the stone hewed out of the Arabian quarries: it is said, that in the building of it there were 360000 men kept at worke twentie yeares together; and all three were: inquiring threecore and eightene yeares and foure monthes. The writers who haue made mention of these Pyramides, were *Herodotus*, *Euhemerus*, *Duris* the Samian, *Strabo* or *as*, *Dionysius*, *Artemidorus*, *Alexander Polyhistor*, *Butorides*, *Amphisthenes*, *Demetrius*, *Demetrius*, and *Apon*: but as many as haue written heretofore yet a man cannot know certainly and say, This Pyramid was built by this king: a most iust punishment, that the name and authors of so monstrous vanity, should be buried in perpetuall obliuion: but some of these Historiographers haue reported, that there were

D a thousand and eight hundred talents laid out only for radish, garlick, and onions, during the building of these Pyramids. The largest of them taketh vp eight acres of ground at the foot; foure square it is made, and every face or side thereof equall, containing from angle to angle eight hundred fourecore and three foot, and at the top siue and twenty: the second made likewise foure cornered, is on every side euen, and comprehendeth from corner to corner seven hundred thirty and seven foot: the third is lesse than the former two, but far more beautiful to behold, built of Ethiopian stones; it carrieth at the foot in each face betwene foure angles, three hundred threecore and three foot. And yet of all these huge monuments, there remaine no tokens of any houses built, no apparence of frames and engins requisite for such monstrous buildings; a man shall find all about them far and neare, faire sand and small red grauell, much like

E vnto Lentill seed, such as is to be found in the most part of Affricke. A man seeing all so cleane and euen, would wonder at them how they came thither; but the greatest difficultie moouing question and maruell, is this, What meanes were vsed to carry so high as well such mightie masses of hewen squared stone, as the filling, rubbith, and mortar that went thereto; for some are of opinion, that there were deuised mounts of salt and nitre heaped vp together higher and higher as the worke arose and was brought vp; which being finished, were demolished, and so washed away by the inundation of the riuer Nilus: others thinke, that there were bridges reared with bricks made of clay, which after the worke was brought to an end, were distributed abroad and imploied in building of priuat houses; for they hold, that Nilus could neuer reach thither, lying as it doth so low vnder them when it is at the highest, for to wash away the heaps and mounts aboue said. Within the greatest Pyramid there is a pit 86 cubits deep, and thither (some thinke) the riuer was let in. As touching the heigh of these Pyramids & such like, how the measure should be taken, *Thales Milesius* deuised the meanes; namely, by taking just length of a shadow when it is meet and euen with the bodie that casteth it. These were the wonderful Pyramids of Egypt, whereof the world speaketh so much. But to conclude this argument,

Ddd

That

* *Herodotus* saith, they were 250 foot high aboue the water, and as many deepe radish.

That no man should need to marvell any more of these huge workes that kings haue built, let G him know thus much, that one of them, the least (I must needs say) but the fairest and most commended for workmanship, was built at the cost and charges of one *Rhodes*, a very frumpet: this *Rhodes* was a bondslawe together with *Aspe* a Philosopher in his kind, and writer of morall fables, with whom she serued vnder one master in the same house: the greater wonder it is therefore and more miraculous than all I haue said before, that euer she should bee able to get such wealth by playing the harlot.ouer and aboute the Pyramides abovesaid, a great name there is of a tower built by one of the kings of Egypt within the Island Pharos, and it keepeth & commands the haven of Alexandria, which tower (they say) cost 800 talents the building. And here because I would omit nothing worth the writing, I cannot but note the singular magnanimity of *K. Ptolome*, who permitted *Sofstratus* of Gnidos (the master workman and architect) to graue H his owne name in this building. The vie of this watch-tower, is to shew light as a lanthorne, and giue direction in the night season to ships, for to enter the haven, & where they shall auoid bars and shelves, like to which there be many beacons burning to the same purpose, and namely, at Puteoli and Rauenna. This is the danger onely, lest when many lights in this lanterne meet together, they should be taken for a star in the skie; for that a far off such lights appeare to sailers in manner of a star. This engineer or master workman before said, was the first man that is reported to haue made the pendant gallery and walking place at Gnidos.

CHAP. XIII.

¶ Of the Labyrinths in Egypt, Lemnos, and Italy.

Since wee haue finished our Obelisks and Pyramides, let vs enter also into the Labyrinths, which we may truly say, are the most monstrous workes that euer were deuised by the head of man: neither are they incredible & fabulous, as peraduenture it may be supposed; for one of them remaineth to be seen at this day within the iurisdiction of Heracleopolis, the first that euer was made, to wit, three thousand and six hundred yeares ago, by a king named *Petefuccus*, or as some thinke *Tithoes*: and yet *Herodotus* saith, it was the whole worke of many KK. one after another, and that *Psammetichus* was the last that put his hand to it and made an end thereof: the reason that moued these princes to make this Labyrinth, is not resolu'd by writers, but diuerse causes are by them alledged: *Demoteles* saith, that this Labyrinth was the roiall palace and seat of king *Mosherudes*: *Lycias* affirmeth it to be the sepulchre of *K. Marius*: the greater part are of opinion, that it was an edifice dedicated expressly and consecrated vnto the Sun, which in my conceit commeth nearest to the truth. Certes, there is no doubt made that *Dadalus* tooke from hence the pattern and platforme of his Labyrinth which he made in Crete; but surely he expressed not aboute the hundredth part thereof, chusing onely that corner of the Labyrinth which containeth a number of waies and passages, meeting and incourtring one another, winding and turning in and out euery way, after so intricat manner and so inexplicable, that when a man is once in, he cannot possibly get out againe: neither must wee thinke that these turnings and returnings were after the manner of mazes which are drawne vpon the pavement and plain floore of a field, such as we commonly see ferue to make sport and pastime among boies, that is to say, L which within a little compasse and round border comprehend many miles; but here were many dores contriued, which might trouble and confound the memorie, for seeing such variety of entrie, allies, and waies, some cross'd & encountred, others flanked on either hand, a man wandred still and knew not whether he went forward or backward, nor in truth where he was. And this Labyrinth in Crete is counted the second to that of Egypt: the third is in the Isle Lemnos: the fourth in Italy: made they were all of polished stone, and besides vaulted ouer head with arches. As for the Labyrinth in Egypt, the entrie thereof (whereat I much marvell) was made with columns of stone, and all the rest stufed so substantially and after such a wonderful manner crouched and laid by art of Masonrie, that impossible it was they should in many hundred yerres be disjointed and dissolued, notwithstanding that the inhabitants of Heracleopolis did what they could to the contrary, who for a spight that they bare vnto the whole worke, annoied and impeached it wonderfully. To describe the site and plot thereof, to vnfold the architecture of the whole, and to rehearse euery particular thereof, it is not possible, for diuided the building is into sixteene regions or quarters, according to the sixteene seuerall governments in Egypt (which they

A they call *Nomo*;) and within the same are contained certain vast & stately pallaces which bear the names of the said iuridictions, and be answerable to them: besides, within the same precinct are the temples of all the Egyptian gods: ouer and aboue, fifteen little chappels or shrines, euerie one enclosing a *Nomis*, to which goddesse they be all dedicated: to say nothing of many Pyramides forty ells in height apiece, and euery of them hauing six walls at the foot, in such sort, that before a man can come to the Labyrinth indeed which is so intricat & inexplicable, & wherein (as I said before) he shall be sure to lose himselfe, he may make account to be weary & tyred out: for yet he is to passe ouer certain lofty galleries, & garrets, all of them so high that he must climbe staires of ninety steps apiece ere he can land at them: within the which, a number of columns and statues there be, all of porphyrit or red marble, a world of images and statues B representing as well gods as men, besides an infinit sort of other pictures pourtraied in monstrous and ougly shapies, and there erected. What should I speake of other rooms and lodgings which are framed and situate in such manner, that no sooner are the dores and gates opened which lead vnto them, but a man shall heare fearfull cracks of terrible thunder: furthermore, the passages from place to place are for the most part so conueighed, that they be as dark as pitch, so as there is no going through them without fire light: and still be we short of the Labyrinth, for without the main wall thereof, there be two other mighty upright wals or wings, such as in building they call *Pterag*; & when you are passed them, you meet with more shrouds vnder the ground, in manner of caues and countermines vaulted ouer head, and as dark as dungeons. Moreover, it is said, that about 600 yeares before the time of *K. Alexander* the Great, one *Circammas* (an eunuchor C groomer of *K. Nechdis* chamber) made some small reparations here about this Labyrinth, & neuer any but hee would go about such a piece of work. It is reported also, that while the main arches and vaults were in rearing (and those were made all of foure square ashler stone) the place shone all about and gaue light with the beams and plancher made of the Egyptian *Acacia* loddin in oile. And thus much may serue sufficiently for the Labyrinths of Egypt and Candy.

The Labyrinth in Lemnos was much like to them, only in this respect more admirable, for that it had a hundred and forty columns of marble more than the other, all wrought round by turners craft, but with such dexterity, that a very child was able to weld the wheele that turned them, the pins and poles wherby they hung were so artificially poysed. The master deuisers and architects of this Labyrinth, were *Zmilus*, *Rholus*, and a third vnto them, one *Theodoros* who was borne in the same Island. Of this, there remaine some reliques to be seene at this day: whereas a man shall not find one smal remnant either of the Italian or Candian Labyrinths; for meet it is that I should write somewhat also of our Labyrinth here in Italy, which *Porfena* K. of Tuscane caused to be made for his own sepulchre, and the rather, because you may know that forein KK. were not so vain in expences, but our princes in Italy surpassed them in vanity: but for that there go so many tales and fables of it which are incredible, I thinke it good in the description thereof to vsethe the very words of my author *M. Varro*: King *Porfena* (quoth he) was interred vnder the citie Clusium in Tuscane, in which very place he left a sumptuous monument or tombe built all of square stone; thirty foot it carried in bredth on euery side, and fifty in height; within the base or foot whereof (which likewise was foure square) he made a Labyrinth, so intricat, that if a man were entred into it without a bottom or clue of thread in his hand, and leauing the one end thereof fastned to the entry or dore, it was impossible that euer he should find the way out again. Vpon this quadrat there stood six Pyramides or steeples, foure at the foure corners, and one in the mids, which at the foot or foundation caried 70 foot euery way in bredth, & were brought vp to the height of 150: these grew sharpe spired toward the top, but in the very head so contriued, that they met all in one great roundle of brass which wrought from one to the other, & couered them all in manner of a cap, and the same rising vp in the mids with a cress most stately; from this couer there hung round about at little chains, a number of bells or cimbals, which being shaken with the wind, made a jangling noise that might be heard a great way off, much like to that ring of bells which was deuised in times past ouer the temple of *Iupiter* at Dodona: I & yet are we not come to an end of this building mounted aloft in the aire, for this couer ouer head serued but for a foundation of 4 other Pyramides, and euery one of them arose a hundred foot high about the other worke, vpon the tops whereof there was yet one terrace more to sustaine six Pyramides, and those that vp to such a monstrous height, that *Varro* was ashamed to report it: but if we may giue credit to the tales that go currant in Tuscane, it was equall to the

* Which was
250 foot : so
that the whole
was 500 foot.

whole * building underneath. O the outrageous madnesse of a foolish prince, seeking thus in a vaineglorious mind to be immortalized by a superfluous expence which could bring no good at all to any creature, but contrariwise weakened the state of the kingdome ! And when all was done, the artificer that enterprised and finished the worke, went away with the greater part of the praise and glory.

CHAP. XIII.

¶ *Of a garden made upon Terraces. Of a citie standing all upon vaults and arches from the ground. And of the temple of Diana in Ephesus.*

WE reade moreover of gardens made in the aire; nay it is recorded, that a whole city (and namely Thebes in Ægypt) was built so hollow, that the Ægyptian KK. were wont to lead whole armies of men vnder the houles of the said city, and in such sort as none of the inhabitants could beware thereof, yea and sodainly appeare from vnder the ground; a marvellous matter I assure you, but much more wonderfull in case the riuer Nilus also ran thorough the mids of the said towne. But surely of this opinion I am, that if this be true, *Homer* no doubt would haue written of it, considering he hath spoken so much in the praise and commendation of this city, and especially of the * hundred gates that it had. But to speake of a stately and magnificent worke indeed, the temple of *Diana* in Ephesus is admirable, which at the common charges of all the princes in Asia was * two hundred and twenty yeres a building. First and foremost, they chose a marish ground to set it vpon, because it might not be subiect to the danger of earthquakes, or feare the chinkes and opening of the ground: againe, to the end that the mighty and huge building of stone-wooke should stand vpon a sure and firme foundation (notwithstanding the nature of the soile giuen to be slipperie and vnsteadfast) they laid the first couch and course of the ground-wooke with charcole well rammed in manner of a pavement, & vpon it a bed of wool-packs: this temple carried in length throughout, four hundred twenty and six foot, in breadth two hundred and twenty: in it were a hundred and seuen and thirtie pillars, made by so many KK. and euery one of them threescore foot high; of which, six and thirtie were curiously wrought and engrauen, whereof one was the handiwooke of *Scopas*: *Cherifphon* the famous architect was the chiefe deuiler or master of the workes, and who vnderooke the rearing thereof: the greatest wonder belonging thereto was this, How those huge chapters of pillars, together with their frizes and architraues, being brought vp and raised so high, should be fitted to the sockets of their shafts: but as it is said, he compassed this enterprife and brought it to effect, by the means of certaine bags or sacks filled with sand; for of these he made a soft bed as it were raised about the heads of the pillars, vpon which bed rested the chapters, and euer as he emptied the nethermost, the forehead chapters settled downward by little and little, and so at his pleasure he might place them where they should stand: but the greatest difficultie in this kind of worke, was about the very frontispiece and maine litle-tree which lay ouer the jambes or cheekes of the great dore of the said temple; for so huge and mighty it was, that hee could not weld it to lay & bestow the same as it ought, for when he had done what he could, it was not to his mind, nor couched and settled in the right place: wherevpon the workman *Cherifphon* was much perplexed in his mind, and so wearie of his life, that he purposed to make himself away; but as he lay in bed in the night season, and fell asleep all wearie vpon these dumps and desperate cogitations, the goddess *Diana* (in whose honor this temple was framed, and now at the point to be reared) appeared sensibly vnto him in person, willing him to be of good cheare and resolute to lue still, assuring him that she herself had laid the said stone of the frontispiece, and couched it accordingly: which appeared true indeed the morrow morning, for it seemed that the very weight thereof had caused it to settle iust into the place, and made a joint as *Cherifphon* would haue wished it. As touching all the other singularities belonging to this temple, and namely the gorgeous ornament that set it out, they would require many volumes to discipher and particularize vpon them; and when all is done, little or nothing pertinent they are to the illustration of Natures worke, which is the principall make I am at.

• Οδηγία: Στοιχεία
πυλ.:

"In the fortieth
chap. of the 16
booke, he saith
400.

* After the frame was made.

С. И. А. Р.

CHAP. XV.

*Of the proud temple in Cyzicum. The fugitive stone. The echo which resoundeth seven times to one cry. Of a great building without pin or nail of iron.
The sumptuous and admirable edifices in Rome.*

THere is at this day a temple standing at Cyzicum, wherein the mason had bestowed threds of gold in all the joints vnder every stone throughout, and those were all faire polished: within this temple, prince *Cyzicus* (who caused it to be built) minded to dedicate the image of *Iupiter* in yorie, and of *Apollo* in marble, setting a crowne vpon his head. Certes, these joints **B** were interlaced with most fine and dainty threads, gaue a wonderfull grace and beautie to the whole Church, by sending and breathing (as it were) from them certaine raies, which by reuerberation caule all the images therein to haue a glittering lustre in such sort, that ouer and aboue the deuil and wittie inuention of the workman, the very matter also (although it be clofe couched and hidden betwene each stone) commendeth the price and riches of the worke.

Within the said town there is a stone called the Fugitive and Runaway: The brave knights of Greece called Argonauts, who accompanied prince *Iafon* in his voyage for the golden fleece, after they had vied it for an anchor, left it there: but for that this stone was ready many times to run away and be gone out of their Prytaneon (for so they call their publick hall) they foudred it fast with lead. In the same city near vnto that gate which is called Thracia, there stand seuen turrets, which doe multiply a voice, and send backe many againe for one: this miraculous rebounding of the voice, the Greekes haue a pretty name for, and call it Echo. True it is, that this reperiçution and redoubling of the voice, proceedeth otherwhiles from the nature of the place, and most of all in valleys lying betwene hills; but at Cyzicum it cometh by fortune, and no such reason can be giuen thereof. At Olympia the like is wrought by art, for there is a gallerie there made of purpose, which after a wonderfull manner deliuereth the same voice which it receiueth, seuen times backe, whereupon they call it Heptaphonon. Moreover, in Cyzicum there is a faire and large building, which (because they keep courts and fit in counsell there) is named Buleuterion: the same is built in such sort as there goeth not one pin or naile to all the carpenterie thereof: and the stories are so laid, that a man may take away the beams and rissers without any prop or shore to support them, yea and bestow them againe fast enough without laces to bind them. After which manner, the wooden bridge at Rome was so framed ouer the riuer Tyberis; and a matter of religion and conscience was made thereof, to maintaine it so, in remembrance of the difficultie in taking it apieces and breaking it downe, at what time as *Horatius Coeles* made the place good against the power of *K. Porçena*.

And now since the coherence of matters hath brought me to Rome, methinks I should not do amiss to proceed unto the miraculous buildings of this our city, to shew the docility of our people, and what proofe there is of their progresse in all things, during the space of nine hundred yeres; that it may appeare how not only in magnanimitie and prowess they have conquered the world; but in magnificence also of stately and sumptuous buildings surmounted all nations of the earth: and as a man shall find this singularity and excellencie of theirs in the particular survey of every one of their stately and wonderful edifices as they have bin reared from time to time, so if he put them all together and take a general view of them at once, he shall conceive no otherwise of their greatness, than of another world assembled (as it were) to make shew in one place: for if I should reckon among great works (as needs I must) the grand cirque or shew-place built by *Cæsar Dictator*, which took up of ground three stadia or furlongs in length, and one in breadth, containing also in edifices and rooms foure acres of iugera, wherein were befitted to sit at ease and behold the sight with pleasure, two hundred and threescore thousand persons: what terme shall I give, but of Stately and magnificent buildings, either unto the royall pallace of *Paulus Æmilius*, enriched with goodly pillars of Sinadian marble out of Phrygia, most admirable to behold; or to the sumptuous Forum of *Augustus Cæsar* late Emperour, or yet the temple of Peace built by the Emperour *Vespasianus Augustus*, now lying, the goodliest and fairest buildings that ever were? what should I speake of the temple * *pantæon*, made by *Agrrippa* to the honor of *Iupiter Reuenger* as also how before this time *Valerius* of Ostia the architector engineer, made a route over the great Theatre at Rome against the Olfra

* The round church of No-
ster dame, now
at Rome,

B d d 3

Lib

Libo exhibited his solemnitie of games and plaies to the people? Wonder we at the dispences G that *KK*. were at about their Pyramids: and wonder we not rather that *Julius Cæsar* did labour disbursed for the purchase of that plot of ground only and no more wherein he built his Forum, a* hundred millions of sesterces? And if there be any here that take pleasure to hoord up money, and be loth to part with a penny, and loue not to be at charges and lay forth ought, wil they not make a wonder when they heare that *P. Clodius* (whom *Milo* slew) paid for the house wherein he dwelt, foureteen millions and eight hundred thousand sesterces? surely if they do not, I do; and take it to be as foolish an expence and as wonderful, as that of the *KK*. in *Ægypt* about a named: likewise when I consider the debts that *Milo* himselfe ought, and which amounted to seventy millions of sesterces, I count it one of the most prodigious enormities that a mans corrupt mind can bring forth. But old men marvelled even in those daies at the mighty thick rampiers that *K. Tarquinius Priscus* caused to be made, the huge foundations also of the Capitoll that he laid, the vaulted finks also and draughts (to speake of a piece of worke the greatest of all others) which he devised, by vndermining and cutting through the seven hills wherupon Rome is seated, and making the city hanging as it were in the aire between heauen and earth, like vnto Thebes in *Ægypt*, whereof erewhile I made mention; so as a man might passe ouer the streets & houses with bores. But how would they be astonished now, to see how *M. Agrippa* in his *Ædile*ship, after he had been Consull, caused seven riuers to meet together vnder the city in one main channell, and to run with such a swift streame and current, that they take all afore them whatsoeuer is in the way, and carry it downe into Tyber: and being otherwhiles encreased with sodaine shoures & land-floods, they shake the pauing vnder them, they flank the sides of the wals about them: sometimes also they receiue the Tyber water into them when he riseth extraordinarily, so as a man shall perceiue the streame of two contrary waters affront and charge one another with great force and violence within vnder the ground: And yet for all this, these water-works aforelaid yeeld not a jot, but abide firme & fast, without any sensible decay occasioned thereby, Moreouer, these streames carrie downe effsoons huge and heauie pieces of stones within them, mighty loads are drawne ouer them continually, yet these arched conduits neither settle and stoup vnder the one, nor be once shaken with the other: down many an house falls of it selfe, and the ruins beat against these vaults: to say nothing of those that tumble vpon them with the violent force of skarefires, ne yet of the terrible earthquakes which shake the whole earth about them: yet for all these injuries, they haue continued since *Tarquinius Priscus*, almost eight hundred yeres inexpugnable. And here by the way I will not conceale from you a memorable example which is come into my mind by occasion of this discourse, and the rather, for that euen the best & most renowned Chroniclers who haue taken vpon them to pen our Romane history, haue passed it ouer in silence: When this *K. Tarquinius* surnamed *Priscus*, caused their vaults vnder the ground to be made, and forced the common people to labour hard therat with their own hands, it happened that many a good Roman citizen being now ouer-toiled in this kind of work (which whether it were more dangerous or tedious, was hard to say) chose rather to kill themselves for to be rid of their irksome and painfull life; in such sort, that daily there were people missing, and their bodies found after they were perished. This king therefore, to preuent farther mischief, and to prouide that his works begun might be brought to an end, deuised a remedy which neuer was inuented before, nor practised afterwards, and that was this, That the bodies of as many as were thus found dead, should be hung vpon iebbets, exposed not onely to the view of all their fellow citizens to be despised as cursed creatures, but also to the wild and rauenous foules of the aire to be torne and deuoured. The Romans (as they are the only nation vnder heauen impatient of any dishonor) seeing this obiect presented before their eies, were mightily abashed; and as this mind of theirs had gained them victory many a time in desperate battels, so at this present also it guided & directed them: and being (as they were) dismayed at this disgrace, they made account no lesse to be ashamed of such an ignominie after death, than they now blushed therat in their life. But to return again vnto these finks and water-works of ours vnder the ground: *K. Tarquinius* about named, caused them to be made so large and of such capacite, that a good wain load of hay might passe within them. But al that euer I haue said already is nothing or at leastwise very little, in comparison of one wonderful thing which I am content to set down before I come to our new and moderne buildings: In that yeare when *M. Lepidus* and *C. Catulus* were Consuls at Rome (according as I find all the best writers to agree) there was not a finer

A and more sumptuous house in all Rome, than that wherein *Lepidus* himselfe dwelt: but verily before fire and thirty yeres were come and gone, there were a hundred houses and more brauer than it by many degrees. Now, if a man list by this reckoning to make an estimat of the infinite masse of marble, as well in pillars as square Ashler, the rich and curious pictures, besides other sumptuous furniture, meet indeed for a king, which must of necessitie be employed in a hundred such houses, as might not onely compare with that most beautifull and gorgeous house of *Lepidus*, but also exceed the same; as also the infinite number of other houses afterwards euen vntil this day, which haue gone beyond those hundred in sumptuosities: What would he say, and to what an vmeasurable proportion will all this arise? Certes, it cannot be denied, but fire (which burneth many a stately pallace) doth say well to the plucking down of mans pride, & punishing B such wastfull superfluities; and yet these & such like examples, will not reforme the abuses that reign in the world: neither wil this lesson enter into our heads, That there is ought vnder heauen more fraile, mortall, and transitory, than man himselfe. But what do I stand vpon those glorious edifices, when two pallaces only haue surpassed them all in collines and magnificence. Twice in our time we haue seen the whole pouerrie of Rome to be taken vp, for to make the pallaces of two Emperours, *C. Caligula*, and *Nero*: and as for that of *Nero* (because there might bee nothing wanting of superfluitie in the highest degree) he caused it to be all guided, and called it was, The golden pallace. For why? those noble Romans who were the founders of this our Empire, dwelt (no doubt) in such glorious and stately houses; those I mean who went from the very plough taile, or elsout of their country cabins (where they were found at repast by the fire side) C to manage the wars, to atcheue braue feats of armes, to conquer mighty nations, and to return with victory triumphant into the citie, I say, as had not so much free land in the whole world as would serue for one of the cellars of these prodigals. And here I cannot but think with my selfe, how little in proportion to the magnificent buildings of these daies were those plots of grounds which in old time the whole state gaue vnto those inuincible captaines by publick degree for to build them houses vpon, and how many of such places would go to one of these in our time, and yet this was the greatest honour that they could desire to bestow vpon those valiant and hardy knights, as it may appeare by **L. Valerius Publicola*, the first consull that euer was at Rome, and had companion with him in that government *L. Brutus*, who had no other reward in recompence of his good seruice to the Commonweale, and so many demerits, as, also by his D brother who in the same Consullship defeated the Samnites twice: where it is worth the noting that in the patent this branch went withall, That they were allowed to open the gates of their houses outward, so as the doores might be cast to the freest side: this was in those daies the most glorious and honourable shew that such mens houses made, euen those who had triumphed ouer the enemy. Howbeit, as sumptuous in this kind, as either *C. Caligula* or *Nero* was, yet that they not enjoy the glory of this fame, though you put them two and two together: for I wil shew, that al this pride & excesse of theirs in building their pallaces (princes though they were & mighty monarchs) came behind the priuat works of *M. Scæurus*: Whose example in his *Ædile*ship was of so ill consequence, as I wot not whether euer there were any thing that ouerthrow so much all good manners and orderly ciuility in such sort, as hard it is to say, whether *Sylla* did more damage E to the state, in hauing a son in law so rich & mighty, than by the proscription of so many thousand Romane citizens. And in truth, this *Scæurus* when he was *Ædile*, caused a wonderful piece of worke to be made, and exceeding all that euer had been knowne wrought by mans hand, not onely those that haue been erected for a moneth or such a thing, but euen those that haue bin destined for perpetuities; and a theatre it was: the stage had three lofty one above another, wherein there were hundred and threescore columnes of marble; (a strange and admirable sight in that citie, which in times past could not endure six small pillars of marble, hewed out of the quarry in mount Hymettus, in the house of a most honourable personage, without a great reproch and rebuke giuen to him for it); the base or nethermost part of the stage, was all of marble; the middle of glasse (an excessive superfluitie, neuer heard of before or after;) as for the vppermost, the F boards, planks, and floores were guilded: the columnes beneath, were (as I haue said before) forty foot high, wanting twaine; and between these columnes (as I haue shewed before) there stood of statues and Images in brasse to the number of three thousand. The theatre it selfe was able to receiue foure score thousand persons to sit well, and at ease, Whereas the compass of *Pompeies* Amphitheatre (now withstanding the city of Rome so much enlarged, and more peopled in his time)

* H. S. miller.

* Publicus, out of Livy.

* For Sylla married the mother of Scæurus.

* L. C. 4. 1. 1.

* At Rome.

time) was deuised for to containe no greater number than fortie thousand seats at large. As touching the other furniture of this Theatre of *Scæurus* in rich hangings, which were cloth of gold: painted tables, the most exquisite that could be found: plaies apperrell and other stufie meet for to adorne the stage, there was such abundance thereof, that there being caried back to his house of pleasure at Tufculum the surplufage thereof, ouer and aboue the daintiest part, wherof he had daily vse at Rome, his seruants and flauers there, vpon indignation for this wast and monstrous superfluitie of their master, set the said country house on fire, and burnt as much as came to a hundred millions of sesterces. Certes, when I consider and behold the monstrous humours of these prodigall spirits, my mind is drawn away stil from the progresse of mine intended iourney, and forced I am to digresse out of my way, and to annex vnto this vanity of *Scæurus* as great follie of another, not in masonry and marble, but in carpentry and timber: and *C. Curio* it was, he who in the ciuile warres betwene *Cæsar* and *Pompey*, lost his life in the quarrell of *Cæsar*. This gentleman, desirous to shew pleasure vnto the people of Rome at the funeral of his father deceased, as the manner then was, and seeing that he could not outgo *Scæurus* in rich and sumptuous furniture (for where should he haue had such a father in law again as *Sylla*? Where could he haue found the like mother to dame *Metella*, who had her share in all forfeitures and confiscations of the goods of outlawed citizens: and where was it possible for him to meet with such another father as *M. Scæurus*, the principall person of the whole city so long together, who parted stakes with *Marium* in pilling and polling of the prouinces, and was the very receptacle & gulfie which receiued and swallowed all their spoiles and pillage:) and *Scæurus* himselfe verily, if he might haue had all the goods in the world, could not haue done as he did before, nor make like Theatre, againe, by reason that his house at Tufculum was burnt, where the costly and rich furniture, the goodliest rare ornaments which he had gotten together from all parts of the world were consumed to ashes: by which fire yet this good hee got and prerogative aboue all other, That no man euer after him was able to match that sumptuousitie of his Theatre. This gentleman (*I say*) *Curio*, all things considered, was put to his shifts, & deuised to surpass *Scæurus* in wit, since hee could not come neere him in wealth. And what might his inuention be? Certes, it is worth the knowledge, if there were no more but this, that we may haue ioy of our own conceits and fashions, and call our selues worthily, as our manner is, Majores, that is to say, superiour euerie way to all others. To come then to *C. Curio*, & his cunning deuise, he caused two Theatres to be framed of timber, and those exceeding big, howbeit so, as they might be turned about as a man would haue them, approach neere one to the other, or be removed farther asunder as one would desire, & all by the means of one hooke apiece that they hung by, which bare the weight of the whole frame, the counterpoise was so euery, & all the whole therefore fure and firme. Now he ordered the matter thus, that to behold the severall stage plaies and shews in the forenoone before dinner, they shall be set back to back, to the end that the stages should not trouble one another: and when the people had taken their pleasure that way, he turned the Theatres about in a trice against the afternoone, that they affronted one another: and toward the latter end of the day, and namely, when the fencers and sword-plaies were to come in place, he brought both the Theatres nearer together (and yet every man far stil & kept his place, according to his rank and order) in so much, as by the meeting of the horns and corners of them both together in compasse, he made a faire round Amphitheatre of it: and there in the midst betwene, he exhibited indeed vnto them all jointly, a sight and spectacle of sword-fencers fighting at sharpe, whom he had hired for that purpose: but in truth, a man may say more truly, that he caried the whole people of Rome round about at his pleasure, bound fure enough for stirring or remouing. Now let vs come to the point, and consider a little better of this thing. What should a man wonder at most therin, the deuise or the deuise it selfe? The workman of this fabrick, or the master that set him on worke? Whether of the twaine is more admirable, either the venturous head of him that deuised it, or the bold heart of him that undertook it: to command such a thing to be done, or to obey and yeeld to goe in hand with it? But when we haue said all that we can, the follie of the blind & bold people of Rome went beyond all, who trusted such a ticklish frame, & durst fit there, in a seat so moueable. Loe where a man might haue seen the body of that people, which is commander and ruler of the whole earth, the conquerour of the world, the disposer of kingdoms and realmes at their pleasure, the deuise of countries and nations at their will, the giuer of lawes to forreign states, the vicegerent of the immortal gods vnder heauen, and representing

*The Romans delighted much in this word *Maior*, as may appear by their here *Maiorem*, &c.

A their image vnto all mankind, hanging in the air within a frame at the mercy of one only hook, rejoicing and ready to clap hands at their owne danger. What a cheape market of mens liues was here toward! What was the losse at Cannæ to this hazard, that they should complaine so much as they do of Cannæ? How neere vnto a mischief were they, which might haue happened hereby in the turning of a hand? Certes, when there is newes come of a city swallowed vp by a wide chinke and opening of the earth, all men generally in a publicke commiseration doe grieve thereat, and there is not one but his heart doth earne, and yet, behold the vniuersall state and people of Rome, as if they were put into a couple of barks, supported betwene heauen and earth, and sitting at the deuotion only of two pins or hooke. And what spectacle do they behold, a number of fencers trying it out with vnrebedd sword: nay ywis, but euen themselves ran ther entered into a most desperat fight, and at the point to break their necks euerie mothers son, if the seafoild failed neuer so little, & the frame went out of joint: Now surely by this proofe, *Curio* had gotten a good hand ouer the people of Rome, & no Tribunes of the Commons with all their Orations could do more: from that time forward he might make account to be so gracious, as to lead all the tribes after him in any suits, and haue them hanging in the air at his pleasure. What a mighty man with them might he be (thinke you) preaching vnto them from the Rostra: What would not he dare to propoale, hauing audience in that publick place before them who could perswade them thus, as he did, to sit vpon such turning and ticklish Theatres. And in truth, if we wil consider this pageant vpright, we must needs confesse & may be bold to say, that *Curio* had all the people of Rome to perform a brute skirmish and combat indeed to honor and solemnize the funerals of his father before his tombe. And yet here is not all for he was at his change and variety of magnificent shewes: and when he perceived once that the hooke of his frame were stretched ynough and began to be out of order, he kept them still close together round in forme of a perfect Amphitheatre, and the very last day of his funeral solemnities, vpon two stages iust in the midst, he represented wrestlers and other champions to performe their deuoir, and then all on a suddaine causing the said stages to be disjointed and hailed one from another a contrary way, he brought forth the same day the fencers and sword players who had woun the prize, and with that shew made an end of all. See what *Curio* was able to do! And yet was he neither king nor Kesar: he was not so much as a generall or commander of an army; nay, he was not named for any great rich man: as whose principall state depended vpon this. That when the great men of the city, *Cæsar* and *Pompey*, were skuffling together by the eares, he knew well how to fish in a troubled water. But to leaue *Curio* & such as he was, with their foolish and idle expences, let vs come to the miraculous workes that *Q. Marcus Rex* performed, and that to some good purpose: which if we consider & esteeme aright, passe all the other before rehearsed. This gentleman when he was Pretor, hauing commandement & commission both from the Senat, to repaire the conduits to the waters of Appia, Anio, and Tepula, which serued Rome, did not that only, but also conueighed a new water into the city, which of his owne name he called Martia: and notwithstanding that he was to pierce certaine mountains, & make trenches quite through them vnder the ground, for to bring the water thither from the Spring, yet he performed all within the time of his Pretourship. As for *Agrippa*, whiles he was *Ædile*, besides the conduits from all other fountains which he scoured, repaired, and caused to keep their current: he brought another of his own to the city, which is known by the name of *Virgo*: he made seuen hundred pooles for recit of waters: a hundred and fise conduits, yeelding water at rockes and spoutes, besides a hundred and thirtie conduit heads in the fields, and the most of them built strongly with vaults, and adorned right stately. Moreouer, vpon these workes of his he erected statues & images, to the number of three hundred, partly of brasse and partly of marble, besides foure hundred pillars of marble, and all within the compasse of one yeare. And if wee may beleeue his owne speech, discoursing of the acts done by him during his *Ædileship*, he addeth moreouer and faith, That the plaies and games which he exhibited that yeare, for to doe the people pleasure, continued threecore daies together, wanting one: that he caused a hundred threecore and ten baines or stoues to be made within the city, wherein people of all sorts and degrees might bathe and sweat of free cost, and not pay a denier: the which remain at this day, and haue brought with them an infinit number of others. But of all the conduits that euer were before this time, that which was last begun by *C. Caligula Cæsar*, and finished by *Claudius Cæsar* his successeur, passeth for sumptuousnesse: for they commanded the waters from the two foun-

taines,

tains, Curtius & Cæuleus, whose heads were 40 miles off: and these they carried before them with such a force and to such an height, that they mounted up to the top of the highest hills of Rome, and ferried them that dwell thereupon. This work cost* three hundred millions of sesterces. Certes, if a man would well and truly consider the abundance of water that is brought thereby, and how many places it serues, as well publicke as priuat, in baines, stews, and fishpools, for kitchins and other houses of office, for pipes and little riuers to water gardens, as well about the citie, as in manors and houses of pleasure in the fields neere the city: ouer and besides, what a mighty way these waters be brought, the number of arches that of necessity must be built of purpose for to conceiue them; the mountaines that be pierced and mined through to giue way together, with the vallies that are raised and made euen and leuell with other ground: he will confesse, that there was neuer any deesseine in the whole world enterprised and effected, more admirable than this. In the ranke of these most memorable workes of man, I may well tounge the mountaine that was digged through by the same *Claudius Cæsar*, for to void away the water out of the lough or meere Fucinus, although this work was left vnfinished for hatred of his* success: four which I assure you cost an incredible and inenarrable sum of money, besides the infinit toill and labour of a multitude of workemen and labourers so many yeres together, as well to force the water which came vpon the pioners from vnder the ground with deuil of engines and windles up to the top of the hill, whereas it stood vpon meere earth, as to cut and hew through hard reggs and rockes of flint: and all this by candlelight within the earth, in such sort that vnto a man had bin there to haue scene the manner of it, vnpossible it is either to conceiue in mind or expresse with tongue the difficultie of the enterprise. As for the peere and haue at Ostia (because I would make an end once of these matters) I will not say a word thereof, nor of the waies and passages cut through the mountaines, ne yet of the mighty piles and damns to exclude the Tuscane sea, for the Lucrine lake, with so many rampiers and bridges made of such infinit cost. Howbeit, among many other miraculous things in Ægypt, one thing more I will relate out of mine author *Pappyrus Fabianus*, a great learned Naturalist, namely, That marble doth grow daily in the quarries and in very truth, the farmers of those quarries, and such as ordinarily do labour and dig out stone, do ascribe no lesse, y who vpon their experience doe assure vs, that looke what holes and caues be made in those rockes and mountaines, the same will gather againe and fill vp in time: which if it be true, good hope there is, that so long as marbles do liue, excess in building will neuer die.

CHAP. XVI.

¶ The sundry kinds of the Load-stone, and the medicines thereto depending.

NOW that I am to passe from marbles to the singular & admirable natures of other stones; who doubts but the Magnet or Load-stone will present it self in the first place: for is there any thing more wonderfull, and wherein Nature hath more trauelled to shew her power, than in it? True it is, that to rockes and stones he had giuen * voice (as I haue already shewed) whereby they are able to answer a man, nay, they are ready to gain say and multiply words vpon him. But is that all? what is there to our seeming more dull than the stiffe and hard stone? And yet behold, Nature hath bestowed vpon it, fence, yea & hands also, with the vse thereof. What can we deuide more stubborne and rebellious in the own kind, than the hard yron, yet it yeelds, and will abide to be ordered: for loe, it is willing to be drawne by the load stone: a marvellous matter that this metall, which tameth and conquereth all things els, should run toward I wot not what, and the nearer that it approacheth, standeth still as if it were arrested, and suffereth it selfe to be held therewith, nay, it claspeth and clungeth to it, and will not away. And hereupon it is, that some call the load-stone * Sideritis, others Heracleos. As for the name Magnes that it hath, it rooke it (as *Nicander* saith) of the first inuenter and deuiiser thereof, who found it (by his saying) vpon the mountaine Ida (for now it is to be had in all other countries, like as in Spaine also;) and (by report) a neat-heard he was: who, as he kept his beasts vpon the foresaid mountaine, might perceiue as he went vp and downe, both the hob-nailes which were in his shoes, and also the yron picke or graine of his stiffe, to sticke vnto the said stone. Moreover, *Sotacus* ascribeth and setteth downe fise sundry kinds of the load-stone: the first which cometh out of Æthiopia; the second, from that Magnesia which consisteth vpon Macedonia, and

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A namely, on the right hand, as you go from thence toward the lake Boëbeis; the third is found in Echium, a town of Boëotia; the fourth about Alexandria, in the region of Troas; and the fift in Magnesia, a country in Asia Minor. The principall difference obserued in these stones, consists in the sex (for some be male, others female); the next lieth in the colour. As for those which are brought out of Macedonia and Magnesia, they be partly red, and partly blacke. The Boëotian load-stone standeth more vpon red than black: contrariwise, that of Troas is black, and of the female sex, in which regard it is not of that vertue that others be. But the worst of all comes from Magnesia in Natolia, and the same is white: neither doth it draw yron as the rest, but resembles the pumish stone. In sum, this is found by experience, That the blower any of these load-stones be, the better they are and more powerful. And the Ethiopian is simply the best, inasmuch, as it is worth the weight in silver: found it is in Zimiri, for so they call the sandy region of Ethiopia, which country yeeldeth also the sanguine load-stone, called Hæmatites, which both in color resemble bloud, and also if it be bruised, yeeldeth a bloody humour, yea and otherwhiles that which is like to saffron. As for the property of drawing yron, this bloud-stone Hæmatides is nothing like to the load-stone indeed. But if you would know and try the true Ethiopian Magnet, it is of power to draw to it any of the other sorts of load-stones. This is a general vertue in them all, more or lesse, according to that portion of strength which Nature hath indued them withal. That they are very good to put into those medicines which are prepared for the eies: but principally they do repress the vehement flux of humors that fall into them: beeing calcined and beaten into powder, they do heale any burne or scald. To conclude, there is another mountaine in the same Ethiopia, and not far from the said Zimiri, which breedeth the stone Theamedes that will abide no yron, but rejecteth and drieth the same from it. But of both these natures, as well the one as the other, I haue written oftentimes already.

CHAP. XVII.

¶ Of certain stones which will quickly consume the bodies that be laid therein. Of others againe that preserve them a long time. Of the stone called Assius, and the medicinable properties thereof.

WITHIN the Isle Scyros there is a stone (by report) which so long as it is whole & found, will swim and flote vpon the water, breake the same into small pieces, it will sink. Near vnto Assos, a city in Troas, there is found in the quarries a certaine stone called Sarcophagus, which runneth in a dire & veine, and is apt to be clouen and so cut out of the rocke by flakes. The reason of that name is this, because that within the space of forty daies it is knowne for certaine to consume the bodies of the dead which are bestowed therein, skin, flesh, and bone, all saue the teeth. And *Mutianus* mine author affirmeth, that look what mirrors, * curryscombs, cloth, or shoes soeuer be cast into the said coffins with the dead, they will turn all into stone. Of this nature there be stones in Lycia, and in the East countries, which if they be hung or applied to liuing bodies also, will eat and fret them away. Yet the stone called Chernites, resembling E yuorie, is more mild and gentle: for keepe it will and preserve dead bodies without consuming them at all, & in a sepulchre or coffin of this stone, the body of *K. Darius* (they say) was bestowed. Touching the stone called Porus, like it is vnto the marble of Paros for white colour and hardness, howbeit nothing so weighty. *Theophrastus* writeth, That there be found in Ægypt certain cleare and transparent stones, and those he saith bee like vnto the Serpentine marble Opites: haply such there were in his time, for now are there none of them to be found; but as they are gone, so there be new come in their place. As for the stone Assius, in talk it is saltish, but singular good to allay the paine of the gout, if the feet only be put into a trough or hollow vessell made of that stone. Moreover, all griefes, pains, and infirmities of the legs, will be healed in such quarries: whereas in all metall mines, the legs take harm. Furthermore, this stone yeeldeth in the top of the quarrie a certain light substance, apt to be reduced into a soft powder, which they call the floure of the said stone, and is as effectual as the stone it selfe in some cases. Like it is for all the world to a red pumish stone. If it be mixt with Cyprian brasse or copper, it cures the accidents of womens breasts; but being incorporat with pitch or rosin, it discuseth the kings euill, and any biles or bitches. The same reduced into a lochoch to be licked downe leasurably, serueth well in a phthy.

* Scripse the
moneth those
that be used in
baines to fetch
off the scurf:
and fithness
of our bodies.

* as they in
Greece is yron.

M

phthysicke: and tempered with hony, it healeth vp old vlcers and skinneth them cleane: and yet this property it hath, to eat away any excrecence of proud flesh. The same is good for the bitings of wild and venomous beasts. Such morimals or sores as scorne ordinary cures & be full of suppuration, it drieth. Finally, there is an excellent cataplasme made with it and beane flour put together, for the gout.

CHAP. XVIII.

¶ Of Yvorie minerall, digged out of the ground. Of stones that are of atonic nature, and such, as their veins represent Date trees within: and of other kinds of stone.

Theophrastus and Matianus aboue named, are verily perswaded, That there be some stones which ingender others. And as for Theophrastus, he affirmeth, That there is a minerall Yvorie found within the ground, as well black as white: also, that there be bones growing within in the earth, yea, and stones of a bony substance. About Munda, a city in Spaine, where Caesar dictator defeated Pompey, there are found stones resembling Date trees, breake them as often as you will. There be also certaine black stones, whereof there is as great account made as of marbles: like as the stone also of the cape Tanara. And such black stones (Varro saith) be more firm and hard which come out of Africa, than those of Italy; and contrariwise, that there be white stones harder to be wrought by the Turner, than the marble of Paros: the said Varro affirmeth, that the flint of Luna may be slit with the saw, whereas that of Tusculum will cracke and flie in pieces in the fire; also, That the darke and dusky Sabine stone, if it be sprinkled with oil, will burne of a light fire: moreover, that about Volsinij there have been found quernes or hand mill-stones framed ready for worke, yea, and some we have seen to turne about and grind of their owne accord; but such haue bin taken for prodigies. And since I am fallen vpon the mention of such mill-stones, there is not a country in the world affordeth better of that kinde than Italy doth: neither do such grow in the rocks, and are hewed forth, but be entire stones of themselves apart: and yet in some provinces there are none of them to be had at all. And in this kind there be of a more free and softer grit, which being smoothed and polished with a slicke stone, may seem a far off as if they were Serpentine marble; and verily, there is not a stone w^{ch} I indure better, or lie longer in building. For thus you must thinke, that all stones bee not of one and the same nature to abide rain and weather, heat of Summer and cold in Winter alike; for some be more durable than others, like as we find in sundry kinds of timber. Finally, there be stones also, which may not away with the raies of the Moon: which in continuance of time wil gather rust, yea, and with oile will change their white colour.

CHAP. XIX.

¶ Of Curallium or Pyrites, i. the Marcasin: and the medicinable vertues thereof. Of the stone Ostracites, and the Amiant: together with the properties serving in Physicke: also of the stone Melittites, and the vertues thereof. Likewise of the Geat, and the effects that it worketh in Physick, of Spunges, Lastly of the Phrygian stone, and the Nature of it.

The mill-stone Curallium, some call Pyrites, because it seemeth to haue great store of fire in it: shewbeit, there is another fire stone going vnder the name of Pyrites or Marcasin, that resembleth brasse ore in the mine. And they say, that of it there is found great plenty in the Ile Cypros, and in those mines which are about Acarnania, where a man shal meet with one in colour like silver, and another like gold. These stones be calcined many & sundry waies: some boile them one or three times in hony, so long, vntill all the liquor be consumed: others burne them first in fire of coales, then they calcine them with honey, and afterwards wash them, after the manner of brasse. These stones thus prepared, are good in Physick, namely, to heat, to dry, to disperse, to subtiliate grosse humors, and to mollifie all schirrhosities or hard tumors. The same are much vsed also crude and uncalcined (being reduced into powder) for the kings euill, and fellons. Moreover, in the rank of these Marcasines, some range certaine stones, which we call quicke fire-

A fire-stones, and of all others they be most ponderous: these be most necessarie for the espials belonging vnto a camp, if they strike them either with an iron spike or another stone, they will cast forth sparks of fire, which lightning vpon matches dipt in brimstone, dry puffs or leaues, will cause them to catch fire sooner than a man can say the word.

As touching the stones Ostracites, they haue a resemblance to oyster shells, wherof they took their name: vied they are much in stead of a pumish stone to smooth and slick the skintaken in drink they stanch any flux of blood; and in forme of a liniment applied with hony, they heale the vlcers in womens breasts, and assuage their paine.

The * Amiant stone is like Alum, & being put into the fire, loseth nothing of the substance: a singular propertie it hath to resist all enchantments and sorceries, such especially as Magicians do practise. As for Gadoxes, the Greeks haue given it this significant name, because it containeth inclosed within the belly, a certaine earth, a medicine souveraigne for the eies, as also for the infirmities incident as well to womens paps, as mens genitoirs.

The stone Melittites hath that name, because if it be bruised or braied, it yeeldeth from it a certaine sweet iuice in manner of honey: the same being incorporat in wax, is good to cure the flegmatick wheales, and other pushes or specks of the body; it healeth likewise the exulceration of the throat: applied with wool, it takes away the chilblanes or angry bloudifalls called Epinyctides: also the griefe of the matrice it easeth in the same manner.

The Geat, which otherwise we call Gagares, carrieth the name of a towne and river both in Lycia, called Gages: it is said also, that the sea casteth it vp at a full tide or high water into the Island of Leucolia, where it is gathered within the space of twelue fadja, and no where els: black it is, plaine and euen, of an hollow substance in manner of a pumish stone, not much differing from the nature of wood, light, brittle, and if it be rubbed or bruised, of a strong fauor. Look what letters are imprinted in it into any vessell of earth, they will neuer be got out again: whiles it burneth it yeelds a smel of brimstone: but a wonderful thing it is of this jeat stone, that water will soone make it to flame, and oile will quench it againe: in burning, the perfume thereof chafeth away serpents, and recouers women lying in a trance by the suffocation or rising of the mother: the said smoke discovereth the falling sicknesse, and bewraieth whether a yong damself be a * maid or no: being boyled in wine, it helpeth the tooth-ache, and tempered with wax it cures the swelling glandules called the Kings euill. They say that Physicians vse this jeat stone much in their sorceries, practised by the means of red hot axes, which they call Axinomania: for they affirme, that being cast thereupon, it will burn and consume, if what we desire and wish shall happen accordingly.

As for Spunges, I mean by them in this place certain stones found in Spunges, and the same also do ingender naturally within them. Some there be who call them Tecolichos, because they are good for the bladder, in this respect, that they breake the stone, being drunk in wine.

As concerning the Phrygian stone, it beareth the name of the country where it is ordinarily found, and it groweth in hollow lumps in manner of a pumish stone: the order is to steep it well in wine before it be calcined, and in the burning to maintain the fire with blast of bellows, vntill it wax red; then to quench it again in red wine, continuing this course three times: & being thus prepared, it is good only to scour cloth, and make it ready for the Dier to take a colour.

CHAP. XX.

¶ Of the red blood-stone Hamatites, and the fire sort thereof: also of the blacke sanguine stone called Schistos.

The blood-stone Schistos and Hamatites both haue great affinitie one with another. As for the blood-stone Hamatites, a meere mineral it is, and found in mines of metall: being burnt it comes to the colour of Vermilion: the manner of calcining it is much after that of the Phrygian stone, but wine serueth not to quench it. Many sophistificate it with Schistos, and obtrude the one for the other: but the difference is soon known, for that the right Hamatites hath red veins in it, and besides is by nature fraile and easie to crumble: of wonderful operation it is to help blood-shotten eies: the same giuen to women to drink, staeth the immoderat flux that followes them: they also that vse to cast vp blood at the mouth, find helpe by drinking it with the iuice of a pomgranat: in the diseases likewise of the bladder it is very effectual;

third degree they place a kinde of Chalazius named Chrysites; but the Physicians make most account of that kinde of whetstone which they call Bafanites, because this stone sendeth nothing from it, for all the stamping and punning that is made in it. As for such stones as yeeld a certaine moisture from them, they are supposed to be good for cie talues; and therefore in that regard the Æthiopian marble is best esteemed for that purpose. As for the marble of Ternara, of Carthage called Poenicum, and the bloud-stone Homarites, they are al good (they say) for those compositions which stand vpon saffron: but that Tarnarian marble which is blacke, as also the white marble of Paros, is not so good for Physitians, who rather chuse the Alabastrite of Egypt, or the white Serpentine marble: for this kinde of Ophites it is whereof they make their vessels and barrels. In the Island Siphnus there groweth in the quarries, a stone, which they vse to hew hollow, and by Turners craft make vessels for the kitchen good to boile viands in a sovery hand. H
form for platters and dishes to serue vp meat to the table; much like to the green stone that cometh from Comus in Italy, which wee see ordinarily imploied to those vies: but this propertie hath the Siphnian stone by it selfe, that if it be once heat with oile, it beginneth to look blacke and waxes hard withal, being otherwise naturally exceeding soft: such difference there is among stones. For on the further sides of the Alps there be stones found exceeding soft: and in the province Belgica or Picardy, they haue a certaine white stone, which they slit through with a saw as they do timber, yea and with much more facility, wherewith they make plates that serue to couer their houses in manner of slates or tiles, both on the sides and also in gutter and ridge; yea and if they list, to make fine work vpon the roofs that may shine like to peacocks feathers, which they call Pauonacea: and verily this kinde of stone is apt also to be clouen. I

Sperularia lepis

As touching * Talc (which also goeth in the name of a stone) it is by nature much more easie to be clouen into as thin flakes as a man will. This kinde of glasse stone, the bither part of Spaine only in old time did afford vs, & the same not all throug hout, but within the compass of a 100 miles, namely about the city Segobriga: but in these daies we haue it from Cypros, Cappadocia, and Sicilie, and of late also it hath been found in Barbary, howbeit, the best glasse stone comes from Spaine and Cappadocia, for it is the tendrest and carrieth largest particles, although they be not altogether the clearest, but somewhat dusky. There be also of them in Italy about Bononia, but the same be short and small, full of spots also and joined to pieces of flint; and yet it seemeth that in nature they be much like to those that in Spaine be digged out of pits which they sinke to a great depth. Moreover, there is found of this Talc betwene other K stones inclosed in a rocke and lying vnder the ground, which must be hewed out if a man would haue them. But for the most part, this Talc lieth in manner of a vein in the mine by it selfe, as if it were perfectly cut already by nature; and yet was there neuer any piece knowne to be above five foot long. Some are of opinion, that it is a liquid humour of the earth congealed to an yce after the maner of Cryfall. Certes, that it groweth hard into the nature of a stone, may appeare evidently by this, That when any wild beasts are chanced to fall into such pits where this glasse stone is gotten, the very marrow of their bones (after one winter) will be conuerted and turned into a stony substance like to the Talc it selfe. Otherwhiles there is found of this kinde which is blacke; but the white is a strange and wonderful nature, for being (as it is well knowne) tender and brittle, nothing more, yet it will indure extreme heat and frozen cold, and neuer cracke; L
may you shal neuer see it decay for age, keep it so long as you will, so that it may escape outward injuries: notwithstanding we doe see many stones in building laied with strong mortar and cement, yet subiect to age. There hath beene deuised another vse also of Talc in smaller pieces, namely, to pae therewith the floore of the great shew-place or cirque in Rome, during the running of chariots and other feats of actiuitie there performed, to the end that their whitenesse might giue a more louely glosse to commend the place. In the daies of Nero late Emperour, there was found in Cappadocia a stone as hard as marble, white and transparent, and shining through, yea euen on that side where it hath certaine reddish streakes or spots: in which regard, (for that it is so resplendent) it hath found a name to be called Phengires. Of this stone, the said Emperor caused the temple of Fortune to be built called Seia (which king Seruus had first dedicated) comprised within the compass of Nereus golden house: and therefore when the doores stood open in the day time, a man might see within, the day light, after the manner of glasse stones, yet so, as if all the light were within-forth onely, and not let in from the aire through the windowes. Moreover, king Tubawiteth, that in Arabia there is a certaine stone found, which

A which likewise shineth as glasse, whereof the inhabitants of those parts do make their mirrors or looking-glasses.

It remaineth now, that I should proceed to those stones which are by workmen imploied to good and necessary vies: first of all, to those which serue to whet tools and instruments of yron, of which there be many sorts: Those of Candie, for a long time were of greatest name & most in request: in a second degree were those accounted which came from the mountainie Targetus in Laconia: but both the one and the other serue for no vse, without oile. But among the grind-stones and whetstones which are occupied with water, those of Naxos were in greatest price and most commended, next to them, those of Armenia, whereof I haue already written. The stones of Cilicia will do well enough either with water or oile, it skills not whether: but the whetstones, B that come from Arsinoe, are onely vied with water. There bee found in Italie whetstones, which with water will giue a wonderfull keene edge; also beyond the Alps, and (such they call Passernices. In a fourth rank are to be reckoned those stones which serue for a mans spittle, and such be the bones that Barbers occupie for to sharpen their rasors; but they are of little or no vse at all because they be so soft and brittle: and of this kind, the chiefe are sent out of the higher part of Spain from the country Flamminitana. As for other stones whereof I haue not written already, they be all naught for building, so soft they be, and by that means nothing durable; and yet in some countries they haue none other to build withall, as namely at Carthage in Africk, notwithstanding the wals of the houses there are subject to the waters of the sea, are pinched and pierced with winds, yea and beateh with rain and weather; against which inconueni- C
ences the inhabitants are forced to keep their wals with pitching, for otherwise (the stones are so tender and soft) the ordinary parget of lime would fret and eat them: wherupon there goeth a pretty speech of the Carthaginians, that they do contrary to all others, in that they vie pitch to their houses, and lime to their wines; for in truth they run vp their new wines with lime. There be found moreover about Rome other soft stones, to wit, in the territories belonging to Fidena and Alba: in Liguria likewise, Vmbria, and Venice, they haue a white free stone, which may be easily cut with a toothed saw: these are very tractable and easie to be wrought, and will last reasonable well, but within house only; for if the weather lie vpon them, if the rain beat, and the pinching frost come, they will pill and skale, yea and break into peeces; neither be they durable against the breath and vapor of the sea. The Tyburtine stones, they will indure all other things D
well enough, only they may not abide hot vapors, for if the heat of summer take them, they will gape and be ready to cleaue in sunder. As for flints, the black, and in some places the red also, are much commended: in certaine countries, the white be very good, as namely, those in the quarries about Anicia within the territory of Tarquinij about the lake neere vnto Volfinij: also along the tract of Statona, there be good building stones that will take no harm by fire; these are commonly used for those monuments and memorials wherein ought is to be ingraued, for they continue a long time, and are not the worse for age: Of this kind of stone, the founders make their moulds for to melt brasse in. Moreover, there is a kinde of Greene stone, which wonderfully cheeth and scorneth all fire; but in no place is there plenty thereof to be had: and wherefoeuer it is found, it groweth not in manner of a rock or quarrie, but lieth scattered here and there. Of the E
rest that hitherto are not named, the pale stone is not good for building, and seldom will it serue to make mortar. The round pebbles are lasting enough, and will indure any hardnesse, but surely in building nothing trusty, vnlesse they be knit and bound with strong mortar and couched well together. Those that are gathered out of riuers make no sure building, for they seeme alwaies to relent and be moist: but for such stones as these, and generally for all those that we doubt, the only remedy is to dig them out of the ground in Summer, to let them haue two yerres seasoning in lying abroad and taking all kinds of weather before they be employed in building; and look how much thereof hath caught harme by this means, the same will serue very well in ground works and foundations: and that which continueth still found, you may be bold to put it in building, yea, in open workes without dore. The Greekes haue a kinde of wall F
as we do in bricke wals: and this kinde of building they call in Maſonic Isodomon: but in case they be not euen laied nor ranged straight, but that some part of the wall is thicker than others, they terme it Pseudisodomon. A third manner they haue which they name Emplecton, namely, when the front onely of the wall is smooth and euen, for otherwise within they huddle & fill

The seven and thirtieth Booke

one with another. Moreover, to lay a wall artificially and to bind the stones wel, they ought in alternative course to ride and reach one ouer another halfe, so that the joint may fall out in the mids of a stone both above and vnder, a necessarie point to be considered in the very mids of a wall if it be possible: if not so, yet in any case toward the sides & ends thereof: as for the middle of the wall within, it would be well stuffed and filled with any rubbish, rammel, and broken stones. There is a kind of net-work building in Masonry called Diatryma, ordinarily vsed in Rome, but subject it is to cracke and chinke. In sum, a wall would be built by rule and square, by line and leuell, and answerable to the plumb.

CHAP. XXIII.

¶ Of Cisterns, and Lime: of sundry sorts of Sand: of the tempering of Sand and Lime together for mortar: of faults in Masonrie: of Pargetting and other Rough-casting: of the proportion of Columnes and Pillars.

For to make good cisterns which might hold water, the mortar that goeth thereto ought to be made of fine parts of fine pure sand and gravelly together, to two parts of the most strong and binding lime that may be gotten, provided alwaies that the fragments of flint which are to be employed herein, be small, and exceed not the weight of one pound a piece: this done, not only the bottome or paving, but the side-walls and the ends, ought to be rammed downe hard with yron beetles: howbeit, for to keep good and cleare water, it were the better way to haue alwaies two cisterns together, that in the former the water may settle and cast downe all the grounds to the bottome, and so the cleare water only passe into the other as if it were strained through a fine colander. As touching lime, *Cato Censorius* disalloweth that which is made of diuers stones, or of sundry colours: and to speake a truth, white stones are better to make lime than the hard, and such is more meet to lay stone withall in Masonrie; howbeit the lime which commeth of hollow and fistulous stones, is thought to serue better for to couer and parget walls. The lime which commeth of flint, is rejected both for the one and the other: also the lime made of stones digged out of the ground, is farre better than of pebbles gathered from riuier sides: that which commeth of millstones is most profitable, for it is more fatty and glutinuous than others. A strange and wonderfull matter it is, that any thing after it hath bin once burnt and calcined, should be set on fire againe with water. And thus much of Lime.

As touching Sand, there be three kinds thereof: the one is digged out of pits in the ground, and this requireth a fourth-part of lime to be put vnto it in making mortar: a second commeth out of riuier sides or the sea shore, and this would haue a third part: and if there be besides another third part of potsherds beaten to powder and put thereto, the stuffe or mortar will be the better. Between the Apennine hill and the riuer Po, there is no sand digged out of the ground, ne yet any sea sand at all. And verily, the greatest reason that cities fall to decay and be so ruinat, is this, for that the mortar being robbed of the due proportion of lime, hath not that binding as it ought, and so the walls built therewith are not sodered accordingly. Also, this would be obserued, that mortar the elder that it is, the better it is found for building. Moreover, in the old laws which provide for the perpetuities of houses in ancient time, we find it expressly set down, that the vnder-taker to build a house at a certain price, shall vse no mortar vnder three yerres of age: and this was the reason that in those daies a man should not see any rough-cast or parget to rise or chawne illfaouredly as now they do: and in truth, vnlesse there be laid vpon wals three coats or chawnes (as it were) of mortar made with sand and lime, and two courses ouer them of other mortar made of marble grit and lime tempered together, the wals will not be permanent nor otherwise faire and resplendent as they ought to be: and look where wals be dampish and giuen to sweat a certaine salt humor or sal-petre, it were very well to lay a ground vnderneath of mortar made of the powder of potsherds and lime wrought together. In Grece they haue a cast by themselves, to temper and beat in mortars, the mortar made of lime and sand wherewith they meane to parget and couer their walls, with a great wooden pestill. As for the mortar made of marble-grit and lime together, the true marke to know whether it haue making sufficient for building, is this, namely, if it will not stick to the shouell that worketh it, but will come out of the heape neat and cleane; but contrariwise, in whitening and fret work, the lime being foked and the wet in water, ought to cleaue fast like glew, neither ought it to be tempered with water, but in the

A grosse masse or lumpe. At Elis there standeth a temple consecrated to the honour of *Minerva*, wherein *Pannus*, the brother of *Phidias*, vsed a parget (as they say) which he tempered with milk and saffron together; and therefore at this day, if a man wet his thumb with spittle, and rub it against the wall, he shall perceiue both the smell and tast of saffron to remaine still.

As touching pillars in any building, the thicker they stand one to another, the bigger & greater they seeme to be. Our architects and masons make foure sorts of them: for they say, that such pillars as beare in compass or thicknesse toward the foot, as much as commeth to the sixth part of the height, be called Dorique: those that carry but a ninth part, are Ionique: such as haue a seventh part, be Tuscanique. And as for the Corinthian pillars, their proportion is answerable to the Ionique; onely this is the difference, that the Chapters of the Corinthian pillars arise in height to as much as the compass at the base taketh vp: in which regard they seeme more slender than others. As for the height of the Ionick chapter, it is just the third part of the thickness. The proportion ordinarily in old time for the height of pillars, was answerable to the third part of the breadth of the temple. In the temple of *Diana* at Ephesus, the inuention was first practised to pitch the footfall of pillars vpon a quadrant or square below, and to set chapters vpon their heads. And as touching the proportion, it was thought sufficient in the beginning, if a colunne contained in compass or thicknesse the eight part of the height; also, that the square of the quadrant vnder the base, should containe halfe the thicknesse of the pillar: finally, that the pillars should be smaller by one seventh part in the head, than at the foot. Ouer and besides these pillars, there be others also of the Atticke fashion, and those be made with foure corners, and the sides are equall.

CHAP. XXIII.

¶ The medicinable properties of Lime, Also, as touching the Maltha vsed in old time, and of Plastre.

Much vse there is of Lime also euen in Physick: but then there must be chosen that which is quick and vnquint. Such lime is caustick, diffusiu, and extractiue: the same also is proper to repress corrosiue vlcers that begin to spread and run far. If the said lime bee tempered with vineger and oile of roses, it maketh an excellent healing plastre, which will skin vp a sore cleane. The same if it be incorporat with swines grease or liquid rosin and hony together, serues also to set bones in ioint: & the same composition is likewise good for the kings euil. Concerning Maltha, it was wont to be made of quick and new lime: for they took the Lime-stone and quenched it in wine, which done, presently they punned it with swines grease and figs, hereof they made ordinarily two couches: and being thus tempered and laid, it was thought to be the fastest whitening that could be deuised, and in hardnesse to exceed a stone. But looke whatsoeuer is to be pargetted with this Maltha or mortar thus prepared, ought first to be rubbed thoroughly with a size of oile.

Of neare affinity to lime is plastre, whereof be many kinds: for there is a kind of plastre artificiall, and namely in Syria and about *Thurium*, made of stone calcined in manner of lime: and there is of it that is digged out of the ground naturally, as namely, in the Isle Cyprus, and about the *Perrhæbians*. Neare *Thymphaea*, a city in *Ætolia*, it lieth very ebbe and as it were euen with the ground: as for the stone that is to be burnt for it, the same ought to be not vnlike to the stone *Alabastrites*, or at leastwise to that which stands much vpon marble. In Syria they chuse for this purpose the hardest, and they burne the same with cow dung, that it may the sooner be calcined. But the best plastre of all other is known (by experience) to be made of the Talc or the glasse stone aforesaid, or at leastwise of such as haue the like flakes as Talc. Plastre must be wrought and driuen presently whiles it is wet and will run, for nothing in the world will so soon thicken and dry: and yet when it hath bin vsed already, it may be beaten againe to powder, & serue the turn in new works. Plastre serueth passing wel to white wals or seeling, also for to make little images in fretwork, to set forth houses, yea, and the brows of pillars and wals, to cast off rain. To conclude, I may not forget that which befall to *C. Proculus*, a great fauorite and follower of *Augustus Cæsar*, who in an extreame fit of the paine of the stomacke, dranke plastre, and so killed himselfe wilfully.

CHAP.

CHAP. . XXV.

¶ *Sundry kindes of paved floores : and when at first they began to be used at Rome. Of open terraces paved. Of Greekeish pavements. And the first invention of arched or embowed roofes.*

THe deuise of paved floores arose first from the Greeks, who made them with great art, and curiously, in regard of the painting in sundry colours which they bestowed thereupon : but these braue painted floores were put downe, when pavements made of stone and quarrels came in place : the most famous workman in this kind, was one *Sofus*, who at Pergamus wrought that rich pavement in the common hall, which they call *Alaroton* eceon, garnished with bricks or small tiles enaled with sundry colours : and he deuised, that the worke vpon this pavement should resemble the crums and scraps that fel from the table, and such like stufte as commonly is swept away, as if they were left still by negligence vpon the pavement. Among the rest, wonderfull was his handiwork there, in pourtraying a Doue drinking, which was so liuely expressed, as if the shadow of her head had dimmed the brightnesse of the water : there should a man haue seen other Pigeons sitting vpon the brim of the water tankard, pruning themselves with their bills, and disporting in the Sunshine. The old paved floores, which now also are much vsed especially vnder roofe and couert, how soeuer they came from barbarous countries, were in Italy first patted and beaten downe with heauie rammers ; as we may collect by the verie name it selfe. Pavement, which comes of Pavire, to ram downe hard. As for the manner of paving with small tiles or quarrels ingrauen, the first that euer was seen at Rome, was made within the temple of *Iupiter Capitolinum*, and not before the third Punicke war began. But ere the Cimbrian wars began, such pavements were much taken vp in Rome, and men tooke great delight and pleasure therein, as may appeare sufficiently by that common verse out of *Lucilius* the Poet.

Ance Pavimenta a sa emblemata vemiculata, &c.

Before the Pavements checker-wrought in painted Marquetry, &c.

As touching open galleries and terraces, they were deuised by the Greeks, who were wont to couer their houses with such. And in truth, where the country is warme, such deuises doe well : howbeit, they are dangerous and deceitfull, where there is store of rain and frost. But for to make a terrace so paved, necessary it is first to lay two courses of boards or planks vnderneath, and those crosse and ouerthwart one the other : the ends of which planks or boards ought to be nailed, to the end they should not twine or cast asidewhich done, take of new rubbish two third parts, and put thereto one third part of sharps stamped to powder, then with other old rubbish mix two five parts of lime, and herewith lay a couche of a foot thicknesse, and be sure to ram it hard together. Ouer which there must be laid a coator course of mortar, six fingers breadth thick, and vpon this middle, couche broad square paving tiles or quarrels, and the same ought to enter at least two fingers deep into the said bed of mortar. Now for that this floore or pavement must rise higher in the top, this proportion is to be obserued, that in euery ten foot it gain an inch and a halfe. After which, the pavement thus laid is to be plained and polished diligently with some hard stone : and aboueall, regard would be had, that the planks or boarded floor were made of oke. As for such as do cast or twine any way, they be thought naught. Moreover, it were better to lay a course of flint or chaffe between it and the lime, to the end, that the said lime might not haue so much force to hurt the board vnderneath. Requisite also it were to put vnderneath round pebbles among. After the like manner be the spiked pavements made of flat tiles & sharps. And here I must not forget one kind of paving more, which is called *Grecanicke*, the manner whereof is thus. The Greeks after they haue well rammed a floore which they mean to pave, lay thereupon a pavement of rubbish, or else broken tile shards, and then vpon it, a couche of charcoale well beaten and driven close together, with sand, lime, and small cindres well mixed together : which done, they do lay their paving stufte to the thicknesse of halfe a foot, but so euery, as the rule and square will giue it, and this is thought to be a true earthen paved floore of the best making. But if the same be smoothed also with a hard sicke stone, the whole pavement will seem all blackas for those pavements called *Lithostrata*, which be made of diuers coloured squares couched in

workes,

A works, the inuention began by *Syllas* time, who vsed thereto small quarrels or tiles at Preneeste within the temple of *Fortune*, which pavement remains to be seen at this day. But in proceesse of time pavements were driuen out of ground-floores, and passed vp into chambers, and those were seeled ouer head with glasse : which also is but a new inuention of late deuised : for *Agrippa* verily in those baines which he caused to be made at Rome, annealed all the potterie worke that there was, and enamelled the same with diuers colours : whereas all others be adorned only with whitening : & no doubt he would neuer haue forgotten to haue arched them ouer with glasse if the inuention had bin practised before, or if from the wals & partitions of glasse which *Scavrus* made vpon his stage, as I said before, any one had proceeded also to rooffe chambers therewith. But since I am fallen vpon the mention of glasse, it shall not be impertinent to discourse somewhat of the nature thereof.

CHAP. XXVI.

¶ *The first inuention of glasse, and the manner of making it. Of a kind of Glasse, called Obsidianum. Also of sundry kindes of Glasse, and those of many formes.*

THere is one part of Syria called *Phoenice*, bordering vpon Iurie, which at the foot of the mount *Carmell*, hath a meere named *Cendeuia*, out of which the riuier *Belus* is thought to spring, and within five miles space, falleth into the sea, near vnto the colony *Ptolemais* : This riuier runneth but slowly, and seemeth a dead or dormant water, vnyhole some for drinke, howbeit, vsed in many sacred ceremonies with great deuotion ; full of mud it is, and the same very deepe ere a man shall meet with the firm ground : and vntill it be at some spring tide, when the sea floweth vp high into the riuier, it neuer sheweth sand in the bottom ; but then, by occasion of the surging waues, which not only lift the water, but also cast vp & scoure away the grosse mud, the sand is rolled too and fro, and being cast vp, sheweth very bright and cleare, as if it were purified by the waues of the sea : and in truth, men hold opinion, That by the mordacity and astringent quality of the salt water, the sands become good, which before serued to no purpose. The coast along this riuier which sheweth this kind of sand, is not aboue halfe a mile in all, and yet for many a hundred yeare it hath furnished all places with matter sufficient to make glasse.

D As touching which deuise, the common voice and fame runneth, that there arriued sometimes certain merchants in a ship laden with nitre, in the mouth of this riuier, & being landed, minded to seeth their viuals vpon the shore and the very sands : but for that they wanted other stones, to serue as treuets to beare vp their pans and cauldrons ouer the fire they made shift with certaine pieces of salt-nitre out of the ship, to support the said pans, and so made fire vnderneath : which being once afire among the sand and grauell of the shore, they might perceiue a certaine cleare liquor run from vnder the fire in very streams, and hereupon they say came the first inuention of making glasse. But afterwards (as mans wit is very inuentiue) men were not content to mix nitre with this sand, but began to put the Load-stone among, for that it is thought naturally to draw the liquor of glasse vnto it, as well as yron. Then they fell to calcine and burne in many other places shining grauell stones, shells of fishes, yea, and sand digged out of the ground, for to make glasse therewith. Moreover, diuers authors there be who affirme, That the Indians vse to make glasse of the broken pieces of Cry stall, and therefore no glasse comparable to that of India. Now the matter whereof glasse is made, must be boiled or burnt with a fire of dry wood, and the same burning light and cleare without smoke, and there would be put thereto brasse of Cyprus, and nitre, especially that which cometh from *Ophyr*. The furnace must be kept with fire continually, after the manner as they vse in melting the ore of brasse. Now the first burning yeeldeth certaine lumps of a fatty substance, and blackish of colour. This matter is to be kept in and penetrant whiles it is hot, that if it touch or breath vpon any part of the body, it will pierce and cut to the very bone ere one be aware or do feele it. These masses or lumps be put into the fire againe, and melted a second time in the glasse houses, where the colour is giuen that they shall haue : and then some of it with blast of the mouth, is fashioned to what form or shape the workman will : other parcells polished with the Turners instrument, and some againe engrauen, chafed, and embossed in manner of siluer plates : in all which feats, the Sidonians in times past were famous artificers : for at Sidon were deuised also mirrors or looking glasses. Thus much as touching

ching the antique manner of making glasse. But now adaies there is a glasse made in Italy of a certain white sand, found in the riuer Vulturius for six miles space along the shore towns, from the mouth where he dischargeth himselfe into the sea, and this is between Cumes and the lake Lucrinus. This sand is passing soft and tender, whereby it may be reduced very easily into fine powder, either to be beaten in mortar or ground in mill: to which powder the manner is to put three parts of nitre, either in weight or measure, and after it is the first time melted, they vie to let it passe into other furnaces, where it is reduced into a certain masse, which, because it is compounded of sand and nitre, they call Ammonitrum: this must be melted againe, and then it becomes pure glasse, and the very matter indeed of the white clear glasses: & in this sort throughout France and Spain the manner is to temper their sand, & to prepare it for the making of glasse. Moreover, it is said, That during the reigne of *Tiberius* the Emperour, there was deuised a certain temper of glasse, which made it pliable and flexible to wind and turne without breaking: but the * artificer who deuised this, was put downe, and his work bouie, for feare lest vessels made of such glasse should take away the credit from the rich plate of brasle, siluer, and gold, and make them of no price: and verily, this bruit hath run currant a long time (but how true, it is not so certain.) But what booteth the abolishing of glasse-makers, seeing that in the daies of the Emperour *Nero* the art was growne to such perfection, that two drinking cups of glasse (and those not big, which they called *Pterotos*) were sold for 6000 sesterces.

There may be ranged among the kinds of glasses, those which they call Obsidiania, for that they carry some resemblance of that stone, which one *Obsidius* found in *Aethyopia*: exceeding blacke in colour, otherwhiles also transparent: howbeit, the sight therein is but thicke and dusky. It serueth for a mirror to stand in a wall, and instead of the image yeeldeth back shadows. Of this kind of glasse many haue made jewels in manner of precious stones: and my selfe haue seene manye pourtraitures made thereof, resembling *Augustus* late Emperour of famous memory, who was wont to take pleasure in the thicknes of this stone, inasmuch as he dedicated in the temple of *Concord* for a strange and miraculous matter, foure Elephants made of this Obsidian stone. Also *Tiberius Caesar* sent back againe to the citizens of *Heliopolis*, a certain image of prince *Menelaus*, found among the moueable goods of one who had bin lord gouernor in *Aegypt*, which he had taken away out of a temple, among other ceremoniall reliques: and the said statue was all of the laier, called Obsidianus. And by this it may appeare, That this matter began long time before to be in vse, which now seemeth to be renewed againe and counterfeited by glasse that resembleth it so neare. As for the said Obsidian stone, *Plinius* writeth, That it is found naturally growing among the Indians, within *Sammium* also in Italy, and in Spaine along the coast of the Ocean. Moreover, there is a kind of Obsidian glasse, with a tincture artificiall, as blacke as laier, which serueth for dishes and platters to hold meate like as other glasse, red throughout, and not transparent, called for that colour *Hæmatinum*. By art likewise there be vessels of glasse made white and of the colour of Cassidony, resembling also the Iacinth and Saphire, yea, & any other colors whatsoeuer. In sum, there is not any matter at this day more tractable and willing either to receive any forme or take a color, than glasse: but of all glasses, those be most in request and commended aboue the rest, which be white, transparent and cleare throughout, comming as neare as it is possible to Crystall. And verily, such pleasure do men take now adaies in drinking out of faire glasses, that they haue in manner put downe our cups and boules of siluer or gold: but this I must tell you, that this ware may not abide the heat of the fire, vnlesse some cold liquor were put therein before: and indeed, hold a round bal or hollow apple of glasse full of water against the Sun, it will be so hot, that it is ready to burne any cloth that it toucheth. As for broken glasses, well may they be glued and sodered againe by a warme heat of the fire, but melted or cast againe they cannot be whole, vnlesse a man make a new furnace of pieces broken one from another: like as we see there be made counting rundles thereof, which some call *Abaculos*, whereof some are of diuers and sundry colors. Moreover, this would be noted, That if glasse and sulphur be melted together, they will soulder and vnite into a hard stone. To conclude, hauing thus discoursed of all things that are knowne to be done by wit or art, according to the direction of Nature, I cannot chuse but maruell at fire and the operations thereof, seeing that nothing in a manner is brought to perfection but by fire; and thereby any thing may be done.

CHAP.

A

CHAP. XXVII.

The wonderfull operations of fire: the medicinable properties that it hath; and the prodigious significations observed thereby.

Fire receiueth sundry sorts of sand & earth, out of which it doth extra& and melt one while glasse, another while siluer, in this place vermilion, in that diuers sorts of lead and tin, sometime Painters colours, and another while matters medicinable. By fire, stones are resolued into brasle; by fire iron is made, and the same is tamed likewise therewith: fire burneth and calcineth stone, whereof is made that mortar which bindeth all worke in masonry. As for some things, the more they be burnt, the better they are, and of one and the same matter a man shall see one substance ingendred in the first fire, another in the second, and another also in the third. As for the coles that go to these fires, when they be quenched they begin to haue their strength and after they are thought extinct and dead they are of greatest vertue. This element of Fire is infinit, and neuer ceaseth working, inasmuch as it is hard to say whether it consume more than it ingendreth. The very fire also is of great effect in physick; for this is known for certain by experience, there is not a better thing in the world against the pestilence (occasioned by the darkness of the Sun, and the want of cleare light from him) than to make fires and perfumes in diuers sorts, either to clarify or to correct the aire, according as *Empedocles* and *Hippocrates* haue testified in diuers places. *M. Varro* writeth, that fire is good for convulsions, cramps, and contusions of the inward parts: and for this purpose I will alledge the very words he vseth: the Latine word *Lix* (quoth he) is nothing else but the ashes of the hearth; and hereupon comes *Lixivum cinis*. Lie ashes, which being drunk is medicinable; as we may see by fences and sword-plaies, who after they haue done their flourishing, and be ready to enter into fight at sharpe, refresh themselves with this potion. Furthermore it is said, That a cole of oke wood being reduced into ashes and incorporat with hony, cureth the carbuncle, which is a pestilent disease, whereof two noblemen at Rome, both Consuls in their time, died of late, according as I haue shewed already. See the wonderfull power in nature, that things despised and of no account, as ashes and coles, should afford remedies for the health of man! But before I make an end of fire, and the hearth where it burneth, I will not passe one admirable example commended vnto vs by the Roman Chronicles: in which we read, That during the reign of *Tarquinius Priscus* king of Rome, there appeared all on the sudden vpon the hearth where hee kept fire, out of the very ashes, the genital member of a man, by vertue whereof a wench belonging vnto *Tanaquil* the queen, as the fate before the said fire, conceived and arose from the fire with childe; and of this conception came *Servius Tullius* who succeeded *Tarquin* in the kingdome. And afterwards, while hee was a young childe, and lay asleep within the court, his head was seen on a light fire, whereupon he was taken to be the son of the domestical spirits of the chimney. Which was the reason, that when he was come to the crown, he first instituted the Compitalia, and the solemne games in honour of such house-gods or familiar spirits.



THE



THE XXXVII. BOOKE OF
THE HISTORIE OF NATVRE,
WRITTEN BY C. PLINIVS
SECVNDVS.

The Proem.



At the end that nothing might be wanting to this historie of mine concerning Natures works, there remaine behind nothing but precious stones, wherein appeareth her Majesty, brought into a narrow and streight roome: and to say a truth, in no part of the world is she more wonderfull, in many respects: whether you regard their varietie, colours, matter, or beauty, which are so rich and precious, that many make conscience to seale with them, thinking it unlawfull to engrave any print in them, or to diminish their honour and estimating on by that means. Some of them are reckoned ineffimable, or valued at all the goods of the world besides, in so much, as many men thinke some one precious stone or gem sufficient to behold therein the very perfection of Nature, and her absolute worke. Touching the first invention of wearing such stones in jewels, and how it tooke first root, and grew afterwards to that height as all the world is in admiration thereof, I have already shewed in some sort in my treatise of Gold and Rings. And yet I will not conceale from you that which poets do fable of this matter, who would beare us in hand, that all began at the rocke Caucasus, whereunto Prometheus was bound fast, who was the first that got a little fragment of this rocke within a peece of iron, which being done about his finger, was the ring, and the foresaid stone the gemme: whereof the Poets make much foolish moralization.

CHAP. I.

Of the rich precious stones of Polyocrates the Tyrant, and King Pyrrhus. The first Lapidaries or Cutters in precious stones. And who was the first that had a case of rings and gems at Rome.



Prometheus having given this precedent, brought other stones into great price and credit, in so much as men were mightily enamoured upon them: and Polyocrates of Samos, the puissant prince and mighty monarch over all the Islands and coasts thereof, in the height of his felicitie and happy estate, which himselfe confessed to be excessive, being troubled in his mind, that he had tasted of no misfortune, and willing after a sort to play at Fortunes game, one while to win, and another while to lose, and in some measure to satisfy her inconstancie, was perswaded in his minde that he should content her sufficiently in the voluntarie losse of one gem that he had, and which he set so great store by: thinking verily, that this one hearts griefe for parting from so precious a jewel, was sufficient to excuse and redeeme him from the spitefull enuy of that mutable goddess. Seeing therefore the world to come upon him still, and no foure sorrowes intermingled with his sweet delights, in a weariness of his continual blessednesse, he imarked himselfe and failed into the deep, where wilfully he flung into the sea a ring from his finger, together with the said stone to precious, set therein. But see what ensued! A mighty fish euen made as a man would say for the king,

A king, chanced to swallow it down as if it had bin some bait, which being afterwards caught by fishers, & thought to be of an extraordinary biggnes, was brought as a present into the kings palace, and so sent into the kitchen, where the cook found within the belly thereof the foresaid ring of his lords & masters. Oh the subtiltie of the Fortune, who all this while twisted the cord that another day should hang Polyocrates! This stone (as it is well known) was a Sardonyx: & it we may beleieve it, the very same it is, which at Rome is shewed in the temple of Concord, where Augustus the Emperresse dedicated it as an oblation, enshafed within a golden horse, and verily if it be the same, one of the least Sardonyches it is among many other there which be preferred before it.

Next to this stone of Polyocrates, there goeth a royall name of the gem which Pyrrhus K. of Albanie had, him I mean, who warred against the Romans: for (by report) an Agath he had, wherein a man might see the nine Muses, and Apollo with his harpe, liuely represented, not by art and mans hand, but euen naturally imprinted: for the veins and streaks of the stone were so disposed, that a man might distinguish euery one of the Muses afunder, & ech one distinguished by their featural marks and ornaments. Setting aside these two gems above-named, we do not read in authors of any great reckoning made of such jewels; vntil we see speake of one Ismenias a famous minstrell, who had the name to weare many of them ordinarily about him, and those very gay, and glittering: and surely his vanity that way was such, that there goeth a notable tale of him; for meeting vpon a time in a merchants hand with an Emeraude in the Island Cyprus, wherein ladiet Amymon was engrauen, and whereof the price was at first held at six deniers in gold, he made no more ado but cauled the mony to be paid presently: but the merchant being a man of some conscience, and thinking indeed the price to high, gaue two of them back again vnto Ismenias: whereat being ill apaid, I beshrew you, (qd. he) for this bating of the mony hath much empaired the worth of the stone. This Ismenias (as it is thought) was the first who brought vpon the order that all such musicians and minstrels as himselfe should be known by their gems, and esteemed skilfull in that art according as they were set out therewith more or lesse. And in very truth, Diomedorus a great minstrell, who liued in those daies with him, vsed likewise to be in his change and variety of pretious stones, because he would not seeme any way to come behind Ismenias. There was a third also as vaine as the best, a musician in that age named Nicomachus, who loved to haue a number of gems about him, but no iudgement hee had in the world to chuse them. These examples which offer themselves by fortune to me in the beginning of this my booke, may serue to pull downe their plumes who stand so much vpon the vaine ostentation of these stones, when they shal see how all the pride they take herein, smelleth out of the vain humor of some odd minstrels. But to return againe to Polyocrates his gem, at this day it is to be seen within the temple of Concord, whole & sound. And not only in the time of Ismenias, but also many yeres after, it should seem that Emeraundes were wont to be cut and engrauen. This opinion also may be confirmed by the ad & edit of K. Alexander the Great, which forbade expressly, That no man should be so hardy as to engrave his image in pretious stone, but Pyrgoteles, who (no doubt) was simply the best in that art. After him, Apollonides and Cronius were of great fame: & principally one Diocorides, who counterfeited in stone the liuely forme of Augustus Caesar, the which serued the Emperors his successors as a signet to seale withall. Sylla Dictator was wont alwaies to signe with a seale representing K. Jugurtha, tied & bound as he was yielded to him. We read in Chronicles also, that a certaine Spaniard of Intercatia, whose father Scipio Emilianus slew in single fight, vsed afterwards no other seale but that which represented this combat: whereupon grew this merry conceit of Stilo Praconinus, who asked, What this Spaniard would haue done if his father had killed Scipio? Augustus late Emperour of worthy memory, vsed at the beginning to seale with the image Sphinx vpon his signet: and verily in the casket of his mothers jewels, two of these he found so like one to the other, that one could not be known and discerned from the other: & as he was wont to weare one of them about him wherfoeuer he went, so in his absence (during the ciuile wars which he leued against M. Antonius) his friends who managed his affairs at Rome, signed with the other Sphinx, all those letters & editis which passed in his name, for the performance of some demands which those times did require. And from hence it came, that those who receiued any such letters or editis, containing some matter of difficulty, were wont pleasantly and merrily to say, That the said Sphinx came euer with some hard riddle or other that could not be expounded. Moreover, the frog, wherewith Mucenas vsed to seale, was alwaies terrible to those who receiued any letters signed therewith; for euermore they were sure

but most within the kingdom of Parthia: howbeit, the principall come from out of Carmania. G
The stone whereof the vessels be made, is thought to be a certaine humour thickened and baked as it were within the ground by the naturall heat thereof. In no place shall a man meet with any of these stones larger than small tablements of pillars or counting-boards; and seldome are they so thicke as to serue for such a drinking cup as I haue spoken of already: resplendant they are in some sort, but that brightnesse is not peareling, and to say a truth, it may be called rather a polishing glosse or lustre, than a radiant and transparent clearenesse: but that which maketh them so much esteemed, is the variety of colours; for in these stones a man shall perceiue certaine vains or spots, which as they be turned about resemble diuers colours enclining partly to purple and partly to white: he shall see them also of a third colour composed of them both, resembling the flame of fire: Thus they passe from one to another as a man holdeth them; in so much as their * purple seemeth to stand much vpon white, and * their milkie white to beare as much vpon the purple. Some esteemed those Cassidoine or Murrhene stones richest, which represent as it were certain reuerberations of sundry colours meeting all together about their edges and extremities, such as we obserue in rainbows: others are delighted with certaine fattie spots appearing in them; and no account is made of them which shew either pale or transparent in any part of them, for these be reckoned great faults and blemishes. In like manner if there be scene in the Cassidoine any spots like corns or graines of salt: if it containe resemblances of werts, although they beare not vp but lie flat as they doe many times in our bodies: finally, the Cassidoine stones are commended in some sort also for the smell that they do yeeld.

As touching Cryfall, it proceedeth of a contrary cause, namely of cold; for a liquor it is congealed by extreame frost in manner of yce, and for the prooofe hereof, you shall find cryfall in no place els but where the winter snow is frozen hard: so as we may boldly say, it is very yce and nothing els, whereupon the Greeks haue giuen it the right name Cryfallos, i. Yce. We haue this cryfall likewise out of the East-parts, but there is none better than that which India sends to vs. Ingendred it is also in Asia, and namely about Alabanda, Ortosia, and the mountains adioyning, but in request it is not no more than that which is found in Cyprus: howbeit, there is excellent cryfall within Europe, and namely vpon the crests of the Alps. King *Tuba* writeth, that in a certaine Island lying beyond the red sea ouer-against Arabia, named * Neron, there growes cryfall: as also in another thereby, which yeeldeth the * Topase precious stone; where, *Pythagoras* (lieutenant or gouernour vnder king *Ptolome*) digged forth a piece which carried a cubit K
in length. *Cornelius* * *Boechus* affirmeth, that in Portugall vpon certaine exceeding high mountains, where they sinke pits for the leuell of the water, there be found great cryfall quarters or masses of a wonderfull weight. But marvellous is that which *Xenocrates* the Ephesian reporteth, namely, that in Asia and Cyprus there be pieces of cryfall turned vp with the very plough, so ebb it lieth within the ground, an incredible thing, considering that before-time no man beleeueth that euer it could be found in any place standing vpon an earthly substance, but only among clifffes and craggs. It foundeth yet more like a truth, which the same *Xenocrates* writeth, namely, that oftentimes it is carried down the streame running from the mountains. As for *Suidas*, hee faith confidently, that cryfall is not engendred but in places exposed onely to the South: and verily this is most true, for you shall neuer meet with it in waterish countries lying L
Northerly, be the climat neuer so cold, no though the riuers be frozen to an yce euen to the very bottome. Wee must conclude therefore of necessity, that certaine coelestiall humours, to wit, of raine and some small snow together, do concur to the making of cryfall: and hereupon it comes, that impatient it is of heat, and vnlesse it be for to drinke water or other liquor a quality cold, it is altogether reiected: but strange it is, that it should grow as it doth, fix angled: neither is it an easie matter to assigne a found reason thereof, the rather for that the points be not all of one fashion, and the sides betweene each corner are so absolute euen and smooth, as no lapidarie in the world with all his skill can polish any stone so plain. The greatest & most weightie piece of cryfall that euer I could see, was that which *Livia Augusta* the Emperesse dedicated in the Capitoll, which weighed about fiftie pounds. *Xenocrates* mine author aboue-named, M
affirmeth, that there was scene a vessell of cryfall as much as an Amphore: and some besides him doe say, that there haue bene brought out of India, cryfall glasses containing foure sextars a piece. Thus much I dare my selfe auousch, that cryfall groweth within certaine rockes vpon the Alps, and those so sleep and inaccessible, that for the most part they are constrained to hang

A by ropes that shall get it forth. They that be skilfull and well experienced therein, go by diuers markes and signes which direct them to places where there is cryfall, and where also they can discern good from bad; for this you must think, there be many imperfections and faults therein; as namely, when it is rough or rugged in hand, rustie like yron, cloudie and full of speckes; otherwhiles there is a secret hidden fistulous vicer as it were withinthere lieth also in it a certain hard knurre, which is brittle and apt to breake into small crumbs, besides the corn or grain therein called Sal. Some pieces of cryfall you shall haue which carry a certain red rust: others be full of hairy strakes, a man would imagine they were so man rists; but cunning artificers can hide this last imperfection when they cut and engrau the piece that hath it: for in truth, if a cryfall be pure and cleare of it selfe, much fairer it is plain, than so wrought and engraued; and such cryfalls the Greeks call Acenteta; but aboue all, when they look not like the froth of clear water: last of all, this is to be considered, that the heauier cryfall is in proportion, the better account there is made of it. Moreover, I read of certaine Physitians who are of opinion, that there is not a better and more wholesome cautery for any part of the body that requireth cauterising or burning, than a ball or pomander of cryfall held opposit between the member and the Sun beams. But will you heare of another notorious example of folly and madnesse in the cryfalls as well as in Cassidoins? There are not many yeres since a dame of Rome, and shee none of the richest, who bought one boll or drinking cup of cryfall, and paid 150000 sesterces for it. As for *Nero* the Emperour (of whom I spake erewhile) when vnhappy news was brought vnto him of a great ouerthrow and a field lost to the danger of his owne state and the common wealth, in C
the height of his rage and a most furious fit of anger, caught vp two cryfall drinking cups and past them all to pieces: his spight was belike at all the men liuing in that age, & better means he could not deuise to plague and punish them, than to preuent that no man else should drinke out of those glasses: and in very truth, a cryfall being once broken, cannot by any deuise whatsoever be reunited and made whole againe as before. We haue at this day cups and vessels of glasse that come passing neere vnto cryfall: but wonderfull it is, that notwithstanding our glasses be so like, yet they haue not abated and brought downe the price of cryfall, but rather caused it to be far dearer.

In the next degree to cryfall wee are to place Amber, a thing that hitherto I heare women only fet daintie store by, and adorne themselves withall: strange it is, that l' Amber, Cassidoine, and Cryfall, should thus be in equall request with fine pretious stones, marie for Cassidoine and Cryfall, in some respects verily they may seeme to deserue a higher rounge, and namely, in regard that both of them are so appropriat for to drinke water or cold liquor out of such cups: but as for Amber, our delicats and wantons haue not yet deuised any probable reason why there should be such a reckoning made of it: but surely it is the folly and vain curiosity of the Greeks that hath giuen occasion thereof, and brought it into so great a name. And here I must beseech the readers to beare with me in this my discourse as touching the first originall of Ambers; for I thinke it not impertinent to deliuer what marueiles and wonders the Greeks haue broached as touching this thing, that the age and posterity ensuing may yet be acquainted with their fabulities: first and foremost therefore, many of their Poets, yea, and as I suppose, the chiefe and principall of them, to wit, *Aeschylus*, *Philoxenus*, *Alexander*, *Euripides*, and *Sayrus*, tell vs a tale of the sisters of young price *Phaeton*, who weeping piteouly for the miserable death of their brother who was smitten with lightning, were turned into Poplar trees, which in stead of tears yeelded euery yere a certain liquor called Electrum (i. e. Amber) which issued from them where they grew: after the riuier Eridanus, which we call *Padus*, i. e. the Po: and the reason why the same was named Electrum, is this, because the Sun in old time was vially called * Elector in Greeke. But that this is one of their loud lies, it appears evidently by the testimony of all Italiane. But some of these Greek writers and such as would seeme to be more speculative and better scene in the works of Nature than their fellows, haue told vs of certain Islands that should lie along the coast within the Venice gulfes, called Electrides, forsooth because that amber is there gathered, by reason that the foresaid riuier Po falls into the sea among them: howbeit we know it is, that there were neuer yet Islands so named within that tract; no nor any Islands at all neere to that place, into which the riuier *Padus* could possibly bring any thing at all down his streames. As for *Aeschylus* the foresaid Poet, who faith that the riuier Eridanus is in Iberia, that is to say, Spaine, & otherwile that it is called Rhodanus, as also for *Euripides* and *Apollonius*, who say that

Rhine & Po both meet in one, and discharge themselves together into the said Venice gulf, G
they shew their grosse ignorance in Cosmography, and description of the world, and therefore
they would be rather pardoned if they knew not what Amber was. Those that write more mo-
destly than the rest (and yet can lie as well as the best) heare vs in hand, that about the sides of
the foresaid Venice gulf, or Adriatick sea, vpon rocks otherwise inaccessible, there grow trees
which yerely at the rising of the Dogstar do yeeld forth this Amber in manner of a gum. *Theophrastus*
contrariwise affirms, that Amber is digged out of the ground. As for *Chares*, he saith,
that *Phaeton* died in *Aethyopia* neere vnto the temple of *Iupiter Ammon*, which is the reason of
a chappell there wherein hee is shrined, as also of an oracle much renowned; in which quarters
(quoth he) amber is engendered. *Philemon* would make vs beleue, that Amber is mineral, and
that within Scythia in two places it is gotten forth of the earth, in the one it is found white &
of the colour of wax, which they call *Electrum*; in the other it is reddish or tawny, and that is
named *Sualtemicum*. *Demostratus* calls Amber, *Lyncurion*, for that it cometh of the vrine of
the wild beaust named Onces or Lynces: the which is distinct in colour, for that which proceed-
eth from the male is reddish and of a fiery colour; the other which passeth from the female, is
more weak in colour, and inclineth rather to whitish. Some giue it the name *Langurium*, and
make report of certaine beasts in Italie named *Langurix*. *Zenobemus* teacheth the same beasts
Langas, and by his saying, they liue about the Po. *Sudanes* talketh of a tree in Liguria,
which should beare this Amber: of whose opinion also was *Metrodorus*. *Sotacus* was verily persuaded,
that it run downe from certaine trees in Brittain, and those he thereupon called *Electrides*.
Pytheas affirmeth, that in *Almaine* there is the arme of the Ocean called *Mentononon*, along
from which therein inhabit certaine people named *Gutti*, for the space of six thousand stadia; I
from which, within one daies sailing, there lyeth an Island called *Abalus*, into which at euery Spring
tide, there is cast vp by the waters of the sea at a high water, a great quantitie of Amber; and it
is taken for nothing else but a certain excrement congealed and hardened, which the sea in that
season purgeth and sendeth away. The inhabitants of those parts (saith he) vse it for their ordi-
nary fell to burne, and doe sell it to the Saxons and other Dutch, their next neighbours. *Ti-*
manus accorded with him, saue only that he would haue the said Island to be called *Baltia*. *Phi-*
lemon was of this mind, that Amber would neuer flame if it were set on fire. *Niceus* would haue
vs conceiue, that it should be a certaine iuice or humour proceeding (I wot not how) from
the raies of the Sun, and yet he maketh a reason thereof, imagining that the said beames should be
exceeding hot toward the Sun-setting, which rebounding from the earth, leaue behind them a
certain fatty sweat in that part of the Ocean, and the same afterwards is cast vp with tides into
the Sea-shore and sands of the Germanes. He writeth also, that in *Aegypt* it is engendered after
that manner, where it is called *Sacal*: as also among the Indians, who make more account of it
than of frankincense. Semblably in Syria, the women (saith hee) make wherues of it for their
spindles, where they vse to call it *Harpax*, because it will catch vp leaues, straws, & fringes hang-
ing to cloaths. *Theophrastus* reporteth, that the ocean casteth vp amber at tides, to the capes of
the Pyrenean hills: which *Xenocrates* also beleue, who is the last that hath written of Amber,
and such like. There is at this day liuing, *Alarabus*, who hath reported, that neer vnto the Atlan-
tick sea there is the lake *Cephissus*, which the Moeres call *Electrum*, and the same being chased
and heare throughly by the Sun, casteth vp from the mud thereof, Amber, floating aloft vpon
the water. *Aristoteles* maketh report of a place in Affrike named *Cicyone*, as also of the river *Cra-*
chis, which floteth out of a lough and runneth into the sea; in which lake or lough, there liue
certain kinds of foule which he names *Meleagrides* and *Penelopes*: herein amber is engendered
(by his saying) after the same manner as before I shewed in the lake *Elegris*. *Theomnes* saith,
that neer vnto the great Syrtis where the hort-yard and garden of the *Hesperides* lieth, a man
shall find, that amber falleth out of the said garden into a lake beneath, and then the virgins at-
tending vpon that place, come ordinarily to gather it. *Ctesias* affirmeth, that among the Indians
there is a river called *Hypobarus*, (which word signifies as much, as bearing all good vessels) it
runneth out of the North and falleth into the East sea, neere vnto a wild mountain, full of trees
that beare amber. He addes moreover & saith, that those trees are called *Aphytaeora*, by which
denomination is meant, most delightfull sweetnes. *Mithridates* writeth, that toward the coast of
Germany there lies an Island, and the same named *Oseriga*, replenished with woods of Cedar
trees yeelding Amber, which runs from them into rocks. *Xenocrates* is of opinion, that Amber
was

* or Bionoma-
nia.

* *apibus*, some
read: *apibus*,
in summer.

* or rather
Electris, as ap-
pareth: a lit-
tle later.

A was called in Italy not only *Succinum*, but also *Thieum*: whereas the Scythians name it *Sacri-*
um (for there also it is engendered): also he saith, that others think it is engendered in *Numidia*.
But I wonder most at *Sophocles* the Tragical Poet (a man who wrote his Poetics, with so graue
and lofty a stile, and liued besides in so good reputation; being otherwise borne at Athens, and
descended from a noble house, employed also in the managing of state affaires, as who had the
charge & conduct of an army) that he should go beyond all others in fabulous reports, as touch-
ing Amber: for he thinketh not to auaunt, That beyond India it proceedeth from the tears that
fall from the eies of the birds *Meleagrides*, wailing & weeping for the death of *Meleager*. Who
would not maruell, that either himselfe should be of that beliefe, or hope to persuade others to
his opinion? For what child is there to be found so simple and ignorant, who will beleue, that
birds should keep their times to shed tears euery yere so duly, and especially for great drops and
in such quantitie, sufficient to engender Amber in that abundance? Besides, what congruities
is there, that birds should depart as far as to the Indians and beyond, for to mourn and lament the
death of *Meleager* when he died in Greece? What should a man say to this? Are there not ma-
ny more as goodly tales as these, which Poets haue sent abroad into the world? And their pro-
fession of Poetry, that is to say, of faining and deuising fables, may in some sort excuse them. But
that any man should seriously and by way of history deliuer such stuffe, as touching a thing so
rare and common, brought in euery day in abundance by merchants which were enough to con-
uince such impudent lies, is a meere mockerie of the world in the highest degree; a contempt
offered vnto all men, and argueth an habit of lying, and an impunitie of that vice intollerable.

CHAP. III.

¶ Of the true original and generation of Amber. The sundry kinds thereof. The
excesse and superfluitie of people, as touching Amber. The medicinalle
properties that is ascribed, of *Lyncurion*, and the ver-
ities that it hath in Physicke.

B Vt to leaue Poets with their tales, and to speake resolutely and with knowledge of Amber,
I knowe it is for certain, That engendered it is in certaine Islands of the Ocean Septentrio-
nall, where it beateth vpon the coasts of Germany: and the Almaines call it *Glessum*. And
in very truth, in that voyage by sea which *Germanicus Caesar* made into those parts, our country-
men named one of those Islands *Glessaria*, by reason of the Amber there found; which Island
the Barbarians call *Austraia*. It is engendered then in certaine trees, resembling Pines in some
fort, and issueth forth from the marrow of them, like as gum in *Cherrie* trees, and rosin in Pines.
And verily, these trees are so full of this liquor, that it swelleth & breaketh forth in abundance;
which afterwards either congealeth with the cold, or thickeneth by the heat of Autumn. Now
if at any time the sea rise by any extraordinary tide, and catch any of it away out of the Islands,
then verily it is cast a shore vpon the coast of Germany, where it is so apt to roule, that it seem-
eth (as it were) to hang and settle lightly vpon the sands, whereby it is the more easily gotten.
E And for that our ancestors heretofore in old time beleueed that it was the iuice of a tree, they
called it therefore in Latine *Succinum*. That it comes from trees of a Pine kind, may appeare
by this, That if a man rub it, he shall find the smel of Pine-wood: also, for that when it burneth,
the flame, and fume (both) resembleth that of Torch-wood. The Germanes make great traffick
thereof, and bring it into Pannonia, and so from thence vnto vs, through our prouinces [of *Istria*
and Venice;] for from Pannonia, the Venetians first (who confine next vpon the marches there-
of, and whom the Greekes call *Heneti*) receiued it by way of merchandise in the maritime port
townes along the Adriatick sea, and so by that means brought it into name and request: which
ordinary traffick may be the reason which gaue occasion to the foresaid tale that runnes of the
Po and the Poplars about it, that should weepe Amber. And euen at this day the country daies
of *Lumbardia*, and those parts beyond the Po, vse to wear faire carkanets & collers of Amber-
beads to adorne themselves especially, and in some sort for the health also of their bodies: for
persuaded they are, that it withstands the inflammation of the Amygdals & other accidents
of the throat and chawes: for that the people of that country are subiect to poghes vnder their
throat, about those fleshy parts neere vnto it, by reason of sundry kinds of waters which breed
those

* For the per-
spicuitie and
brightness: licet
vnto glass.

* This disease
is called *Bron-*
chitis: or *Hir-*
nia gutturalis,
ordinary in Sa-
uoy and those
parts: about
breed
Guttur.

those infirmities. The foresaid coast of Germany is almost six hundred miles from Carnum in Pannonia, and yet of late daies much frequented by merchants from all quarters. Certum, a Gentleman of Rome discouered those parts, by occasion that he was sent thither by commission from *Julianus* (who had the charge vnder *Nero* for furnishing of the tolemne plaies and fights of sword-fencers) to buy vp good store of amber. This gentleman I say surueied diligently all those coasts, & saw the manner of the whole traffick for that commodity, yea & brought into Rome such plenty thereof, that the great nets and cordage (which for defence of the out-standing and open gallerie within the Theatre were opposed against the wild beasts, there to be baited and to fight) were buttoned & set out with Amber, the armour likewise, the bierres, & other furniture for burial of those fencers which should happen there to be killed, yea, & in one word, all the apparell and prouision for one day to the setting out of those pastimes and disports, stood most of Amber. The greatest piece of Amber that he brought ouer, weighed 13 pounds. Moreouer, it is held for certain, That it is to be found among the Indians. *Archebius*, who sometime reigned as king in Cappadocia, writeth, That from thence it is brought rude and vnclen, with pieces of bark sticking within it: but the way to scoure and polliish it, is to seeth it in the greafe of a few that suckleth pigs. That it doth defile and drop at the first very clear & liquid, it is euident by this argument, for that a man may see diuers things within, to wit, Pismires, Gnats, and Lizards, which no doubt were entangled and stuck within it when it was green and fresh, and so remained enclosed within as it waxed harder. Many kinds there be of amber. The white is most redolent and smells best: but neither that, nor yet those pieces which are coloured like wax, be of any price. The high coloured Amber, namely that which is of a deepe yellow enclining to red, is much more esteemed, and the rather if it be cleare and transparant, prouided alwaies that the glittering thereof be not too ardent. Commendable it is in Amber, and sheweth it to be rich, if it represent fire in some sort: but it must not be too too fiery. But the excellent Amber is that which is called *Falernum*, for the colour which it carrieth, resembling the wine *Falernum*: and the same is cleare and transparant, with a gay lustre that pleaseth & contenteth the eye very well. And yet some there be, who delight more in that Amber which looks with a mild yellow like to boiled and clarified hony. But this I am to giue you to vnderstand, That there may be giuen vnto Amber what tincture or colour a man will: but commonly they vse thereto the suet of Kids and the root of Orchanet: and no maruaile, since that some haue deuised also to enrich it with a purple die. To come vnto the properties that Amber hath, if it be well rubbed and chaufed between the fingers, the potentiall facultie that lies within, is set on work, and brought into actual operation, whereby you shall see it to draw chaffe strawes, dry leaues, yea, and thin rinds of the Linden or Tillet tree, after the same sort as the loadstone draweth yron. Moreouer, take the shavings scraped from Amber, and put them into lamp-oile, they will burne and maintaine light both longer and also more cleare than weekes or matches made of the very tire and best of flax. As touching the estimation that our delicates and wantons make thereof: Some there be, who for their pleasure will giue more for a puppet or image made of Amber to the likenes and proportion of man or woman, be it neuer so little, than for the liuely and lusty body indeed of a tall man and valiant fouldior. But what should I say to such? Certainly they deserue to be wel chastised for their peruers iudgment, & one rebuke is not sufficient. Yet can I hold better with them, who take pleasure in other things, & me thinks they haue some reason therof: for Corinth vself, there is good cause that a man should let his mind therupon, in regard of the singular temper of the brasse, with some proportion of siluer and gold: in pieces of metall engrauen, enchafered and embossed, the curious art and the witty deuise seen vpon the worke may well rauish the spirit of the buyer, and draw him on to giue a round price: Touching the cups made of Cassidonia and Crystal, I haue shewed already, wherein lies their grace, and what may enamour a chapman and cause him to bid well and offer frankly for them: Faire pearles and goodly vniones are commended, for that our braue dames enrich their borders therewith, and set out the attire of their heads: gems and pretious stones adorne and beautifie our fingers: in sum, there is no superfluitie that we haue, but grounded it is either vpon some colourable vse that wee may preferre, or els vpon some gallant shew that it makes: As for this Amber, I see nothing in the world to commend it; only it is a mind that folk haue to take affection to it, they know not wherefore, enen of a delicate and foolish wantonneffe. And in truth, *Nero Domitius*, among many other fooleries and gauds wherein he shewed what a monster he was in his life, proceeded so far, that he made

A made a sonnet in praise of the hair of the Empresse *Poppa*, his wife, which he compared to Amber, and as I remember, in one stasse of his dittie he tearmed them *Succina*,. Ambre: and from that time our dainty dames and fine ladies haue begun to set their mind vpon this colour, and haue placed it in the third ranke of rich tincture: whereby we may see there is no superfluitie and disorder in the world, but it hath a pretence or cloake of some pretious name or other. And yet I will not disgrace Amber too much: for why? there is some good vse thereof in Physicke. But I must tell you againe, our women regard not that one whit: that is not it wherefore they take so great a liking to Ambre. True it is that a collar of Ambre beads worne about the neck of young infants, is a singular preservative to them against secret poyson, & a countercharme for witchcraft and forcerie. *Callistratus* saith, That such collars are very good for all ages, and namely to preferre as many as weare them against fantastical illusions and frights that driue folke out of their wits: yea and Amber, whether it be taken in drinke, or hung about one, cures the difficulty of voiding vrin. This *Callistratus* brought in a new name to distinguish yellow Ambre from the rest, calling it *Chryselestrum*, which is as much to say as gold Ambre. And in very truth, this Ambre is of a most louely and beautiful colour in a morning. This property it hath besides by it selfe, that it will catch fire exceeding quickly, for if it be near it, you shall see it will soon be of a light fire. He saith of this yellow Amber, that if it be worn about the neck in a collar, it cures feauers, and healeth the diseases of the mouth, throat, and jawes: reduced into powder and tempered with hony and oile of roses, it is soveraign for the infirmities of the ears. Stamped together with the best Attick hony, it makes a singular cie-salue for to help a dim sight: puluerized, and the powder thereof taken simply alone, or els drunk in water with masticke, is soveraign for the maladies of the stomacke. Furthermore, Amber is very proper to falsifie many pretious stones which are commended for their perspicuity and transparant clearenesse, but specially to counterfeit Amethysts, by reason that I haue already said, it is capable of any tincture that a man would giue it. The froward pceitfulness of some Authors who haue written of Lyncurium, enforce me to speak of it immediately after Amber: for say that it be not *Electrum* or Amber, as some would haue it, yet they stand stiffly in this, that it is a pretious stone, many they hold, that it cometh from the vrine of an Once, by reason that this wild beast so soon as it hath pised, couereth it with earth, vpon a spight and enuie to man, that he should haue no good thereby. They ascribe moreover, That the Once stone or Lyncurium is of the same colour that Ambre

B ardent which resembleth the fire, & that it serueth well to be engrauen: neither by their saying doth it catch at leaues only and strawes, but thin plates also of brasse and yron: and of this opinion was *Dimacles* and *Theophrastus*. For mine own part I hold all to be mee re vntruths: neither do I think, that in our age there hath been a man who euer saw any pretious stone of that name. What euer also is written as touching the vertues medicinale of Lyncurium, I take them to be no better than fables, namely, that if it be giuen in drinke, it will send out the stone of the bladder: if it be drunk in wine, it will cure the jaundise presently, or if it be but carried about one, it will do the deed: but ynough of such fantastical dreames and lying vanities, and time it is now to treat of those pretious stones, whereof there is no doubt made at all, and to begin with those that by all mens confession are most rich and of highest price. In which discourse I will not prosecute this theme only, but also (for to aduance the knowledge of posterity in those things that may profit this life) I meane to haue a fling at Magicians for their abominable lies and monstrous vanities, for in nothing so much haue they ouerspased themselves as in the reports of gems & pretious stones, exceeding the terms and limits of Physick, whiles vnder a color of faire and pleasing medicines, they hold vs with a tale of their prodigious effects and incredible,

CHAP. IIII.

¶ Of Diamants and their sundry kinds, Their vertues and properties medicinale. Of Pearles.

F The Diamant carrieth the greatest price, not only among pretious stones, but also aboue all things els in the world: neither was it knowne for a long time what a Diamant was, vnlesse it were by some kings and princes, and those but very few. The only stone it is that we find in mines of metall. Very feldome it is, and thought a miracle to meet with a diamant in a veine of gold, & yet it seemes as though it should grow nowhere but in gold. The writers of antient time

Emerauds for many causes deferre the *third place: for there is not a colour more pleasing to the eie. True it is, that we take great delight to behold greene herbes and leaues of trees, but this is nothing to the pleasure we haue in looking vpon the Emeraud, for compare it with other things, be they neuer so green, it surpasseth them all in pleasant verdure. Besides, there is not a gem or precious stone that so fully possesseth the eie, and yet neuer contenteth it with facierie. Nay, if the sight hath bin wearied and dimmed by intemperate poring vpon any thing els, the beholding of this stone doth refresh and restore it againe, which lapidaries well know, that it cut and ingraue fine stones; for they haue not a better means to refresh their eies than the Emeraud, the mild green that it hath doth so comfort and reuiue their wearines and lassitude. Moreover, the longer and farther off that a man looketh vpon Emerauds, the fairer and bigger they seeme to the eie, by reason that they cause the reuerberation of the aire about them for to seeme green: for neither Sun nor shade, ne yet the light of candle, causeth them to change and lose their lustre; but contrariwise, as they euer send out their own raies by little & little, so they encounter reciprocally the visual beams of our eies; and for all the spissitude and thickenesse that they seeme to haue, they admit gently our sight to pierce into their bottome: a thing that is not ordinary in water. The same are shaped many times hollow, thereby to gather, vniue, and fortifie the spirits that maintain our eie-sight. In regard of these manifold pleasures that they shew to our eies, by general consent of all men spared they are, and lapidaries be forbidden expressly to cut and ingraue them: and yet the Emerauds of Scythia and Egypt be so hard, as they cannot be pierced or wounded by any instrument: moreover, when you meet with a table Emeraud hold the flat face thereof against any thing, it will represent the said object to the eie, as well as a mirror or looking glasse. And verily, Nero the Emperor was wont to behold the combats of offenders and sword-players in a faire Emeraud. Now this first & foremost is to be noted, that of Emerauds there be 12 kinds. The fairest and richest of all other, be those of Tartarie and called they are Seychick, of the nation Scythia from whence they came: and in truth, there be none fuller and higher in colour or haue fewer blemishes: and looke how far Emerauds goe beyond other precious stones, so far do the Scythian Emerauds surpass all others. The Baetrian Emerauds, as they are the next, so far be the next in goodness to the Seychicke: found there be in chinks and joints (as it were) of rocks in the sea, and gathered (by report) about the dog daies, when the Northeast Etesian winds do blow: for then they glitter and shine within the earth that is grown about them, by reason that the said winds (which in those parts are strong) remove the sand away from them, and cause them to be seen: but these by report be far less than those of Scythia. In a third place follow the Emerauds of Egypt, & they be gotten out of certain craggy hills and cliffes about Coptos, a towne in high Egypt. As for all others, they be found ordinarily in brasse mines: that is the reason that the Emerauds of the Ille Cypros be held for chiefe and principally among those nine: and yet their singular commendation lieth not in any clear or mild colour that they haue, but their onely grace consisteth herein, that they seeme moist with a certaine tartinesse, and on which side fouer a man do view them, they resemble the liquid water of the sea, for transparent they be and shining withall, that is to say, they send out a colour of their own, & withall, through their perpetuall reuice the penetrant beams of our eies. It is reported, That in the same Ille Cypros, about the sepulchre of *Hermias* a petty king there, and near vnto the sea sides where were pooles and stews of great fishes kept to be salted, there stood in old time a lion of marble, in the head of which Lion were set certain faire Emerauds in stead of

eyes, looking opposit into the sea: but they glittered and pierced so deep into the water, that the Tunes vpon that coast were affraid therat, & fled from the nets and other instruments that the fishers laid to take them withall: who marvelled a long time at this strange accident: but in the end knowing what the matter was, they changed the eies of the foresaid Lion, and remoued the Emerauds. But requirit it is that I should set down the imperfections & defaults of Emerauds, for that a may may so easily be deceiued and beguiled in the choise of them: First therefore all Emerauds be subject to some blemishes, and yet as we obserue in men, they haue their particular defects by themselves, according to the nation where they be found, for those of Cyprus haue not an vnforme verdure, but you shal see in one and the same stone a mixture (as it were) of diuerse greenes, more or lesse in sundry parts: neither keep they euer that rich greene after one tenour, which we see in the Scythian Emerauds.ouer and besides, in some you shal meet with a cloud or shadow running between, which doth impeach the cleare color: neither is the same commendable, if it be ouer bright. These faults are the cause that Emerauds are distinguished by diuers names and kinds: for some be darke, and those be called blind: others be thicke, without any clearenesse or perspicuity at all. And some againe are discommended and reiected for diuers little clouds, which also are different for the shade aforesaid: for this little cloud wherof I speak, is a fault in whiteneffe, when as in viewing of an Emeraud it looketh not green all through, but either the eiesight meeteth with some white in the way, or else at leastwise in the bottom. And thus much as touching the faults in colour. But in the very body and substance of the Emeraud there be others obserued, to wit, when there appear either hairy streaks, or congealed specks resembling cornes of salt, or els spots of lead. Next to the Cyprian Emerauds, there is reckoning made of the Æthyopian, which as king *Iuba* mine author doth report, are found in Æthiopia, from Coptos in Ægypt three daies journey: These be of a chearefull and liuely green, but hardly shal you find any of them clear, pure, and of one colour. Among these, *Demetrius* raungeth the Hermionian Emerauds and the Persian of which, the former seeme towell out as if they were embossed and fattie withall: the Persian are not transparent, & yet of a pleasant greene and vniforme, contenting the eie-sight well enough, though it cannot pierce and enter into them; and much like they be to the glowing eies of cats & panthers, for we may perceiue them to glitter and shine, and yet they be not translucent. These Emerauds in the Sun lose their lustre and become dim, but in the shade they shine gallantly, yea, and cast from them their beautiful rays farther than any other. And yet the general fault in all these, is this, if they shew the color either of gall or the skie, likewise if in the Sun they glitter and shine cleare, but yet appear not green: These imperfections are perceiued ordinarily and most of all in the Atticke Emerauds, found in silver mines at a place called Thoricos, yet are not these so grosse and fattie as others, and alwaies they seeme more beautiful far off than neer at hand: these are subject ordinarily to the fault called Plumbago, that is to say, in the Sun they looke with a leaden hew: Moreover, this peculiar quality they haue by themselves, that some of them wear & decay with age, in so much as by little and little their liuely green decayeth; and besides, in the Sun they lose their lustre. After the Atticke Emerauds, those of Media be accounted the greenest, and otherwhiles they resemble the green Sapphire. These seem to be full of waues, and to containe within them diuers shapes and figures of many things, as for example, poppie heads, birds, wings, and finnes, *locks of haire, and such like. Such Emerauds as are not found naturally greene, may be made better and receiue their perfection, by washing them in wine & oile. In one word, there is not a greater Emeraud to be found than those of Media. As touching Carchedonian Emerauds, I wot not well whether they be now out of al request & knowledge, since their mines of brasse haue failed them; and yet were they alwaies (at their best) the smallest of all others, and bare the lowest price: the same were brittle & easie to be broken, their color also was not settled but vncertain & changeable, resembling for all the world the greene feathers in Peacocks tailes, or the downe of Pigeons neckes; as a man held and turned them one way or other they shined more or lesse, being otherwise of themselves full of veines and scales. A speciall fault there was, wherto these Emerauds were subject, which lapidaries called Sarcion, that is to say, a certain caninosity or fleshinesse incident vnto gems. Gathered they were in a certaine mountaine neere vnto Carchedon, which thereupon was named Smaragides. *K. Iuba* hath left in writing, That the Emeraud called Cholos, serued the Arabians much in their buildings: for to adorn and beautifie their houses, they were wont to enclose & set the same in the wals like as the white marble, which the Egyptians

* Capillare,
non crystallinum

A gyptian name Alabastrites. He reporteth moreover, that there be many other Emerauds neere by, taken forth of the mountain Taygetus in Laconia, and those therefore be named Laconick, and much like they are to those of Media. He speakeeth likewise of others in Sicilie. Reckoned there is in the ranke of Emerauds, a certain gem brought from Persia, named Tanos; howbeit of an vnpleasant green it is, and foule within: as also the stone Chalcosmaragdos, that comes out of the Isle Cyprus, which hath in it certain veines of brasse that trouble the green colour. *Theophrastus* reporteth, that he hath read in the books and records of the Ægyptians, That a king of Babylon sent as a present to one of their kings, one entire Emeraud four cubits long and three broad. Also, that there had bin within the temple of *Iupiter* among them, an Obelisk made of foure Emerauds, which obelisk now withstanding was forty cubits long, & caried in breadth four cubits in some places, and two in others. He addeth moreover, that while he wrot his historie, there was at Tyros within the temple of *Hercules*, a pillar standing of one Emeraud, vnlesse haply it were some bawdard Emeraud; for such (quoth he) are found, and namely in Cyprus there was seen naturally growing, a stone, whereof the one halfe was a plaine Emeraud, the other a Iasper, as if the humor had not bin fully transformed and conuerted into an Emeraud. *Apian* the Grammarian, surnamed * Plistonices, wrot not long before, who hath left recorded, That there remained still within the labyrinth of Ægypt, the gyant-like image of their god *Serapis* nine cubits tall, and of one entire Emeraud.

* Contend-
ous, or Vicio-
tious.

Moreover, many are of opinion, that Berils are of the same nature that the Emeraud, or at leastwise very like: from India they come as from their natie place, for seldome are they to be found elsewhere: lapidaries by their art and cunning know how to cut them into six angles, and to polish them smooth; for otherwise their lustre, which is but sad, would be dull and dead indeed, vnlesse it were quickned and reuiued by the repercussion of these angles: for be they polished neuer so much any other way, yet haue they not that liuely glosse which those six faces giue them. Of these Berils those are best esteemed which carry a sea-water greene, and resemble the greenesse of the sea when it is cleare. Next to them are those called Chrysoberyli: these be somewhat paler, and their lustre tendeth to the colour of gold. A third kind there is approaching neere to this, but that it is more pale (howsoever some do think it is no kind of Beril, but a gem by it self) and this they call Chrytoprasos. In a fourth degree are placed the Berils named Hyacinthozontes, because they incline somewhat to the Iacinth. And in a fift such as are much of a sky colour, wherupon they are named Acroides. After them be the Berils Cerini, for that they seem like wax: then the Oleagini, that is to say, of an oile colour. And in the last place bee the Crystalline, which are white, and come very neere to crystals. All the sort of these Beryl stones haue these faults, to wit, white hairy streaks or lines in them, yea and other filthy ordure; being of themselves without these imperfections apt to shed their colour, which soon fadeth. The Indians take a wonderfull pleasure in long Beryls, and commend them for the only stones & gems in the world; as if they cared not to be set in gold, but chose rather to be worn without it: and in truth in that regard their manner is to bore holes through them, and then to file them vp into chains and collars with haire of elephants: howbeit when they meet with some excellent Beryls indeed, which are come to their absolute goodnesse and perfection, they think it not good to pierce such, but presently they tip them with gold, that is to say, they set vnto their heads certain knobs in manner of bosses which comprehend and inclose the same. And in very truth, they delight to cut their Berils into long rolls or pillastres in manner of cylindres, rather than after the manner of other gems, because their principal grace and commendation lies in their length. Some are of opinion, that the Beryl groweth naturally cornered and with many faces; and they hold those Beryls to be richest, which being bored through along, haue their white pith taken forth, for to giue them a better lustre of gold put vnto them; by the reuerberation wherof the ouermuch perspicuity of the stone may seem more corpulent and in some fort corrected.ouer and about the faults already noted, subiect they are also to those imperfections which be incident to the Emerauds, yea and besides to certain specks called Prerygie. It is thought, that Beryls be found likewise in these parts of the world, to wit, about the kingdome of Pontus. As for the Indians, after that crystal was once found out, they deuised to sophisticat and falsifie other gems therewith, but Beryls especially.

Ggg

CHAP.

¶ Of the pretious stone Opalus, and all the sundry kindes. The faults in them, and the means to try which be good. Also diuers sorts of other gems and pretious stones.

The stones called Opales differ little or nothing otherwhile from Beryls, and yet the same sometimes are nothing at all like them, neither is there a gem that they will giue place to, vlesse it be the Emeraud: India is the only mother of them: lapidaries therefore & those who haue written books of pretious stones, haue giuen vnto them the name and glory of greatest price; but especially for the difficultie in finding them out and chusing them, which is innearable: for in the Opal you shal see the burning fire of the Carbuncle or Ruby, the glorious purple of the Amethyst, the Greene fea of the Emeraud, and all glittering together, mixed after an incredible manner. Some Opals cary such a resplendant lustre with them, that they are able to match the brauest and richest colours of painters; others represent the flaming fire of brimstone, yea and the bright blaze of burning oile. The Opal is ordinarily as big as a filberd Nut. And here comes to my mind an historic among vs as touching the Opal, worth remembrance: for there is at this day to be seene one of these Opals, for the which gem *Marcus Antonius* proscribed and outlawed one *Nomius* a Senator of Rome, the sonne of that *Struma Nomius* (at whom the stomack of *Catullus* the Poet did rise so much, seeing him as he did, sit in a stately chaire of Ivory called *Curulis*) and grandfather to that *Servilius Nonianus* whom I my selfe haue seene Consul. Now the said Senator when he was driuen to fly vpon this proscription, took no more of all the goods which he had, but only a ring wherein this Opal was set, which (as it is well known) had bin valued somtime at 20000 Sesterces. But as the cruell and inordinate appetite of *Antony* (who for a Jewell onely outlawed and banished a Roman Senator) was wonderfull on the one side, so the pecuiliennesse and contumacie of *Nomius* was as strange on the other side, who was so far in loue with that gem which cost him his proscription, and rather than to part with it suffered himselfe to be turned out of house and home: and yet the very wild beasts are better aduised than so, who are content to bite off those parts of their bodies and leaue them behinde for the hunters, seeing themselves in danger of death for them. In the Opal there be obserued also diuers blemishes and imperfections, as well as in other stones; namely, if the colour resemble the floure of that herb which is called *Heliotropium*, Turnsole: also if it look like crystal or baile, likewise if there be a spot comming between in manner of a grain or kernel of salt: if it be rough in handling, or if there be certain small pricks or spots represented to the eyes: neither is there any pretious stone that the Indians can counterfeit so well by the means of glasse, as this; in so much as hardly a man shall discern the naturall Opal from the false, when they haue done withall. But the only triall is by the Sun, for if a man hold an Opal betwixt his thumbe and finger, against the beams of the Sun, if it be a counterfeit, he shall find those diuers colours which shewed therein, to runnall into one and the same transparent colour, and so to rest in the body of the stone; whereas the brightnesse of the true Opal oftsoons changeth, and sends forth the lustre to and fro more and lesse, yea and the glittering of the light shineth also vpon the fingers. This gem, for the rare and incomparable beauty and grace that is in it, most Writers haue called *Pederos*.

There is also another kind of Opalos apart by it self, according to the opinion of some, who say it is called by the Indians *Sangenon*. It is said that that there be Opals in Egypt and in Arabia, like as in the kingdom also of Pontus; but such of all other beare the lowest price. In Gallatia likewise, and in the Isles *Tharfos* and *Cyprus*: for albeit they haue the lovely beautie of the Opalus, yet their lustre is nothing so liuely and light some, and seldome that you meet with any of them that is not rugged: their chief colours stand much vpon brasse and purple; the fresh verdure of the green Emeraud is away, which the true Opal doth participate. This is generally held, that they are more commendable which be shadowed as it were with the colour of wine, than delaid with the clearenesse of water.

Thus far forth haue I written of gemmes and pretious stones which be esteemed principall and most rich, according to the decree generally set downe and pronounced by our nice and costly

A costly dimes: for we may conclude vpon this point more certainly, going by their sentence, than grounding vpon the iudgement of men: for men (kings especially and great men) make the price of each gem according to their feuerall fancies. *Claudius Caesar* the Emperour made no reckoning of any but the Emeraud and the Sardonyx, and these ordinarily he wore vpon his fingers; but *Scipio Africanus* (as saith *Demosthenes*) tooke a liking to the Sardonyx before him, and was the first Roman that vsed it; and euer since, this gem hath bin in great request at Rome: in regard of which credit, I will range it next to the Opal. In old time the Sardonyx, as may appear by the very name, was taken for the pretious stone which seemed to be a * *Cornaline* vpon white, that is to say, as if the ground vnder a mans naile were flesh, and both together transparent and cleare: and in very truth, the Sardonyx of India is such, according to *Imenias*, *Demosthenes*, *Zenobius*, and *Sotamus*. As for these two last named, they verily doe name all the rest that are not cleare and shew not through them, Blind Sardonyches, such as the Arabian be; and these haue carried away the name of Onyx, without any mention or appearance at all of the Sarda or Cornaline: and these stones haue begun of late to be knowne and distinguished by their sundry colours; for some of them haue their ground blacke or much vpon azure and the naile of a mans hand: for it hath bin generally thought and beleued, that such hath a tincture of white, and yet not without a shew of purple, as if the said white enclined to a vermillion or Amethyst. *Zenobius* writeth, that these stones were not set by among the Indians; notwithstanding otherwise they were so large and bigg, as thereof they made ordinarily sword handles and dagger halts: and no maruaile, for certaine it is, that in those parts land floods comming downe with a streame from the hills, haue discovered such and brought them to light. He saith also, that they were at the beginning highly accepted of in those parts; for that there is not in manner a stone engrauen, that will imprint the seale vpon wax cleanly without plucking the wax away, but it and through our persuasions, the Indians also grew into a good conceit of them, and tooke pleasure in wearing the same: and verily, the common people of India make holes through them, and do weare them enfiled as carkans and collars about their neckes only. And hereupon it commeth, that those are taken to be Indian Sardonyches or Cornallines which be thus bored through. As for the Arabiecke, excellent they are thought to be which are environed with a white circle, and the same very bright and most slender: neither doth this circle shine in the concauite or in the fall of the gem, but glittereth onely in the very bosses; and besides, the very ground thereof is most blacke. True it is, that the ground of these Sardoinis is found in the Indian stones to resemble wax or horne, yea within the white circle, in so much as there is a resemblance in some some sort of a rainbow, by means of certain cloudie vapors seeming to proceed from them: and verily the superficial face of this stone is redder than the shells of Lobsters. As touching those that be in colour like to hony or lees (for this is taken to be an imperfection and fault in Cornallies) they be all rejected; likewise if the white circle that girderth it about spread and do not gather round and compact together: semblably, it is counted a great blemish in this gem, if it haue a veine of any other colour (but that which is naturall) growing out of square: for the nature of this stone is such, like as of all things els, not to abide any strange thing to disturb the seat thereof. There be also Armeniakoe Cornallines, which in all respects else are to be liked, but for the pale circle that claspeth them.

By occasion of this stone Sardonyx, I am put in mind for the names sake, to write of the gem Onyx also: for notwithstanding there be a stone so called in Carmania (which is the Cassidin) yet there goeth also a gem vnder that name. *Suidas* saith, that the pretious stone Onyx hath a white in it resembling the naile of a mans finger: it hath likewise (quoth hee) the colour of a Chrysolith, otherwhile called a Topase, of a Cornaline also, and a Jasper. *Zenobius* affirmeth, that the Indian Onyx is of diuers and sundry colours; to wit, of a fiery red, a blacke, a * *horne* grey; hauing also otherwhiles certaine white streaks or veines in fashion of eyes compassing it about; and in some of them you shall see white streaks or veins likewise to goe crosse and by as betweene them. *Sotamus* maketh mention moreover of an Arabian Onyx, but it differeth from others (saith hee) in this respect, That the Indian Onyx hath certaine sparkes in it, and the same enuironed and compassed about with white circles either single or many fold, farre otherwise than the Indian Sardonyx; for in the former, the white seemed to be pointed prickes, but in these they be complete circles. As for the Arabian Onyches, there be found of them blacke, with white circles. *Satyrus* reporteth furthermore, that the Indian Onyx is fleshy; that in one

part it resembleth a Rubie otherwife called a Carbuncle, in another a Chrysolith, and an Amethyst, yet he maketh no account of such but the true Onyx indeed (quoth hee) hath very many veins, and those of sundry colors, garnished also it is with circles as white as milk; and albeit the colors of the veins be inexplicable as a man casteth his eie vpon them severally, yet meeting as it were all in one, they make a good comfort and yeeld a lustre most pleasing to the sight. Now that I haue treated of the Onyx, I must not deferre to say somewhat also of the nature of Sarda, which maketh the other half of the stone Sardonyx, and so by that means (as it were by the way) to discourse of those gems that are of an ardent and fiery colour.

CHAP. VII.

¶ Of Carbuncles or Rubies, and their sundry kinds: of their defaults and imperfections: of the means to trie them. Of other precious stones resembling the fire.

AMong these red gems, the Rubies otherwife called Carbuncles, challenge the principal place, and are esteemed richest: they haue their name in Greeke of the * likeuesse vnto fire, and yet fire hath no power of them, which is the reason that some call them Apyroti. As touching their kinds: there be Rubies of India, and Rubies of the Garamants, which carry the name also of Carchedonij, i. Carthaginian, in regard of excellency, by reason of the wealth and puissance of the city Carthage the Great. In this ranke, some doe place the Etyhopian Rubies and the Alexandrian, which are found indeed among the cliffs of the hill Ortholia, but trimmed & brought to their perfection by the * Alabandians. Moreover, in all sorts of Rubies, those are taken for the male which shew a quick red more fire-like than the rest; and contrariwise female, such as shine not so bright but after a faint manner. In the male it is observed, that some seeme to flame more cleare and pure, others are darker and blacker: there be againe that shine brighter than the rest, yea, and in the fune give a more ardent and burning lustre, but the best simply be those which are called Amethylozites, that is to say, that in the end of their fire resemble the blew violet color of the Amethyst. The next in goodnesse to them, are those which they call Syrtites; and such doe glitter and shine of their own nature by reason whereof, they are discovered soon wherefoever they lie, by the reuerberation of the Sun-beams. As touching the Indian Rubies, *Satyrus* saith, they are not found cleare, but for the most part foul; howbeit, after they be scoured, their brightnesse is most fiery. He affirmeth moreover, that the Etyhopian Rubies are greasie and shine not out, but seeme to haue a fire burning within as if it were infolded in some thing about it. *Callistratus* holdeth opinion, that if a Carbuncle or Rubie be laid vpon a thing, it ought to yeeld certain white clouds, in the edges and extremities of the glittering that it makes; but if it be held vp or hung in the aire, it flameth & burneth out fire red; and hereupon it is, that most men haue called it the white Carbuncle; like as they haue named those Indian Rubies * Lithizotes, which shine more faintly & with a brownish or dusky flame. As for the Carchedonian Rubies, *Callistratus* saith, they be far lesse than others; whereas of the Indians some are so big, that being made hollow they will contain the measure of one sextar. *Archelaus* writes, that the Carchedonian rubies be blacker than others to see too; but if they be quickened as it were with fire or Sun, or be held bowing forward, they are more ardent and fiery than any other: the same in a shady house, seeme purple; in the open aire, flaming; against the raies of the Sun, sparkling; he auoucheth moreover, that the fiery heat thereof is so actual, that if a man seal with them, though it be in a shadowie and coole place, they will melt the very wax that is stamped therewith. Many authors haue written, that the Indian Rubies be whiter than the Carchedonian, and contrarie to the nature of the Carchedonian, if they be bended forward, they lose much of their viuacitie, and be dimmer and more dull by that means: also, that in the Carchedonian Rubies which be male, there are seene certain raies as it were of starres twinkling within; whereas the female contrariwise, sparkle all their fire without forth: that the Alabandines be more darke and blackish than others, and withall rough in hand. It is said moreover, that there be certaine stones growing in Thracia, of the same colour that Rubies, and which will not be chafed and made hot in the fire. *Theophrastus* writeth, that there be Rubies found about Orchomenus in the country of Arcadie, as also in the Isle Chios: and as for the Orchomenian, they be of a blacker kinde, and serue to make mirrors of. The Troezenian Rubies (by his saying) are

A of diuers colours and spotted with white specks comming in among; and the Corinthian Rubies be more pale and whiter than the rest. *Boetius* writeth, that there be brought Rubies from Maris and Lisbon in Portugall; but with much ado: and great difficultie they are found, by reason of the clay wherein they be inlapped, in certain deserts and forests burnt with the Sun. In sum, there is not a harder thing than to discern these sundry kinds of Rubies one from another; they are so facile to be counterfeited and falsified by the art and skill of lapidaries & goldsmiths, who haue a cast to lay some foile vnder, to make them for to shine and glitter like fire. Men say, that the Etyhopsians haue a deuise to steep their dusky and dark Rubies in vineger; for in 14 daies they will be pure and glitter, yea, and continue so 14 moneths after. There is a way to counterfeit Rubies with false glasse stones, which they will make seem Rubies as like as is possible; but the grinding vpon a mill some discouereth the fraud, like as it doth in any other artificiall and sophisticated gems whatsoeuer; for their matter is more soft and brittle withall than the fine and pure stones indeed: also the false Rubies are detected by the hardnesse of the powder that is fetched from them, & the weight; for these glasse Rubies be farre lighter; and otherwhiles a man shall see in these falsified Rubies certaine little risings in manner of blisters or bladders, which shine like siluer. Moreover, there is found in Thesprotia a certaine minerall Rubie called Anthracitis, resembling coles of fire; but whereas some authors haue written, that such grow in Liguria, I take it to be a meere vnto, vnlesse haply in times past such might be found there. It is said also, that there be of these kind of Rubies, which are compassed about with a white veine, and their colour is fierie as well as of the rest before named; but this peculiar property they haue by themselves, that being cast into the fire, they seeme dead and doe lose their lustre: contrariwise, if they be well sprinkled and drenched with water, they seeme to glow, yea and to flame out againe.

There is a stone much like to this, called Sandastros, which some name Garamantites, growing among the Indians in a place likewise so named. It is engendered also in that part of Arabia which regardeth the South Sun. The chiefe grace and commendation of Sandastros, is to be cleare, and to haue certaine drops as it were of gold like stars shining within, that is to say, alwaies in the body of the stone, and neuer in the coat or out side: in regard of which starre-like specks, there is attributed some religious matter to these stones, for that they represent in some sort to them that behold them, the seven stars called Hyades, both in number and also in order and manner of disposition: which is the reason, that the wise men of Assyria named Chaldei, doe observe them with much deuotion. Moreover, these Sandastros are distinguished by the sex, for the male seeme to haue a more sad and deep colour, and by the reuerberation of their fire within giue a tincture to those things that they touch or lie neer to: and the Indian verily of this kind are said to dim the eie-sight. As for the female Sandastros, they carry not such an ardent fire of fire, but are more pleasant to the eie, as being attractive rather than burning. Some writers there be, who prefer the Arabian Sandastros before the Indian, saying that the Arabian are like to the Chrysolithes that be somewhat smokie. As for *Isomenus*, he affirmeth that the Sandastros are so tender that they cannot be polished: in a greater error therefore be they who call this stone Sandaresos; but all authors herein accord, That the more stars do make appearance in them, so much better is the price. Furthermore, this is to be noted, that the nearenesse in name, otherwhiles is the cause of error; as we may see by Sandaster, which *Nicander* called Sandalerion, others Sandaferon: and in truth, this Sandaster some take to be Sandaster, and the Sandaster indeed, Sandaresos; which is found likewise amongst the Indians, bearing the name of the place where it groweth: in colour it resembleth an apple, or else Greene oile: and in truth, no account is there made of it.

As touching Lychnites, so called for the resemblance that it hath to the blaze of a candle lighted, which giueth a singular grace to it, and maketh it very rich, it may be ranged well among these fierie and ardent stones: found this is about Ortholia and throughout all Caria and the places adjoining; but the most excellent come from the Indians, which some haue thought and said to be the milder kind of Carbuncle or Rubie balais. In a second degree of worth and account vnto this Lychnites, is Ionis, so called of the March violet which in colour it doth very much resemble.

Ouer and besides, I find other sorts of Rubies different from those aboue named; for some of them hold of the fresh and glorious purple of Lac, others stand as much vpon the Scarlet or

Ggg 3 Crimson:

* For the Greeks call them *amethysts*.

* These are called yet by Lapidaries, Alabandines, or Almadines.

* As one would say, more like stone than a precious gem.

Crimfen: which being chaufed in the fun, or otherwise fet in a heat by rubbing with the fingers, will draw to them chaffe, frawes, threads, and leaues of paper. The common Grenat also of Carchedon or Carthage, is faid to do as much, although it be inferior in price to the former. These Grenats are found vpon the hills amongst the Nafamons, and as the inhabitants are of opinion, are ingendred by means of a certaine diuine dew or heavenly shewre: found they are twinkling againft the moon-light, and especially when the is in the full. In times past, all the traffike of the Grenats was at Carthage, whereupon they took the name of Carchedon. But *Archelaus* saith, that there be of them in Egypt also about the city Thebes; howbeit, such are brittle, full of weins, and like to a cole going out and ready to die. I find, that drinking cups haue been made of this stone, as also of the former, called Lychnites. Generally, all rubies be very hard for to be cut; and this ill quality they haue, that they neuer do scale cleane, but ordinarily plucke fome out of the wax away with the signet: contrariwise, the Cornalline or Sarda, signeth very faire without any of the wax sticking to it: this Sarda giueth part of the name to the Sardonyx: the gem it selfe is very common, found first about * Sardis; but in truth, the principall is that which commeth from about Babylonia, out of certaine quarries of stone, where it was found sticking within another stone in manner of the heart. After this manner, it is said, that the Persians had sometime minnerall Cornallines, but the mine now doth fade: howbeit, there be of them in many other places besides, to wit, in Paros and Aflos. The Indians fend vnto vs three feuerall kindes, to wit, the red, the fatty (called therupon Demium) & the third which ordinarily haue a ground of filuer-foile laid vnder them to giue a lustre. The Indian Sardes or Cornallines are transparent and carry a thorough light with them: the Arabian be more thicke: there be found of them also about Egypt, but they haue commonly a ground of gold-foile. These gems likewise are distinguished by the sex, for the male haue a more bright and orient lustre; the female are not so resplendent, but shine as it were through a grosse & fatty matter. In old time, there was not a precious stone in greater request, than the Cornalline: & in truth, *Menander* & *Philemon* haue named this stone in their * Comedies, for a braue and proud gem: neither can we find a precious stone that maintaineth the lustre longer than it, against any humor wherein it is drenched; and yet oile is more contrary to it than any other liquor. To conclude, those that be of the colour of honey, are reiected for nought; howbeit, if they resemble the colour of earthen pots, they be worse than those.

CHAP. VIII.

¶ Of the * Topaze, and the sundry kinds of it. Of * Callais: and of other Greene precious stones not transparent.

The Topaze or Chrysolith, hath a singular green colour by it selfe, for which it is esteemed very rich, and when it was first found, it surpassed all others in price: they were discovered first in an Ile of Arabia called Chiris, wherein certaine rousers (Troglydites) being newly landed, after they had bin driven thither by tempest and vrged with famine, began to feed vpon herbs and dig for roots; and by that meanes met with the Topaze stone: This is the opinion of *Archelaus*. But *K. Inba* reporteth, that there is an Iland within the red sea called Topazas, distant from the continent 300 stadia, the which is oftentimes so mistie, that sailers haue much ado to find it, whereupon it tooke that name: for in the Troglydites language (saith he) Topazin is as much to say, as to search or seek for a thing. It is said, that the first that tooke a liking vnto the stone, was queene *Berenice* the mother of *Ptolome* the second, and that by the meanes of *Philemon* (sientenant generall to her son in those countries) who presented one of them to the said queene. Of which Chrysolit, *Ptolomeus Philadelphus* K. of Egypt, caused the statue of his wife *Arfinoe* to be made, 4 cubits long, and in the honour of the said queene his wife, dedicated it in a chappell named the Golden temple. The moderne writers do report, that there be found of these Chrysolits about Alabastrum a towne in Thebaïs, a province in high Egypt; and two kinds they make thereof, to wit, Praiosides, and Chrysopteros: which later commeth neare to that golden Berill M called Chrysoprasion, for that the colour thereof resembleth fully the juice of Porret; and of all precious stones it is the largest: this property it hath aboue all other gems, That only it comes vnder the file to be polished for noble men, whereas all other be scoured by the grindstones coming out of Naxos. This stone will weare with vsage.

This

A This stone in regard of colour may be accompanied with the Turquois called Gallais, for a certain green it hath inclining to yellow. It is found beyond the farthest parts of India among the inhabitants of the mountaine Caucasus, to wit, the Phicians and Asdates; they grow vnto a very great bignesse, but the same is fistulous and full of filth. The purest and richest of this kind be those of Carmania. But in both countries they be found in ycie cliffes hardly accessible, where you shall see them bearing out after the manner of bosses like vnto icicles: they stick to those crags & rocks so lightly, that a man would say that saw them, how they grew not naturally out of the rocks, but were only set too by mans hand. And for that the place where they do grow, is so steep that a horseman is not able to ride vnto them, and because the people of that country be loth to climb so high with their feet, being otherwise acquainted ordinarily to the horseback, besides, in regard of the danger in venturing to climb for them, therefore they reach them a far off with slings, and so driue them down, with all the hard moffe about them: and in very deed, a commodity this is of great reueneue, & besides, the rich men know not the like Jewell to weare about their necks. By a collar or chaine of these Turquoises, men are judged wealthy more or lesse, and this is the glory that they take from their childe hood, to be able to say, that thus many Turquoises they haue pulled and cast downe by that manner of slinging. And yet in the praefise of this feat, all sped not alike; for some you shall haue to throw downe many them, & yet cannot get one Turquois. This (I say) is the manner of chasing or hunting Turquoises; and when they be gotten, they must come into the lapidaries hands to be cut and formed to what fashion you will: and in truth they be otherwise brittle and easie to be wrought vpon. The best Turquois is that which approacheth nearest to the grasse green of an Emeraud, howbeit, all the grace that they haue, seems to come from outward help: being set in gold, they looke most beautiful, neither is there a precious stone that commeth gold better. The fairer that a Turquois is, the sooner looserth it the colour by oile, ointment, or wine: contrariwise, the baser that they be, the better do they hold their own and maintain their lustre. Neither shall you meet with any precious stone more easie to be falsified and counterfeited with glasse, than a Turquoise. Lastly, some writers asseme, that they be found in Arabia, within the nest of certain birds called Melacoryphi, which is as much to say as blacke-cops.

D As touching green stones, there be many more kinds, but of the baser sort we reckon one of a Porret colour, which we call Prasus, and the first kind of it is all green, whereas the second hath vpon the green, certaine red spots like blood, which cause it to seem vnplesant to the eie, and rough in hand: the third is Greene, but yet parted with three white strakes.

The stone Chrysoprasus, i. the sea water or Horehound green, is preferred before the other: in some sort it resembleth the green juice of a Leek, but it inclineth somewhat from the Topaze, as if it were between it and gold. Some of these are so great and big, that there be drinking cups made thereof, after the fashion of boats: but pilasters or round statues in manner of cylindres or rolls, are very quickly framed of such stones. These be found among the Indians: like as another stone, which is called * Nilios: A weak lustre it hath, and will not long continue, for looke but a while wisely vpon it, you shall perceiue it soone to fade. *Sudines* saith, That there be of them found in Syverus, a riuer that passeth through the country of Attica: in colour it resembleth a smokie Topaze, or otherwhiles that of a hony colour. *K. Inba* reporteth, That it is bred in Ethiopia, and namely about the bankes and sides of a riuer which we call Nilus, whereupon it commeth to be named Nilios.

There is a stone called Molochites, for that the Greene colour which it hath, commeth neare vnto a Mallow, and is more dim than the rest whereof I haue spoken. Commended it is highly in signets to scale faire: and besides it is supposed to be by a naturall vertue that it hath, a countercharme to preserue little babes and infants from all witchcrafts and forceries.

A kind of Iasper likewise there is of a Greene colour, and the same oftentimes is transparent; and although there be many other stones go beyond it in riches, yet it retaineth still the ancient glory and honor that it had. A gem it is, common to many other countries: India yeldeth it vnto vs like to an Emeraud. That of Cyprus is very hard, and of a greyish fatty colour, betwene white and Greene. The Persians send vs a Iasper like vnto the skie or aire, and thereupon it is called Aerizusa: and such a one is that which commeth from the Caspian hills. The Iasper about the riuer Thermoodon is blew as Azure. In Phrygia you shall haue it purple: in Cappadocia

* Thought to be the Almain Chrysolite.

* A city, whereupon it tooke the name, and not of Sardinia the Ile, as some thinke.

* *Menander* & *Philemon* haue named this stone in their Comedies, for a braue and proud gem: neither can we find a precious stone that maintaineth the lustre longer than it, against any humor wherein it is drenched; and yet oile is more contrary to it than any other liquor. To conclude, those that be of the colour of honey, are reiected for nought; howbeit, if they resemble the colour of earthen pots, they be worse than those.

* Some take it for our Chrysolith.

* It is thought to be our Turquois.

Cappadocia partly purple and partly blew, but no kind of lustre hath it at all. Out of Amisus, a City in Pontus, we haue Iaspers brought, much like to the Indian: and the Iasper of Chalcedon is muddy and troubled. But it were better to set downe their degrees in goodnesse, rather than to stand vpon the countries from whence they are transported. The best Iasper then is that esteemed which standeth much vpon purple or Lac: the second is incarnat, or of a rose colour: the third resembleth the Emerald in greenesse. To euery one of these severall kinds, the Greekes haue imposed significant names. And in a fourth place the Greekes haue ranged another called Borea, like to the morning skie in the time of Autumne; and this may well be called Aerizula. There is a Iasper in colour like to the Sarday, the Cornalline, as also resembling much the violets: there be as many more sorts behind, which I haue not touched, but subject they be toblemishes, as namely being blew or like to Crystall or * waterie steame. Last of all, we haue a Iasper H called Terebinthizula by the Greekes, but as I take it very improperly, as if it were compounded of many gems of one and the same kind; and therefore the better sort of such are inclosed within a circle of gold, yet so as they be open both aboue and beneath, neither is any thing but the edges only compassed with gold. The faults or imperfections of the Iasper be these. If the lustre indure not long, notwithstanding it glitter a far off; also if it shew a spot like vnto a graine of salt, besides all other which I haue already named in the rest. Moreover, Iaspers may be falsified by the means of glasse: and this is soone detected, namely, when they cast a reuerberation of their lustre outwardly, and hold it not within. To conclude with the stones called Spargides, they are not much vnlike to the Iaspers. And this gift they haue aboue all the rest, that they make the best signets, and seale fairest.

CHAP. IX.

¶ Sundry kinds of Iaspers.

OF diuers sorts of Iaspers, al the East part (by report) are most affected to that which is like the Emerald, and they carrie it ordinarily about them as a countercharme. The same if it be compassed round about with one white crosse line in the midst, is called Grammatias; if with many Polygrammos. And hereby the way I can hold no longer, but my mind serues me very well to challenge the Magitians, who haue giuen it out. That this stone is very good for those to haue about them who are to make some publick speech or solemne Oration to the people. Moreover, we haue a Iasper called Onychopuncta & Iasponyx, which seemeth to inclose a cloud within it, & in some sort to resemble the snow. This Iasper is fashioned like to a Star, and beset with diuers reddish points: a man that saw it, would say it were a kind of Megarian salt. There is besides a Iasper which seemeth as if it were infected with smoake, and this is called Capnias. Concerning the bignesse of the Iasper, I haue seene one of them nine inches long, which serued for to represent the visage of Nero the Emperour, standing ready armed with a cuirace.

As touching the precious stone Cyanos, I must speake of it apart, notwithstanding I haue of late mentioned and applied it to one of the names of the Iasper, to wit, that with the blew colour. The best Cyanos is that of Scythia; the next cometh from Cyprus: and in the last place we are to reckon the Ægyptian. This stone is very apt to be counterfeited, and especially by the inuention whereof is ascribed to a king of Egypt, who was highly honoured for begetting the first that gaue a colour to it. Distinguished these stones also are by the sex, for there be of them both male and also female. Otherwhiles you shall perceiue a certaine powder in them as it were of gold, and yet not like to that of Sapphires; for the Sapphire also glittereth with marks and pricks of gold. Sapphires are likewise sometime blew: mixed also with purple, although that be very seldom: the best are among the Medes, yet in no place be they transparent. Moreover, they are vtoward for to be cut and engrauen, by reason that the lapidarie shall meet with certaine hard knots of Crystall coming here and there betweene. The blewest are thought to be the male.

Next after these, I am to range those stones that bee of a purple colour, and such as decline somewhat from them, and yet seem to depend of them: of which, I must place in the first ranke as principall, the Amethysts of India: and of them there bee found in a part of Arabia, which bordereth vpon Syria, and is called Petra: also in Armenia the lesse, in Ægypt, and in France:

A but the foulest and of most base account, be those of Thafos & Cyprus. The reason of the name Amethyst, is generally thought to be this, that notwithstanding it approach very neer to the colour of wine, yet before it thoroughly tast thereof, it turneth into a March Violet color: and that purple lustre which it hath, is not altogether fiery, but declineth in the end to the color of wine. There is not one of these Amethysts, but it is transparent with a violet colour. Easie they are all to be cut and engrauen. And as for the Indian Amethysts, they haue the full and rich colour of the Phœnician purple; and in truth, the diers with that they may but giue a tincture answerable to it. Verily this purple colour is pleasing to the eie, neither doth it strike or pierce the sight so forcible as the Rubies do. In a second ranke are to be ranged the Amethysts inclining to the Iacinths, the color of which stone the Indians call Sacon, like as the gem it selle Sacodians.

B Now if the color be more weak and feeble, they call it Sapinos; and this Amethyst in a third degree is named Parantes in the marches of Arabia, which name it taketh of the people. The fourth kind resembleth the colour of wine. The first declines neer to Crystall, saue only that toward the bottom thereof, it standeth of a certaine whitish purple: but this is nothing esteemed, for the excellent Amethyst indeed being held up in the aire, ought to shine in manner of a Ruby, and to carry a certain purple lustre, mildly participating of the incarnat rose color. Such Amethysts as these some chuse rather to call Pæderotes, like as a kind of Opale; others, Aærotes: many giue them the name of Venus gems, for the great grace that they haue, & decent loueline which they seem to shew both in fashion and colour, especially without forth. The Magitians, as vain herein as in all other things, seem to bears vs in hand that they haue a special vertue to withstand drunkennesse, whereupon they should be called Amethysts: neither say they so, but telvs, that if the name of the Moon and the Sun be engrauen in them and lo worn about the neck hanging, either with the hairs of a Cynocephalus head, or els swallows feathers, they are a fourcaine remedy against charms and forceries that be practised, with poisoning. Nay they would make vs beleue that there is a way to vie them, which will cause men to be gracious with princes who haue any negotiation with them, and that by the means thereof they shall find easie access to their presence, and fauor in their eies. Also, by their saying, they are of force to auert haile and such like distemperature of the weather, yea, and to turn away Locusts, so there be a charm in manner of a praier said withall, the form whereof they also do prescribe & shew: and no maruell, for they haue promised the like of Emeralds, if there were inclosed in them the forme

D either of Ægles, or the flies named Beetles. In setting down which toies and vanities, they shew well enough in what contempt they haue mankind, and how they are disposed to mocke the world.

It followeth now by good order to speake of the Iacinths, which, albeit they differ much from Amethysts in some respect, yet in lustre they approach very neare: and this is only the difference between them, that the braue violet colour, which in the Amethyst is full and rich, in the Iacinth is delayed and weaker. The Iacinth also at the first sight is pleasant and acceptable, but the louely beauty thereof vanissheth away before it haue giuen a man enough. And so far is it off from contenting the eie fully and satisfying the pleasure thereof, that it fades sooner than the dainty flour of that name. Hyacinthus, so quickly doth the lustre passe away, in manner othere it come to the eie. Æthiopia furnisheth vs with Iacinths & Chrysolithes both, which are transparent and carry the colour of gold: howbeit those of India bee preferred before them; they of Baëtria likewise, if they be not spotted and flecked with diuers colors. The worst of all others, be the Arabian: for they be not only skewed in colour, but also foule and troubled: and look what radiant lustre they haue, interrupted it is with a cloud of spots; and if any chance to be clear otherwise, yet a man that looketh on them, would say they were full of their owne dust. The best are those, which being laid to gold, cause it to looke whitish in manner of siluer, in comparison to them. Such as be cleare and transparent, Goldsmiths vie to set within a hoope of gold, so as they may be seen both beneath and aboue. The rest had need of a ground of Lætron soile to giue them a lustre: howbeit, now adaies those that are not skilfull lapidaries haue taken vp a custome to call some Iacinths Chryselestri, which incline to the color of a base gold called Eletrum, the which in a morning are more beautiful and glorious to the eie, than all the day after. Those Iacinths that come from Pontus, are knowne by their lightnesse: some of them be hard and of an Orange red, others be soft and foule. Boethius mine author reports, That they be found in Spaine also, in that place where he saith they sink pits for to leuel water, and out of which the peasants doe

take forth crystal. He affirmeth also, That he hath seen a* Chrysolith of twelue pound weight. G Moreover, there be certain lacinths which haue a white veine comming between, and those are called Leucocrysi. And of this kind some be named Capnia, because they be smokie. You shall find of them like vnto glasse beads, and yet of a shining yellow in manner of Saffron. And verily false lacinths there be counterfeited by glasse so artificially, that a man shall hardly discern them by the eie: howbeit handle and feele them, you shall soone find the deceit; for the fine lacinths indeed are colder naturally than those that be counterfeit. Among these lacinths, I may range wyl ynough those stones which are called Melichrysi, which shew as if cleare hony shone through gold. These we haue from India: but of all other they are most subiect to injurie and will soone breake. The same country yeeldeth also a gem called Xystion, whereof there is such plenty, that the very common people doweare them.

If we should speake of white stones, the principall of them all is the gem named Pæderos, And yet considering that vnder this name there passe other* fair & beautiful stones (such a prerogative hath the word to signifie some excellencie of louelines) there may be question made, how it can be properly vsed for one gem, or one colour; yet surely there is a kinde of pretious stone by it selfe called Pæderos, and the same worth the looking on; and there seem to meet together a skie color, and the same in his manner greenish vpon a cleare and transparent Crystal: accompanied therewith a purple and a certain yellow and bright gold colour of Muskadel, and the same is alwaies the last colour that appeareth outwardly and giueth the lustre: and yet a man that beheld this stone, would say that the head thereof were crowned with a chaplet of purple: and as it appeareth to haue these colours confounded all together, so it seemeth as if every one had a feuerall lustre by it selfe. A more pure and clearer gem there is not againe: comfortable to the head & pleasing to the eie. The best simply of this kind we haue from the Indians, who call it Argenon. In a second degree to it is that of Ægypt, where it is called Senites. Of a third sort there be in Arabia, but those are rough. Those of Natolia and the kingdome of Pontus, are not so radiant and quicke as the others: and yet from Galatia, Thracia, and Cyprus, we haue such as be more feeble than they. If you would know what faults be incident to these Pæderotes particularly: they carry otherwhiles a languishing lustre; troubled they be with vnaturall colours, and generally subiect they are to all the defects and imperfections of others.

In the second place of white gems, is * Ateria to be counted: a wonderfull propertie it hath in Nature, for which it deserues to be chiefe, for that it keepeth enclosed within a certain light K in manner of the apple in the eie: which according as a man doth hold or turne, hee shall see how it will send and transufe it from the owne place; one would thinke that it walked within and shifted from place to place. And the same, if it be opposed against the beames of the Sun, casteth forth bright and white raies of the owne, in manner of a starre, whereupon it tooke the name Ateria: and very hard it is to be engrauen. Those which come out of India be preferred before them of Carmania.

In like manner a white pretious stone there is called Astrios, approaching neer to Crystal: this is engendred among the Indians and along the coasts of Pallene: From the verie centre within, there shineth a kind of star in manner of a full Moone in the height of her brightnesse. Some giue this reason of the name, that being held against any stars, it receiue them from them a L light and sendeth the same from it againe in manner of beames. And they hold that the best be in Carmania, and there is not another gem againe lesse subiect to blemishes and imperfections than it. As also that a worse kind thereof is called Ceraunia: and the worst of all other resembleth the blase or flame of lampes and candles.

As touching Astroites, many make great account of it: and such as haue written more diligently thereof, doe report, That Zoroastres hath highly commended it and told wonders thereof in art Magicke.

Sudanes speake of another gem called Astrobolos, and saith it is like vnto a fish eie, and casteth forth white glittering raies against the Sunne.

Among white pretious stones may be reckoned that which they call Ceraunia, which is apt M to receiue light and lustre both from Sunne and Moone and other starres. It selfe looketh like Crystal cleare, howbeit, the lustre that cometh from it seemeth to be of a blue Azure color: and Carmania is the native place thereof. Zenathemis confesseth, That it is a white gem, and hath within a starre-like fire, which seemeth to run too and fro and change place, according as a man turneth

A turneth it. He affirmeth also, that the foresaid Ceraunia will become dul and dusky; which if they be foked for certain daies together in vineger and sal-nitre, will recouer their light and conceiue a new fire in manner of a star, which will continue for so many months as they lay daies infused, & after that lose their lustre again. Sotacius hath set down two kinds more of Ceraunia; to wit, the black and the red, saying, that they resemble halberds or ax heads. And by his saying, the black, such especially as be round withall, are ended with this vertue, that by the means of them cities may be forced, and whole naues at sea discomfited; and these (forsooth) hee called Betuli, whereas the long ones be properly named Ceraunia.

It is said there is one more Ceraunia yet, but very season it is, and hard to be found, which the Parthian Magicians set much store by, and they only can find it, for that it is no where to be B had but in a place which hath bin shot with a thunderbolt.

Next after the Ceraunia, there is a stone named Iris: digged out of the ground it is in a certain Isle of the red sea, distant from the city Berenice 60 miles. For the most part it resembleth Crystal, which is the reason that some haue termed it the root of Crystal. But the cause why they call it Iris is, That if the beames of the Sun strike vpon it directly within house, it sendeth from it against the wals that be near, the very resemblance of a rainbow both in form and colour, and estoons it will change the same in much variety, to the great admiration of the beholders. For certain it is known, that six angles it hath in manner of Crystal, but they say that some of them haue their sides rugged, and the same vnequally angled, which if they be laid abroad against the Sun in the open aire, do scatter the beames of the Sun that light vpon them to & fro; C also that others do yeeld a brightnesse from themselves, and thereby illuminat all that is about them. As for the diuers colours which they cast forth, it neuer hapneth but in a dark or shadowy place: whereby a man may know, that the varietie of colours is not in the stone Iris, but comes by the reuerberation of the wals. The best Iris is that which represents the greatest circles vpon the wall, and those which be likest to rainbowed indeed. There is another gem called Iris, like to this in all respects, but that it is exceeding hard. Horus saith, that if it be calcined and puluerised, it is a singular remedie against the biting of Ichneumones: also, that naturally it is to be found in Persis.

Much like in form and shape to Iris, but not of the same effect, is there another stone called Zeros: a man that sees it would take it to be a crystal, with a black stroke parting it ouerthwart: D Thus hauing laid abroad the pretious stones & jewels which are distinguished by sundry kinds of principal colours, I will proceed to the rest, and discourse of them alphabetically.

CHAP. X.

¶ Of certaine gems digested in order according to the Alphabet.

T He Agat was in old time of great estimation, but now it is in no request. Found it was first in Sicily neere to a riuer called likewise Acharis, but afterwards in many other places. It exceeds in bignesse, and is full of varietie in colours, whereby it hath gotten many names; E for called it is Phaffachates, Cerachates, Sardachates, Hamachates, Leucachates, and Dendrachates, as if the veins thereof resembled a little tree. As touching the Agath, called Antachates, as it burneth you shall haue it to smel like vnto Myrrh. Also there is an Agath of a reddish colour resembling coral, and thereupon called Coralloachates: and the same is beset with certain spots or drops of gold in manner of the Saphyr: of which kind there is passing great plenty in Candy, where they call it the holy or sacred Agat; for people are persuaded that it auaieth much against the sting of venomous spiders and scorpions: which propertie I could very well beleue to be in the Sicilian Agaths, for that so soone as Scorpions come within the aire and breath of the said prouince of Sicily, as venomous as they be otherwise, they die thereupon. The Agats likewise found among the Indians haue the same operation, and besides doe F represent many other miracles; for you shall find imprinted naturally in them the forme and proportion of riuers, woods, and laboring horses: a man shall see in them coaches and little Chariots or horse-litters, together with the furniture and ornaments belonging to horses. As for physicians, they make their grinding stones thereof for fine powders. And it is holden for a truth, that only to behold and looke vpon an Agath, is very comfortable for the eies. If they be but field

in the mouth, they quench and allay thirst. The Phrygian Agats haue no part of green in them. G Those that be found about Thebes in Egypt are without red and white veins: howbeit, the ele also be effectuall against scorpions. Of the same credit likewise are the Cyrian Agats. Some hold opinion, that the singular grace and commendation of an Agat, is to be clear and transparent like glasse. There be found of them in Thrace, & about the mountain Oeta, in the hill Per-nassus, in Lesbos and Messene, and such haue floures imprinted in them like those which grow in the highwaies and paths by the fields: also in the Island of Rhodes. But the Magitians observe diuers other sorts; and as for those that be like vnto a Lions skin, they haue the name to be powerfull against scorpions. In Persia they are persuaded, That a perfume of such Agaths turneth away tempests and all extraordinary impressions of the aire, as also stayeth the violent streame and rage of riuers. But to know which be proper for this purpose, they vse to cast them into a cauldron of seething water; for if they coole the same, it is an argument they be right, but to be sure that they may do good, they must be wrought to the haire of a Lions mane: for as touching those Agates which seeme to haue the print of an Hyznes skin, the Magitians cannot abide them, as causing discord in an house. But they hold, That the Agath of one simple colour causeth those wrestlers to be inuincible who haue it about them. And a proof hereof they take by seething it in a pot full of oile, with diuers painters colours; for within one two houres after it hath siuered and boiled therein, it will bring them all to one entire colour of vermilion. Thus much of Achates or the Agath. The stone which is named Acopis resembleth Sal-Nitre: hollow and light it is in manner of the pumish stone, howbeit spotted with golden spots or drops in manner of starrs. Seeth this gently in oile, and therewith anoint the body, it I riddeth away all wearinesse and lassitudes, if wee may beleue the Magitians. The stone Alabastrites is found about Alabastrum a city in Egypt, and Damasco in Syria, white of colour it is, and intermeddled with sundry colours. This being calcined with Sal-gem and reduced into powder, is said to correct a stinking breath and strong fauor of the teeth. In the gessiers of cocks there be found certaine stones, called thereupon Alethorix, which in shew resemble Crytall, and be as big as beans. Milo that great Wrestler of Crotona vsed to carry this stone about him, whereby he was inuincible in all the feats of strength or a iustitie that hee tried, as Magitians would seem to persuade vs. Androdamas is a stone of a bright colour like siluer, and in manner of a Diamant, square, and alwayes growing in a table Lozenge-wise. The Magitians suppose, that it tooke that name of repressing the anger and furious violence of men. As touching Argyrodamas, whether it be the same or another stone, Authors haue not resolved. Antipathes is a stone all blacke, and nothing at all transparent. You shall find whether it be a true stone or no by seething it in milke, for no sooner is it put in, but it causeth the milke to look like Myrrh. The Magitians would haue vs to thinke, That it is good against Vitchcraft and eye-biting especially. Arabica is passing like vnto Iuorie, and for Iuorie might it go, but that it is so hard, which bewraith it to be a stone. It is thought, that as many as haue it about them shall finde ease of the paine of the sinues. The stone Aromatites is thought principally to grow in Arabia, and yet it is found in Egypt about Pyra: but wherefoeuer it is to be had, a hard stone it is, in colour and smell both resembling Myrrh: in which regard it is much vsed of queenes and great ladies. Asbestos is ingendred within the mountaines of Arcadia, and is of an iron gray L colour. As for a Spilate, Democritus saith, that it is bred in Arabia, and of a fiery colour: which by his saying, ought to be tied with camels haire, and so hung fast about them that be troubled with the schirrophies of the spleen: also (if he say true) it is found in the nest of certain Arabian birds. Another also of that name groweth there in the cape Leucopetra, but it is of a siluer colour, and glittereth withall: excellent to be borne about one against the phantastical feares and imaginations in the night season. The same Democritus saith, That in Persia, India, and the mountaine Ida, there is a stone found named Artizoë, glittering bright as siluer, three fingers thicke, formed in manner of a Lentil, and of a pleasant and delectable fauor: The Sages of Persia neuer go about the election and ordering of a King, but they thinke it necessarie to haue it about them. As for the Augites, many be of opinion, that it is no other stone than Callais, to wit, the Turquois. Amphitane is a stone knowne by another name also, Chryocolla: found it is in that part of India where the Pismires Volant do take out gold; where it resembles gold, and is in fashion four-square. It is reported constantly, that it hath the same force naturally that the Loadstone hath, but that it draweth gold to it as well as iron. Aphrodisiace is partly white, and

A and partly reddish. A sykos being once heat at the fire, will continue a seuen-night after hot: blacke it is and ponderous, hauing certaine veins that diuide it: it is thought to be good against cold. As touching Egyptilla, Tacchus taketh it for a white stone, with a veine partly of a Sard or Cornalline, and partly blacke, passing through it ouerthwart: howbeit the common sort take Egyptilla to be blew, with a blacke mote in the bottome.

As for the stone Balanites, there be two kinds thereof; to wit, of a greenish colour, and resembling Corinth brasse: the former cometh from Coptos, the other out of the region Troglodytica; and they haue a ferie vaine cutting them just in the mids. The same Coptos sendeth other stones to vs besides, to wit, those which be called Batrachites; the one like in colour to a frog, a second to * yuory, the third is of a blackish red. * Baptes, how soeuer otherwise it be soft and tender, yet an excellent odor it hath. The stone called Belus eie is white, and hath within it a black apple, the mids whereof a man shall see to glitter like gold: this stone for the singular beautie that it hath, is dedicated to Belus the most sacred god of the Assyrians. There is another stone named Belus, growing (as Democritus saith) about Arbela, to the benefice of a wall-nut in manner and forme of glasse. As for Baroptenus or Baropitis, it is black, interlaced as it were with certain knots, both white and also of a sanguine red, after a strange and wonderful manner. Botrytes is found sometime black, otherwhiles red, & like it is to a cluster of grapes when it beginneth first to knit. As for it which is more like to the hair of women, Zoroastres calleth it * Boltrychites. * Bucardia resembleth an ox heart, and is to be found onely about Babylon. Brotia is shaped in manner of a Tortoise head: it fallieth with a crack of thunder (as it is thought) from heauen: and if we wil beleue it, quencheth the fire of lightning. Bolæ are found after a great storm or tempest, resembling a clod.

Cadmitis were the very same which they call Ostracitis, but that otherwhiles it is compassed about with certain blew bubbles. Callais comes very neere to the Saphir, but that it is whiter, and resembleth rather the water of the sea about the shore. Capnites (as some thinke) is a kind of stone by it selfe, beset with many wreaths, and those seeming to smoke, (as I haue faid already in due place: the naturall place of it is Cappadocia and Phrygia: in some sort it is like yuory. As touching Callainæ, it is commonly said, that they be found alwayes many joined together. Catochites is a stone proper to the Island Corsica: in bignes it exceedeth ordinary precious stones; a wonderful stone, if all be true that is reported thereof, and namely, That if a man lay his hand D thereupon, it will hold it fast in maner of a glewic gum. Catopyrites groweth in Cappadocia. Cepites or Cepocapites, is a white stone, and the veins therein seem to meet together in knots; and so white and cleare withall, that it may serue as a mirrour to shew ones face. Ceramites in colour resembleth an earthen pot. As for Cinædix, they be found in the braine of a fish named Cinædus: white they be and of a long fashion, and of a wonderful nature, if wee may beleue that which is reported of the euent which they signifie; and namely, that according as they be cleare or troubled in colour, they do presage either storms or calm at sea. Cerites is like to wax; and Circos, vnto wreaths or circles. Corfoides, is made in manner of a gray peruke of haire: Corallo-achates, vnto a Corall set with gold spots: Corallis, to Vermillion, and is ingendred in India and Syene. Craterites hath a colour betwene the Chrysolith and the bafe gold Eletrum, E of an exceeding hard substance. Crocallis doth represent a chyff. Cyfites is engendred about Coptos, and is of a white color: it seemeth as it were to be with child; for something stirs and rattleth within the belly if it be shaken. Calceophonos is a blacke stone: if a man strike vpon it, he shall perceiue it to ring like a piece of brasse: and the Magitians would persuade those that play in Tragœdies to carry it about them continually. As for the stone Chelonia, there be two sorts of it: in colour they do both resemble the Swallow, and of one side which is purple, you shall see black spots intermingled here and there among. Chelonia is no more but the very eie of an Indian Tortoise: of a most strange nature by the Magitians saying, and working great wonders, but they will lie most monstrously: for they would promise and assure vs, That after one hath well rinsed or washed his mouth with hony, and then lay it vpon the tongue, he shall presently haue the spirit of prophesie, and be able to foretell of future things all a day long, either in the full or change of the Moon: but if this be practised in the wane of the Moon, he shall haue this gift but onely before the Summe-rising: vpon other daies, namely while the moone is croissant, from six of the clock or sun-rising six houres after. Moreover, there be certaine stones called Chelonitides, because they be like to Tortoises, by which these Magitians would seeme

to tell vs by way of prophesie and reuelation, many things for to allay tempests and stormes: but especially the stone of this kinde which hath golden drops or spots in it, it together with a flie called a beetle it be cast into a pan of feeding water, it will auert tempests that approach. Chlorites is a stone of a grassie green colour, according as the name doth import; and by the saying of Magitians, it is found in the gellier of the bird called Motacilla or Wagtaile, yea and is ingendred together with the said bird. They giue direction (forsooth as their manner is) to in-chale or inclose it with a piece of yron, and then it will doe wonders. Chalcipites taketh that name of the riuer Choafpes, green it is and resplendent like burnished gold. Chrysolampis is found in Æthiopia; all the day long of a pale colour, but by night it glows in manner of a cole of fire. Chrytopis is so like to gold, as a man would take it for no other. The stones called Cepionides, grow in Æolis about Atarne, a little village now, but sometimes a great town: they haue many colours, and be transparent; sometimes in manner of glasse, otherwiles like Crystal or the lasper: such also as be not cleare through, but toulle and thick within, are notwithstanding so pure and neat without, that they will represent a man or womans visage as wel as a mirror or looking glasse.

Daphnias is a stone, whereof *Zoroastres* writeth, and namely that it is good against the falling sicknesse. Diadochus is like to Berill. Diphris is of two kinds, the white and the black, the male and the female; wherein may be perceived very distinctly, those members that distinguish the sex, of a certain line or vein of the stone. Dionysias is a blacke stone and hard withall, hauing certain red spots intermingled: if it be stamped in water, it giueth the taste of wine, and is thought to withstand drunkennesse. Draconites or Dracontia, is a stone ingendred in the brains of serpents, but vlesse it be cut out whiles they be alieue, namely after their heads be chopt off, it neuer grows to the nature of a precious stone, for of an inbred malice and enuie that this creature hath to man, if perceiuing it selfe to languish and draw on toward death, it killeth the vertue of the said stone: and therefore they take these serpents whiles they be asleepe, and off with their heads. *Sotacum* (who wrote that he saw one of these stones in a kings hand) reports, that they who go to seek these stones vse to ride in a coach drawn with two steeds, and when they haue espied a dragon or serpent, cast in their way certain medicinale drugs to bring them asleepe, and so haue means and leisure to cut off their heads: white they are naturally & transparent, for impossible it is by any art to polish them, neither doth the lapidary lay his hand to them.

Encardias is a precious stone, named also Cardias: one sort there is of them, wherein a man may perceiue the shape of an heart to beare out: a second likewise there is so called, of a greene colour, and the same doth represent also the forme of an heart: the third sheweth the heart only black, for all the rest is white. Enorchis is a faire white stone; the same being diuided, the fragments thereof do resemble a mans genetours, whereof it took that name. As touching Exhebeus the stone, *Zoroastres* saith, that it is most beautifull and white, and therewith goldsmiths vse to burnish and polish their gold. As for Eritalis, being of it selfe a white stone, seemes as a man holdeth it to wax red. Erotalos, which some call Amphicoene, others Hieromnemon, is commended much by *Democritus*, for sundry experiments in prophesying and foretelling fortunes. Eumeeres groweth in the Baſtians country, like to a flint; being laied vnder a mans head lying asleepe vpon his bed, it representeth by visions and dreams in the night all that hee is desirous to know, euen as well as an oracle. As for Eumetres, the Assyrians call it the stone or gem of *Belus*, the most sacred god among them, & whom they honor with great deuotions; as green it is as a lecke, and serueth very much in their superstitious inuocations, sacrifices, and exorcisms. Eupetalos hath foure colors, to wit, of azur, fire, vermilion, and an apple. Eucrois is like the stone of an oliue, chamfered in manner of winkle shels, but very white it is not. Eurortias seemeth to haue a certain mouldines that couers the black vnderneath. Eusebes seemeth to be that kind of stone whereof (by report) was made the seat in *Heraclis* temple at Tyros, where the gods were wont to appear and shew themselves. Merouer, any precious stone is called Epimelas, when being of it selfe white, it is ouercast with a blacke colour aloft.

The gem Galaxias, some call Galaſites, like vnto those last before-named, but that it hath certain veins either white or of a bloud colour running between. As for Galaſites indeed, it is as white as milk, and therupon it took that name. Many there be who call the same stone Leucas, Leucographias, & Synnephites, which if it be bruised yeeldeth a liquor resembling milk, both in color and taste; in truth, it is said, that it breeds store of milke in sources that giue suck: also that

A that if it be hung about the necks of infants, it caueth saluation, but being held in the mouth, it melteth presently. Merouer, they say, that it burthens memory and caueth obliuion: this stone cometh from the riuer Achelous. Some there be, who call that Emeraud Galaſites, which seemeth as it were to be bound about with white veins. Galaicos is much like to Argyrodamus, but that it is somewhat fouler: commonly they are found by two or three together. As for Galidanides, we haue it from the Medians, in colour it resembleth blades of come, and seemes best here and there with floures: it groweth also about Arbelæ: this gem is said likewise to be conceiued with young, and by shaking to bewray and confesse a child within the wombe, and it doth conceiue euery three moneths. Glossipetra resembleth a mans tongue, and groweth not vpon the ground, but in the eclipse of the Moone falleth from heauen, and is thought by the magicians to be very necessary for pandors and those that court faire women: but we haue no reason to beleue it, considering what vaine promises they haue made otherwaies of it: for they beare vs in hand, that it doth appeale winds. Gorgonia is nothing els but Coral: the name Gorgonia groweth vpon this occasion, that it turneth to be as hard as a stone: it assuageth the trouble of the sea and maketh it calme: the magicians also affirme, that it preferueth from lightning and terrible whirlwindes. As vaine they be also in warranting so much of the hearbe Guiane, namely, that it will worke reuenge and punishment vpon our enemies.

The pretious stone Heliotropium, is found in Æthiopia, Affricke, and Cyprus: the ground thereof is a deepe green in manner of a lecke, but the same is garnished with veins of bloud: the reason of the name Heliotropium is this, For that if it be throwne into a pale of water, it changeth the raies of the Sun by way of reuerberation into a bloudie colour, especially that which cometh out of Æthiopia: the same being without the water, doth represent the body of the Sun, like vnto a mirror: and if there be an eclipse of the Sun, a man may perceiue easily in this stone how the moone goeth vnder it, and obſcureth the light: but most impudent and palpable is the vanity of magitians in their reports of this stone; for they let not to say, that if a man carrie it about him, together with the herbe Heliotropium, and besides mumble certaine charmes or prayers, he shall goe inuisible. Semblably, Hephæstites is of the nature of a looking glasse, for although it be reddish or of an orange colour, yet it sheweth ones face in it: it means to know this stone whether it be right or no, is this: in case being bur into scalding water, it presently cooleth it; or if in the Sun it will set on fire any dry wood or such like fiewel: this stone is found growing vpon the hill Corycus. Homnides is a stone so called, in regard of the greene colour that it hath resembling the herbe Clarie; for otherwhiles it is white, and sometime againe blacke, yea and pale now and then; howbeit hooped about it is with a circle of golden colour. Hexacoſtalithos, for bignesse is but small, and yet for the number of colours that it hath, it got this name: found it is in the region of the Troglodytes. Hieracites changeth colour all whole alternatiuely by turns; it seemeth to be blackish among kites feathers. Hammites resembleth the spawne of fishes: and yet some of them be found as it were composed of nitre, and otherwile it is exceeding hard. The pretious stone called Hammons-horne, is reckoned among the most sacred gems of Æthiopia: of a gold colour it is, and sheweth the forme of a rams-horne: the magicians promise, that by the vertue of this stone, there will appeare dreames in the night which represent things to come. Hormesion is thought to be one of the loueliest gems that a man can see, for a certaine fiery colour it hath, and the same spreadeth forth beams of gold, and alwaies carrieth with it in the edges a white and pleasant light. Hymnatarooke the name of the Hynes eie: found they are in them when they be assailed and killed: and if we may giue credit to Magitians words, if these stones be put vnder a mans tongue, hee shall presently prophesie of things to come. The bloud-stone Hammatites is found in Æthiopia principally, & those be simply the best of all others, howbeit there are of them likewise in Arabia and Affricke: in colour it is like vnto bloud, and so called: a stone that I must not ouerpasse in silence, in regard of my promise that I made to reprove the vanities and illusions of these impudent & barbarous magicians who decieve the world with their impostures: for *Zacharias* the Babylonian, in those books which he wrote to king *Mithridates*, attributeth vnto gems all the destinies and fortunes that be incident vnto man: and particularly touching these bloud-stones, not contented to haue graced them with medicinale vertues respectiue to the eies and the liuer, he ordained it to be giuen vnto those for to haue about them, who carry any Petition to a king or great prince, for it would speed and further the suit: also in case of law matters it giueth good issue

and sentence on their side, yea and in wars, victory ouer enemies. There is another of that kinde, called by the Indians Henui, but the Greekes name it Xanthos: of a whitish colour it is vpon a ground of a yellow tawne.

The stones called Idai. Dactyli, be found in Candy: of an yron colour they be, and resemble in forme the thumb of a mans hand. As touching Icteria, there be foure kinds thereof, to wit one like to a pale coloured bird called the Lariot, and therefore is thought to be good against the jaundice: a second there is of the same name, but more enclining to a swert color: the third resembleth a green leafe, broader than the former, weighing little or nothing, and is besides full of pale and wan veins: the fourth is of the same colour, but it hath blacke veins running too and fro. The stone called Iupiters gem, is white, light, and tender. The stone Indico taketh name of those nations from whence it cometh, the colour outwardly is somewhat reddish, and if it be rubbed, there cometh from it a certain purple humour in manner of a sweat. There is another of that name, but it is white, and sheweth like vnto dust or powder. The same Indians haue another gem called Ion, for that it resembleth the colour of the March violet; but feldome shall a man see it with a fresh and gay blew indeed.

The stone Lepidotes doth represent scales of fishes in sundry colours. Lesbias taketh name of the Isle Lesbos the native place thereof: howbeit they are found in India likewise. Leucophthalmos, is otherwise reddish or tawne, howbeit in that colour it carrieth the forme of an eie, both for white and blacke. Leucopetalos sheweth white in manner of snow, and yet the same is garnished with a lustre of gold. Libanocrus in colour resembleth frank incense, but a liquor or moisture it yeldeth answerable to hony. Limonites seemeth to be all one with the Emeraud. As touching the vntuous stone Liparis, I find this only written of it, That a flinke or perfume thereof fetcheth forth any venomous vermine. The stone Lysimachus is like vnto the marble of Rhodes, and hath in it certaine veines or streakes of gold: This stone must be polished vpon marble and when all the superfluities be fetched off, it is found to grow narrow pointwise. Leucocorys seemeth to be made of a Chrysolith, hauing white veins or streakes betwene.

A gem there is called Memnonia, but I haue not read the description thereof. As for Media, it is a blacke stone, and found it was first by that famous *Aleides*, of whom the Poets write so many fables, yet certaine veins it hath of a golden colour: a kind of sweat it flieth from it yellow as saffron, and in tast much resembling wine. Meconites doth represent expressely, poppy heads. The stone Mitrax we had from the Persians, and the mountains along the red sea: many colours it hath, and against the Sun it glittereth diuersly. Merocites is green like vnto a lecke, and yet if you rub it, you shall see a humour come from it like to milke. The Indian stone Morion (which is most blacke and yet transparent) They call Prammon: if it be intermingled with the fiery red of the Carbuncle or Rubie, they call it Alexandrinum; like as the Cyprian, Morion, which hath a shew of the Sarda or Cornalline: found there be of them in Tyrus and Galatia. Xenocrates reporteth, that vnder the Alpes also they be gathered. These be the gems that be fitted for to engrave the forme of any thing from a pattern. As for Myrinites, it hath the colour of Myrrhe, and the forme of a fine pretious stone: it yeldeth the smell of a sweet perfume or ointment, and being rubbed giueth a sauer also of Nard. As touching Myrmecias, it is blacke, and hath certain rifings in it like to werts. Myrinites in colour resembleth hony, and in odour the myrtle. Mesofolucos is a gem diuided iust in the mids with a white line: contrariwise, Mesomelas, when there is a blacke line cutteth through any other colour in the midst.

Nafamonites is in colour like to bloud, howbeit certaine blacke veins it hath. Nebrites is a stone consecrate to god *Bacchus*: it tooke that name of the resemblance which it hath to those skins of deere that he was wont to weare: there be others of the same kind, but blacke they are. The gem Nympharea keepeth the name of a city and nation in Persia, and it resembleth the teeth of a water-horse.

Orca is the barbarous name of a certaine pretious stone, which is very pleasant vnto the eie: wherein concur together blacke, yellow, Greene, and white. Ombria, which some call Notia, is said to fall from heauen in stormes, showers of raine, and lightening, after the manner of other M stones, called thereupon Ceraunia and Brontia: and the like effects are attributed to it, as be reported of Brontia: and thus much moreover, That so long as it lieth vpon the hearth of an altar, the * libaments will not burne that be offered thereupon. Orites is in forme round as a globe: some call it Siderites, it will abide the fire and feele no harme thereby. Ostracias or Ostracites is made

A made in manner of a shell, and is exceeding hard. A second kinde there is of it resembling an Agath, but that an Agath in the polishing seemeth to looke greasily, which the Ostracias doth not. And the harder kind of this stone is of that power, that the fragments thereof will serue to engrate other gems. As for Ostracites, it took the name of an Oystre shell, which it doth represent. The Barbarians haue a pretious stone, which they call Ophicardelos, blacke of colour, and the same enclosed with two white lines or circles. As touching the stone Obidianus, I haue written sufficiently in the book going next before: and yet there be certain gems of that name, and carrying the same color, not only in Æthiopia and India, but also in Samnium, as some are of opinion, yea, and in the coasts of the Spanish Ocean.

Panchrus, according to the name, seemeth to consist (in manner) of all colours. Pangonius is no longer than a mans finger: it differeth from Cryfall in this onely, that it hath more angles in number, whereupon it got the name. As for Paneros, what manner of stone it is *Metodorus* hath not set down, howbeit he reciteth an elegant verse of queen *Timaris*, which together with the stone the consecrated to *Venus*: whereby is giuen to vnderstand, That by the meanes thereof she became fruitful and bare children: Some there be who call this gem Pansebaston. Now concerning the gems of Pontus, knowne by the name of Pontica, there be many sorts of them. One is full of stars, garnished with bloody or blacke specks in maner of drops; and this is counted among the sacred stones: another in stead of starres hath strakes and lines onely of the same colours; and there be of them again which represent the forme of mountains and vallies. The gem Phlogionis, which is called likewise Chrysites, is found in Ægypt, and is likened vnto the Ostracias of Attica. Phoenicites tooke the name of the similitude that it hath to a Date. And Phycites was so named, because of the likenes it hath to the sea weed or leucuce, named Phycos in Greeke. Perileucos is a stone, so called by occasion of a whitish lace that seemeth to go from the mouth of the gem downe to the very bottome. The gems Pæantides, which some name Gemonides, are said to conceiue and to bring forth other little stones: but a singular vertue they haue to help women that be in trauell of child-birth. Such be found in Macedonie, nere vnto the monument or sepulchre of *Tiresias*, and that which they bring forth, seemeth like vnto water growne to be congealed into yce.

The Sunnes gem is white, and after the manner of the Sunne, whose name it beareth, it casteth forth shining raies round about on euery side. Sagda is a stone, which the Chaldeans find sticking to ships, and they say it is Greene as Porrets or Leekes. Samothracia the Island yields vs a pretious stone of the owne name, blacke of colour, light in hand, and like to [rotten] wood. As for Saurites, it is found (by report) in the belly of a green Lizard, slit open with the edge of a cane or reed. Selenites is a pretious stone, white & transparent, yeelding from it a yellow lustre in manner of hony, and representing within it the proportion of the Moone, according as she groweth toward to the full, or decreaseth in the wane against the change: This admirable stone is thought to be found in Arabia. Siderites is much like to yron: and supposed it is, That if it be brought among them that are at some variance or controuersie already in law, it will breed discord and maintain dissention still. Of this Siderites is made another stone, which is engendered in Æthiopia, called Sideropæciolus, for the sundry spots therein. Sponges is like vnto a sponge, even as it carrieth a name respectiue vnto it, Synodontites cometh from the braine of certaine fishes called Synodontes. The stones Syrtice be found in the shore of the Syrtis in Barbary, yea, and in Lucania, shining with the colour mixt of saffron and hony, but within they containe certaine starres, which haue but a dim and dusky light. The stone Syringites is hol- low throughout in manner of a pipe, and is like vnto a straw betwene two joints.

Trichrus that cometh out of Affricke is blacke, howbeit if it be rubbed it yeldeth three kinds of humours from it, to wit, from the root or bottome blacke, out of the mids like bloud, and in the head white. Telirhizos is of an ash colour or reddish, and yet the bottome thereof is a lovely & slightly white. Telicardios is much esteemed in the realme of Persia, where it is engendered: in colour it resembleth the heart, and they call it there in their language, a Spot. The stone Thracia is of three kinds; the first green, the second more pale, and the third full of spots of bloud. Tephritis, although otherwise it be of the color of a shes, yet it represents a new Moon crescent and tipped with hornes. Tecolythus seemeth like to the stone or kernell of an Olive: It is not raunged in the number of pretious stones, but whoeuer licketh thereof, shall find, That it will breake the stone and expell it. The stone called *Venus* haire, is exceeding black and shining;

* Liquidior.

* As the haire growing in the forehead, and such things, whereof allay was giuen first to the fire.

how it maketh a shew of red haies sprinkled among.

Veiientana is a gem proper vnto Italie, found about Veiij, a citie in Tuscane: this stone is blacke and crossed through the middelt with a white path.

Zanthenes (as *Democritus* writeth) is found ordinarily in Media: in colour it resembleth base gold Electrum: and if a man doe stampe it in Date wine and Saffron together, it will relent in manner of wax, and cast a most sweet and pleasant smell. Zmilaces is a stone which the riuier Euphrates yeldeth, like to the marble of Proconessus, but that in the middelt it hath a greennish colour. Finally, Zoronifios is engendered in the riuier Indus: commonly it is called the Magicians gem: more of it I find not written.

CHAP. XI.

¶ Of certaine precious stones, taking their names from the members of mans body, from beasts also and other things.

BESIDES those gems comprehended vnder the Alphabet, there be more pretious stones also compriled after other sorts of distinction, according to diuers significant varieties: for some there be which bear the names of certain members of the body, as for example, Hepatitis, of the liuer, Steatitis, of the sundry sorts of fat, grease or tallow of each beast. Adad * Nephros is a stone worshipped among the Ægyptians, so is Theudaetylus also. As for Adad, hee is the chiefe god among the Assyrians. The stone Triophthalmos groweth together with the Onyx stone, and representeth three eies of a man together.

There be gems take their nan as likewise of beasts, to wit, Carcinias of the colour which the sea-crab hath; Echites, of a Viper; Scorpiotes, either of the color or form of a Scorpion; Scarites, of the fish Scaurus; a Gilt-head; Triglites, of the Barble; Ægopthalmos, of a Goats eye, like as another, for the resemblance that it hath to the * eie of a wine. Geranites tooke name of a cranes color, euen as Hieracites of the Hawkes of Faulcons color. Aitties resembls the color of that Ægle which hath a white taile. Mymerites sheweth the forme of a Pismire creeping within the stone; so doth Cantharias, of Beetles. Lycophthalmos hath the resemblance of a Wolfes eie, and consists of 4 colours; the outward parts are tawnie, inclining to a blood red, in the middelt there is a black, enclosed within a white circle, as like to the said eie as possibly can be. The stone Toas is like to a Peacock, euen as the gem Chelonia to the Tortoise. In Hammo-chryfos there is a resemblance of sand, as if sand & gold were entermingled. Cenchrites is made like to the graines or seeds of Millet scattered here and there. Dryites hath a great affinity with the stock of a tree; and the same will burn after the manner of wood. Ciffites is white, and in that white shining seemeth to be clasped euery where with leaues of vyie. Narcissites likewise is distinguished and parted with veines of vyie. Cyamea is black, but being broken, it yeldeth out of it a resemblance of a Beane. Pyren is so called by reason of an oliue stone or keruill which it resembls; within this stone there appeare otherwhiles as it were fish bones. Chalzias as it carrieth the name of haile, so it representeth as well the color as the shape thereof; but as hard it is as the Diamant: It is reported also, that if it be put into the fire, yet it wil continue cold & not alter a whit. The fire stone Pyrites is verily black: but rub it with your finger, you shall find it to burne. Polyzonos is a black stone of it selfe, but many white fillets it hath about it. Astrapias is white or blue like Azur, yet from the middelt thereof it seeme to shoot raies of lightening. In the stone Phlegontis there appeare a burning flame within, and neuer cometh forth. In the Granat named Authracitis, there is a shew otherwhiles of sparkles running to & fro. Enhydros is euermore absolutely smooth and white, containing within a certain liquor that moueth too and fro if a man shake it, as he may perceiue in egges. Polytrix is a Greene stone, bedecked with fine veines in manner of the haire of ones head: but (by report) it will make the haire to shed off as many as carry it about them. Of a Lions skin, Leontios beareth the name like as Pardalios of a Panther. The golden color in the Topaze gaue it the name Chrysolith: so the grasse green of a Lecke was occasion of the name Chrysoprasos: and of hony was deuised the colour and name Melichrus, although there be many kinds of it. As for Melichloros it is of two colours, partly yellow, and partly resembling hony. Crocias is yellow as Saffron: and Polia sheweth a certaine greynesse in manner of Spart. As for Spartopolios the blacke, it sheweth like grisly veins to the other, but much harder. Rhodites tooke name of the Rose: Melites of the apple, the colour where-

A of it shews: Chalchites of brasse, and Sycites of a fig. I see no proportion or reason at all between the stone Borsycites and that name; this stone is blacke and branching, and the leaues are white, or red like blood, no more than I do in Gemites, which representeth (as it were) engrauen in the stone, white hands clasped one within another. As for Ananchitis, it is said, That spirits may be raised by it in the skill of Hydromantie: like as by Synochitis, the ghosts which are raised, may be kept about still. What should I speake of the white Dendritis, which if it be buried in the ground vnder a tree that is to be fallen, the edge of the axe that heweth it, will not turne or wax blunt. There be a number of other, and those in nature more prodigious than the rest, for which the Barbarians haue deuised strange names, professing to vs, that they were stones indeed. for mine owne part it shall suffice that I haue disproued their lies in these abouenamed.

CHAP. XII.

¶ Of new stones, and those naturall, of such as be counterfeited and artificiall. Of diuers formes and shapes of gems.

THERE grow still precious stones vnlooked for euery day, that bee new and haue no names, such as that in Lampacis, where one was found in the gold mines so faire and beautifull, that it was thought a present worth sending to K. Alexander the Great, as *Theophrastus* writeth. As touching the stones Cochlides, which now are most common, they seeme rather artificiall than naturall: and verily it is said, That in Arabia there be found of them huge masses which are sodden in hony 7 daies and nights together continually; by which means, after that all the earthy and grosse refuse of this stone is taken away, the stone it selfe remaineth pure and fine: and then coming vnder the lapidaries hand, they be diuided into sundry veines, and reduced into drawne or inlaid worke of Marquette, as he will himselfe. And herein is seen the cunning or the cutter, for that it is so vendible, & euery mans money. In old time they were made of that bignesse, that the KK. of the East had their horses fet out therewith, not only in their frontals, but also in the pendants of their caparisons. And verily, al other precious stones being decocted in hony, look faire and neat with a pleasant lustre: but principally the Coricks, which abhor all things els that are more eager than hony. Moreover, this is to be noted, that our lapidaries haue a tearme for those stones which are of diuers colors, and they call them Phyes, as if they had not another vsuall name for them: & this they do in the subtilty of their wit, to make them seeme more wonderful by these strange words of art, as if they would vendit them for their very wonders of Natures worke: whereas indeed there be an infinit number of names, deuised all by the vain Greeks, who knew not how to make an end, which I purpose not to rehearse; and verily, after I had discoursed of the noble and rich stones, I contented my selfe in some sort to specifie those of a baser degree, such I mean as were more rare than others, & to distinguish them that were most worthy to be treated of. But this effusions would be remembered, that one & the selfe same stone chengeth the name, according to the sundry spots, marks & werts that arise in them: according also to the manifold lines drawn in them, the diuers veins running between, and the variety of colors therein obserued. It remains now to set downe some generall obseruations indifferant to all sorts of gems, and that after the opinion of the best approued and experienced authors in this kind. Any stones that be either hollow & sunk in, or bearing out in boss or belly be nothing so good as those which cary an euen and leuell table. The long fashioned gems are most esteemed: next to them such as be formed like to linell seed: after them those that be round in manner of a targuete: and as for such as be made with many faces & angled, they be of another least accounted of. To discern a fine & true stone from a false and counterfeited, is very difficult, forasmuch as there is an inuention to transform true gems into the counterfeite of another kind. And in truth men haue deuised to make Sardonych by setting and glewing together the gems named Ceraunia, & that so artificially, that it is vnpossible to see therein mans hand: so handsomely are couched, the black taken from this, the white from that, & the vermilion red from another, according as the riches of the stone doth require, & all those in their kind most approued. Moreover, there be in my hands certain books of authors extant, whom I wil not nominate for all the good in the world, wherein is deciphered the manner and means how to giue the tincture of an Emeraude to a Crytall, & how to sophisticate other transparent gems; namely, how to make a Sardonyx of a Cornalline, & in one word, to transform one stone into another: & to say a truth, there is not any fraud or deceit in the world turneth to greater gain and profit than this.

Let other writers teach how to deccie the world by counterfeiting gems, for mine own part I will take a contrary courie, and shew the means how to find out false stones that be thus sophisticat: for surely, wanton and prodigall though men and women bee in the excessive wearing of these jewels, yet meet it is they should be armed and instructed against such counsellers. And albeit I have already touched somewhat respectively as I treated of the chiefe & principall gems, yet I will adde somewhat more to the rest: first and formost therfore this is observed, That all stones which be transparent, ought to haue their triall in a morning betimes, or at the farthest (if neede to require) within foure hours after morning light, but in no wise later. Now there be diuers experiments that serue for this purpose, to wit, the weight of a stone, for commonly the fine gem indeed is heavier than the other: secondly, the very body and substance is to be considered; for it is an ordinary matter to see in the ground and bottome of falsified stones certain litle pushes as it were rising out, to seele them rough in hand outwardly; also to perceiue their filaments not to continue their lustre surely, and to beare it out to the very eie, but commonly in the way to vanish and be spent. But the most effectually proofe of all, is to take a litle fragments, to be ground afterward vpon a plate of yron: but lapidaries will not indure this triall, they refuse also the experiment made by the file: furthermore, the fragment of the black Agath or Geat, will not raise or skarifie true gems. Item, false stones if they be pierced or ingrauen, will shew no white. Such difference there is moreouer in stones, that some some all ingrauen with an yron pounce: others likewise cannot be cut but with the instrument or grauer bent & turned back: but there is not one but may be ingrauen with the Diamant. And verily, the most material thing herein, is to heare the grauing Steele or pounce.

As touching riuers that afford precious stones, Acesines and Ganges are the chiefe: and of all lands, India is the principall.

And now hauing discoursed sufficiently of al the works of Nature, it were meet to conclude with a certain general difference between the things themselves, and especially between country and country. For a final conclusion therefore, go through the whole earth and all the lands lying vnder the cope of heauen, Italy will be found the most beautiful & goodliest region vnder the Sun, surpassing all other whatsoeuer, and worthily to be counted the chiefe and principall in euery respect: Italy (I say) the very lady and queen, yea, a second mother next to dame Nature of the world: chiefe for hardy men, chiefe for faire and beautiful women, enriched with captaines, souldiers, and slaues: flourishing in all arts and sciences, abounding with noble wits and men of singular spirit, situated vnder a climat most wholesome and temperate, seated also commodiously (by reason of the coasts so full of conuenient hauens) for traffick with all nations, wherein the winds are most comfortable (for it extendeth it selfe and lieth to the best quarter of the heauen, euen in the midst just between East and West); hauing waters at command, large forests & faire, and those yeelding most healthfull air; bounded with mighty rampiers of high mountains, stored with wild beasts, and those harmlesse: finally, the ground so fertile for corn, the soile so barke for L herbage, as none to it comparable. In summe, whatsoeuer is necessary and requisite for the maintenance of this life is there to be had, in no place better: all kind of come and grain, wines, oile, wooll, linnen, woollen & excellent beests; as for horse, flesh, and yron, it gaue place to no country whatsoever, so long as it pleased the state to employ it that way; and in lieu of those rich commodities which it hath still within her womb, she yeeldeth tovs variety of good liquors, plenty of all sorts of corn, and abundance of pleasant fruits of all kinds. But if I should speake of a land after Italy (setting aside the monstrous and fabulous reports that go of India) in my conceit Spaine is next in all respects, I meane those coasts which are inuironed with the sea.

FINIS.



An Index pointing to the principall matters contained in the second Tome of Plinies naturall Historie.

A B

A C

- A** Baculi, what they be, 598.l.
 Abaculus, an Iland, 606.l.
 Abiga, an hearbe, 181.r. why so called, ibid.
 Abort, what things do cause, 101.r. 100.r. 129.r. 286.r.
 309.b. 340.b. 396.l. 427.r. 449.r.
 women hauing suffered Abort, how to be cured, 104.b.
 Abort how to be prevented, 312.l. 319.f. 339.r. 396.f. 437.m.
 398.m. 403.r. 417.r. 448.l. 590.m. 591.l.
 Abortiue fruit, how to be fetched away when a woman trauelleth therewith, 180.g. medicines causing Abort not to be put downe in writing, 213.d.
 Abredixtus, a surname that Parricida the painter filied himselfe with, 536.b.
 Abron a painter, 549.f.
 Abshiniter. See Wormeewood wine.
 Absteriue medicines, 144.g. 197.d.
 Absistence from wine medicinal, 303.c. from all drinks, ibid. from flesh meats, ibid.
- A C**
 Acacia, what it is, 194.f. from whence it cometh, ibid. how drawne, ibid.
 Academia, a house of pleasure, 402.g. why so called, ibid.
 Academia questions, why so called, 402.g.
 Acasos, or Acamon, what hearbe, 119.f.
 Acantibus, what hearbe, 194.i. the medicinal vertues thereof, ibid. how employed in the East parts, 194.k.
 Acausticus. See Groundswell.
 Acaros, what it is, 237.a.
 Acaigneta, an hearbe Magicall, 204.g. why so called, ibid. named also Dionysophyllum, and why, ibid.
 Accessie easie and famously to princes, how to be obtained, 357.b.
 Accidaria, what they be, 123.i. why so called, ibid.
 Accenta, when they be, 603.b.
 Acerata, what haies, 580.l.
 Accabulum, what measure it is, 113.c.
 Achate, a precious stone. See Agath.
 Achilles, what Images, 490.k.
 Achilles how he is painted, 516.b.
 Achilles, a singular wound hearbe, 216.i. found by Achilles, ibid. he cured prince Telepbus with it, ibid. the sundry names it hath, ibid. the description, ibid. the vertues, ibid.
 Achemenes, a magical hearbe, 203.b. the description, ibid. the wonderfull operation, ibid. 244.b. why called Hippobolus, 203.b.
 Ach of the hill or mountain Parsely, 24.g. the description, ibid. See Oreogelimum.
 Acidula, a water medicinal, a fontaine medicinal, 402.f. actually cold, ibid.
 Acidulum, a fontaine, 402.l.
 Acinos, what hearbe and the vertues, 111.b.
 Aconiti, what it signifieth, 549.d.
 Aconium, a poisonous hearbe, 43.e. a most speedie poison, 269.f. the description of it, 271.a. why called Cammoren, ibid. how it first was engendred, according to the Poets fables, 270.g. why called Thelyphonon, 271.a. how employed for the killing of Panthers or Libards, 270.i. named by some Scorpion, and why, 271.e. by others Chysitron, ibid. why called Aconitum, ibid.
 what remedies against Aconitum, 437. 119.a.
 153.b. 262.b. 170.g. 270.f. 270.i. 323.d. 363.e. 431.c.
 Aconitum how it may be used for the health of man, 270.g.
 Acopis, a pretious stone, 624.b. the description and vertues, ibid.
 Acopa, what medicines they be, 354.i. what go to them, 417.f. 426.g. 450.f. 491.b.
 Acopos, an hearbe. See Anagyris.
 Acornes, and their medicinal vertues, and properties, 177.f.
 Acoris. See Galengale.
 Acragus, a singular engrauer, 483.e. sundry peeces of his handy-works, ibid.
 Acrio, who was the first Empericke Physician that euer was, 344.b.
 Acriorari, a kinde of Bulbe, 19.a.
 All of generation how it is helped, 130.b. 131.a. 132.g. See more in Venus, how it is hindered, 58.k. 59.d. 187.r. 190.b. 221.d. 256.f. See more in Venus.
 L. Albus the Poet, 490.l.
 L. Albius being of low stature, caused his stature to be made tall, ibid.
 Albus Nanius the Augur, 491.b.
 Albius Nanius his statue creiled upon a Colonne at Rome, ibid.
- A D**
 Adad, the Assyrian god, 630.b.
 Adad Nephros, a pretious stone, ibid.
 Adamantus, a magical hearbe, 203.a. why so called, ibid. the strange vertues and properties thereof, ibid.
 A'area. See Calamachnu.
 Adace, what it is, 74.f. the vertues and properties thereof, ibid.
 Adder, tongue. See Linguleta.
 71.

Adiantum Epula, or *Adiantum*, what feasts they be, 355.e
Admiranda, the title to a booke of M. Cicerone, 403.b
Adonis garden, 91.e
Adonium a flower, 297.e
in Adoration of the gods what gesture observed, 434.k
Adulterie how a woman shall loath and detest, 1.e
A E
Aeglops, a kinde of bulbe, 19.b
Aeglops an hearbe, 325.a, the qualities that the seed hath, 99.e
Aeglops, what vicer, ibid.
Aegina, an Island famous for brass foundries, 488.b
in great name for the branchwork of brazen candlesticks there made, ibid.
Aegips flored with good hearbes, 96.l, what they be, 97.b
Aegips famous for singular hearbes, and commended therefore by Homer, 210.l
Aegiptian heant, 111.e, the vertues, ibid.
Aegipilla, a pretious stone, 625.a, the description, 590.k
Aegle, why they haue but two at one arrie, ibid.
Aegle stone. See Actites.
Aeglephatim, a pretious stone, 620.i
Aeglethron, an hearbe, 94.b, why so called, ibid.
Aeglethron. See Greimite.
Aeglethron, a kinde of Vulture or Geere, 365.d
Aeglethron, what, 486.i
Aeglethron, the treasure of Rome, why so called, ibid.
Aeglethron Tribuni, what officers in Rome, ibid.
Aeglethron, a kinde of Berill, 613.d
Aeglethron, what gold, 472.g
Aeglethron, a Phytiaua of Athens, 301.e
Aeglethron, a magical hearbe, 204.i, why so called, ibid.
the strange qualities that it hath, 554.g
Aeglethron the player his earthen platter, 554.g
Aeglethron the Philosopher, 578.g, a bond slave together with Rhodope the harlot, ibid.
Actites, a pretious stone, why so called, 396.l, 590.k, four kinds thereof, ibid. male and female, ibid. their description, ibid. the vertues of them all, ibid.
Actites, a pretious stone, 620.i
Actites, a magical hearbe, 244.g, the incredible effects thereof, ibid. from whence we haue it, 269.d, the description of it, 271.e, the roots medicinal, ibid.
A F
Africa, the word is a spell in Africke, 297.d
A G
Agaricks, what it is, 227.d, male and female, ibid. the ill qualities that the male hath, ibid.
Agath, a pretious stone, 623.d, why called Agath, ibid. the sundry names that it hath, ibid.
Indian Agathals represent the forme of many things within them, 623.f
the Agath ferueth well to grind drongs into fine powder, 623.f
diuers kinds of Agath, 624.g
the chief grace of an Agath, ibid.
incredible wonders reported of the Agath by Magicians, 623.b
Agath of King Pyrrhus, with the nine Muses, and Apollo therein naturally, 601.a, b
Agatholus, a Physician and writer, 131.e

Aletris, a famous Imagen in brasse, 497.f, see taught Polycletus, ibid. his works, ibid.
Myra, 498.b
Ageraton an hearbe, 271.d, the description, ibid. why so called, and the vertues, ibid.
Aglaophotis, a magical hearbe, 203.a, why so called, why named Marmaritis, ibid. used in coniuring and raising spirits, ibid.
Agnes how to be cured, 38.i, See more in Cornet.
Agnes Castus a tree, 257.e
Agos, what conduits they be, 468.m
Agoracritus, an Imagen in Marble, 565.d, beloned exceedingly by his master Phidias, ibid.
Agromaris, an hearbe, 220.k, why called Eupatori, ibid.
Agromaris, the description, ibid. the vertues, ibid.
Agromaris a kinde of Nitre, 420.b
Agrippa Menenius entered at the common charges of the Romane Citizens, 480.i
ib. Agrippa how he cured the gout with vinegre, 156.k
his admirable works during the year of his Edilship, 585.e, how he conueighed seven rivers vnder Rome, 582.b
Agues, what medicines they do require, 237.a, See more in Feuers.
A I
Aire of sea water wherefore good, 412.k
Aire, which is good to recover strenght after long sickness, 181.d
change of Aire for what diseases good, 303.e
A L
Alabastrian, See Stimmis.
Alabastrian, what kinde of stone, 574.g, what uses it serueth for, ibid. the degrees thereof in goodness, ibid.
Alabastrian a pretious stone, 624.i, the place where it is found, ibid. the description and vertues, ibid.
Alabastrian, a kinde of Emerald, 613.a
Alabastrian, a gold mine in France, yielding the best ore, 469.e
Alabastrian, what it is, 408.k
Alabastrian, what it is, 100.g
Alabastrian, what waters about Rome, 402.m
Alcamenes, a fine Imagen and engraver in brasse and marble, 501.a, his works, ibid.
Alcamenes, an hearbe, 249.b
Alcamenes, a kinde of Nitre, 420.b
Alcamenes, a kinde of Nitre, 131.a
Alcibiades honoured with a statue at Rome, 492.d, reputed the hardest warren, ibid.
Alcibiades, most beautiful in his youth & childhood, 568.g
Alcibiades, the vertues, 275.e
Alcibiades, an hearbe, 275.e, his workmanship, 551.a
Alcibiades a feat painter, 549.f, his workmanship, 551.a
Alcibiades a woman and a parricide, 551.a
Alcibiades hardly deliuered of Hercules, 304.m, the cause thereof, ibid.
Alcon the Imagen, 514.g, he made Hercules of yron
ibid.
Alcon and Steele, ibid.
Alconter, a rich Chirurgian, 348.g, well slected by Claudius Caesar, 189.e
Alder tree what vertues it hath in Physicke, 189.e
Allectia, pretious stones, 624.i, why so called, ibid. the vertues, ibid.
Allectia, why Mith the wrestler carried about him, ibid.
Allectia, an old drinke, 145.b, what nutriment it yieldeth, 152.e
Allectia, 152.e

fereth from Madder, ib. the wonderfull operation of it, ib. I

A M

Amatorious medicines and means making thereto, 403.i
41.b, 119.e, 237.e, 278.k, 288.l, 295.g, 313.b, 314.b
to withstand Amatorious drincks, a remedie, 316.g
Amazons, an image, why called Eucnemor, 503.a
Amazons, Images of warlike women, represented by diuers artificers, 501.e
Amber in request next to Crisfall, 605.e, Plinie seeth how reason thereof, ibid.
Amber, why it is called Electrum in Greeke, ibid. (such is opinions as touching Amber, & the beginning thereof, 606.g
Amber called Succinum, Theum, and Sacrum, 607.a
the true original of Amber according to Plinie, ibid.
worne much in Lombardie and those parts in old time, as an ornament, and medicinable besides, ibid. f, how to be closed, 608.b
the sundry kinds of Amber, ibid. which is best, ibid. i, it is apt to take a trillure or die, ibid.
Plinie seeth how cause why Amber should be so much esteemed, 608.l, m
what Amber is called Chryseletrum, 609.b, the properties of this gold Amber, ibid.
Amber is proper to counterfeit the Amethyst, ibid.
the vertues of Amber, 608.k
Amberofa, properly what hearbe, 222.b, called it is Artemisia, 273.d
Amberofa, a common name to many hearbes, ibid.
Amberofa the right described, ib. why it is called Borix, ibid.
Amberofa, one of the names of Helleboe, 237.e
Ambuga, or Ambucina, what hearbe, 47.d
Ambulges and secret for laying it how to be avoided, 111.b
Amerimnos, one of the names of Helleboe, 237.e
Amethyst, a pretious stone, 620.m
Amethyst, which are best, ibid. where they are found, ibid.
the reason of the name Amethyst, 621.a
Amethyst Indian of a deepe purple colour, ibid.
Amethyst inclining to a lacini, the Indians call Sacodon, ibid.
and the colour Sacod, ibid.
what Amethyst the Indians call Sapiros, 621.b
the Amethyst Parameis, why so called, ibid.
the best Amethyst what properties they haue, ibid.
best Amethyst called Paderaster and Amerater, ibid. why they be called Paderaster, ibid. the reason of the name Amethyst, according to the Magicians, 621.c, the varieties of the Magicians as touching this stone, ibid.
Amethyst stone, 589.a, the description and vertues, ibid.
Amethyst, what hearbe, and the uses thereof, 621.i
Amethyst, 180.k, the vertues that it hath, ibid.
Amethystum, what it is, 598.g
Amethystum, 247.b
Amethyst, a kinde of earth medicinal, 560.g, how to be chosen, ibid.
Amethyst, what plant, 149.c, the description, ibid.
Amethyst, what hearbe, 199.b, the vertues it hath, ibid.
Amethyst, Clinovia, what hearbe, and why so called, 215.a
Amethyst a painter, excellent for disposition of his work, 537.f
Amethyst, a serpent, or enormous worme, 70.k
the strange effects and nature thereof, 387.a, why so called, ibid. the remedie against the worme thereof, 70.k
Amethystum, what they were, 537.f

of Plinies Naturall History.

much by Snails, 15*d*.
Antilogichus, a book treating of flowers, 82*e*.
Antirrhoeus, a kind of Scabiosa, 550*d*. the description and
 nature, *ibid*.
Antirrhoeum, an hearbe, 130*b*.
Antirrhion or *Anticellus*, an hearbe,
 the description and vertues, 254*m*.
Antirrhion, an hearbe, described, *ibid*.*m*
Antimony, 366*e*. See *Stribor Stimmi*.
Anthraxes, 650*d*.
Anthermus. See *Bopalm*.
Antiochus, a cunning painter, 547*e*. wherein he excell'd,
ibid.
Antioch, the daughter of Nicene,
Antioch reproyned by *Pliny* for making medicines of a man's
 skull, 294*d*.
Antipographus, the surname of a painter,
Antistes, what they are, 544*e*.
Antistiper, a fine grauer,
 K. *Antistiper* practis'd with *Aristotle* to kill K. *Alexander*
 the great, 400*b*.
Antipathus, a kinde of vermin for iron workers, 515*e*.
Antipathic betweene the *Puffin* or *Forkes-fish*, and plants,
 430*d*.
Antipathie betweene *Deere* and *Serpents*, 321*d*.
Antipathes a pretious stone, 624*k*. the forme and triall of
 it *ibid* good against eie-biting of *Witches*, *ibid*.
Antiphus there is, *ibid*.
Antiphus, a commendable Painter, 549*a*. his worker, *ibid*.
 544*k*.
Antirrhion, an hearbe. See *Calnes snout* or *Snagpapper*.
Antipodium, what it is and the vertues thereof in *Physicke*
 159*f*. 168*b*.
Antipodos, what,
Antiphus Venus possessed of *Cicero* Academia, maintain'd
 need it, 402*b*.
Antonius Musa, a renowned *Physitian*, 344*i*. he changed the
 order of *Physick* before his time, his cure of *Augustus*
 the *Cesar*, contrarie to the course of other *Physicians*, *ibid*.
M. Antonius his *Admirall* *Physick* staied by the *Emperour*
 before *diluvium*, 426*k*. he made counterfeit money, and
 sent it abroad, 479*e*. See more in *Cleopatras*.
S. Antonius fire, a benefice, the remedies for it, 338*a*. 1. *d*. 450*a*.
 46*f*. 47*b*. 58*b*. 68*b*. 70*b*. 71*b*. 72*k*. 102*b*. 103*b*.
 104*b*. 105*a*. 111*f*. 122*k*. 133*e*. 140*b*. 142*e*.
 146*k*. 159*e*. 161*a*. 174*k*. 184*e*. 191*e*.
 193*d*. 194*m*. 197*a*. 205*e*. 278*d*. 284*k*. 307*e*.
 309*d*. 310*m*. 336*a*. 351*d*. 391*f*. 392*e*. 438*b*.
 424*k*. 433*b*. 446*f*. 450*k*. 475*e*.
Antius, the god of the *Egyptians*, 475*e*.
Antularia, a kinde of white coloure, 531*k*. why for coloure, *ibid*.
 A P
Appell how to be kept sweet, 162*a*. 110*i*. how to be
 perserved from vermin, 264*e*.
Apprine what hearbe,
 274*e*.
Apphac, an hearbe,
 990*a*.
Apphac, an hearbe, 275*b*. the description,
 246*e*.
Appell, a writer in *Physicke*,
 216*e*.
Appell, the most excellent painter that ever was, 237*b*. whether
 he flourish'd, *ibid*. his perfection, *ibid*. he was a
 painter, *ibid*. his grace on *Paul* with pictures imitable
 to his, *ibid*. he knew how to make an end, 537*e*. wherein
 he excrud *Protogenes* in his worke, *ibid*. the historie of
 him, *ibid*.

kins and Protagenes at Rhodes. 558. *b. b. his excellent hand in drawing a small lion. ibid. his ordinarie and daily exercise, and his apothecies there composed. k. he exposed his pictures to the censure of people passing by in the street. ibid. k.*
Apelles thought not forme to be reproved in his workmanship. l. his apothecies to a physician, finding fault with something about the place in this picture. ibid. m. his courteous and faire language. ibid. beloved of King Alexander being in his shop. 559. a. in tune with Canisius, when he drew naked. ibid. by what pattern he made Pegasus. Autodromus. ibid. b. of a kind nature to other painters of his time. ibid. how he overcame Protagenes to create. ibid. c. his deservings in overruling favour and countenance most finely. ibid. d. what welcome he had in the place of a court in Egypt. ibid. e. how he was confound there, and how he detested the confuser. ibid. f. how he painted King Autolichus, holding a bat out one eye. ibid. g. his picture of King Alexander, holding lightning in his hand. 540. the price thereof. ibid. other works of his. ibid. h. 541. a. d. the horse wher he painted in contention with others. 540. m. his desire to have judgement passe justly on his owne side. 541. a. how he painted things that cannot be painted. ibid. b. the secret of this blacke vermil. ibid. c.

phryadiace, a river. 624. m.
phryon, a kinde of Poppie, why so called. 403. a.
phyte, what fift, and why so called. 69. a.
phytaceae, certayne trees. 606. m. what the word signifies. ibid.
piatrum, what beare according to Plinie. 544. the virtues and effects. ibid.
picus the glutton loathed the crops of Coleworts. 26. c.
picules, what it is. 467. a.
pius, furmaced Pythionices. 613. b. he raised up fort to know what contrivance Homer was. 375. c.
pius-Jeha, said at bewbe. 253. b. the description. ibid.
the root medicabile, and when to be digged. ibid. why it is called the wild Radish. ibid.
poene, a bone in a Toids fide of wonderfull power. 435. a. why so called. ibid.
poene-m, a shrub described. 193. a. bane to dogs and other four-footed beasts. ibid.
pollodoros, a most curious workman in brass. 502. d. hee came rested content with his owne workmanship. ibid.
furmaced Pisanus, a Mith, and why. ibid. m.
pollodoros a writer in Physicke. 119. a. a. two of that name. 59. d.
pollodoros, a excellent Painter. 534. a. m. who were his inventions. ibid. k. who hee opened the dore for other artists. ibid.
pollonius Pitanus, a writer in Physicke. 366. i.
pollonius reproued for ofing the numbers of mans body in Physicke. 294. g.
pollodius, a writer in precious flowers. 601. d.
Polycrates, a great Emperour, 373. c.
Polycrates, an herbarist, and writer in Physicke. 126. b.
Polycrates, a pitime. 459. b.
Polycrates, their deceitfull dealing. 509. a. against them and their complices. 176. d.

Apocynum, a brasse image of *Lyfippus* his making. 159. b
Thierius the Emperour was enamored on it. *ibid.*
Aspeltines or *feelings* tending to suffocation, how they are cured 38. b. See more in *Impoiments* and *Tumors*.
Appetite to meate, what medicines stir up 41. b. 59. c. 63. e.
 65. e. 108. e. 143. e. 147. b. 148. g. 155. e. 171. d.
 174. k. 194. d. 202. b. 277. a. 286. m. 359. e. 416. l.
 418. k. 437. c.
Apples Melicopa, or *bony Apples*, what medicinal vertues they haue. 164. b
Apples round what vertues they haue in *Physicke*. 164. i
Apronia, what plant. 150. e
Aproria an herb, the wonderfull vertue thereof. 102. i
Apua, a fish. 418. b
Apudicidamus, a lake, where in all thing swim. 404. i
Apuleius a *Magician*. 372. i

A Q

Aquifolia. 279. c
Aquilus, a *Romane* generally taken prisoner by *K. Antiochus* 463. e. forced to drinke molten gold. *ibid.*

A R

Arabica, a precious stone, 624. k, like to *gnoric*, *ibid.* the vertues. *ibid.*
Arachnick blood stone, why so called. 590. b
Arabus, a fene. 591. b. the use of it. 590. b
Aradica a towne so called in *Greece*. 410. l
Arceion, what herb. 125. b
Arceuslus, an excellent workman in pottery. 552. l
 his moulds in clay exceeding deare. *ibid.* his works. *ibid.*
Arceuslus, a singular weaue in marble, his *Lionesse* and the *Capids*. 570. e
Archagathus, the first professor of *Physicke* in *Rome*. 345. e
 first called the vnderstande *Physician* or *Chirurgion*, by f
 afterwards named the bloudie butcher. 346. g
Archangel, See *Dead Nettie*. *ibid.*
Archeri how they shall shoot and neuer miss. 313. d
Archelis, an herb. 260. g
Arcon. See *Perforata* and *Perfolata*. *ibid.*
Arcton, an herb. 273. k the description. *ib.* the vertues. *ib.*
Arctura, an herb. See *Arction*. *ibid.*
Archiballus, a picture wrought by *Parafius*. 536. g. how highly esteemed by *Tiberius* the Emperour. *ibid.*
Arclium, a painter giues to looseesse of life, and to weeding. 545. d
Arctulif the fontaine semeth sometime of dung. 411. b
 thereof. *ibid.*
Argemoma, an herb, how it differs from *Aunome*. 109. d
Argemoma, an herb, howe the 227. c. the vertues that hath. *ibid.*
 three kinds and their description. *ibid.*
Argentaria, a kinde of siluer or white earth. 560. l. why so called. *ibid.*
Argyrodamus, a precious stone. 624. k
Arinus, a magicall beante. 203. d. the strange operation thereof. *ibid.*
Aris, what beante. 200. d
Arifolia, what beante. 283. d
Arifides, a famous painter 541. e. his gift in expressing the conceits and dispositions of the mind. *ibid.* the perturbations afflicke his admirable picture of a sicking dale, and the mother dying poore a mortal wound. *ib.* his sumdrie excellent pieces of his handwrote. 541. e. f. 542. g. for one picture he receiued 100 talents of siluer. *ibid.*

I n 3

of Plinies Naturall History.

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anoides.
Affrica the *Physick*. 537.*a.* the *flower* of *this* *stone*
good in *Physick*.
Aitaphu, what it is. 148 *l.*
After an *heave*. 274.*m.* the *description*. *ibid.* why *called*.
Bonobum. *ibid.*
After a *kind* of *Samian* *carb.* 559.*d.* the *use* in *Physick*.
ibid. *h.* how *knowne*.
Afferia, a *kind* of *white* *gem* called a *Girafole*. 622.*a.* the
description and *reason* of the *name*.
Afferum, an *heave*. 123.*d.* the *description*. *ibid.*
Afferion, a *kind* of *fisher*. 360.*i.*
Atragalus, what *he* *be*. 349.*b.* the *vertues*.
Atragalus. 407.*f.* an *excellent* *peece* of *work* *thought*
by *Polydorus*.
Atrape, a *picture* of *Apelles* *this* *workmanship*.
Atrapiar, a *precious* *stone*.
Atrius, a *precious* *stone* of a *white* *colour*. 622.*k.* the *de*
scription and *reason* of the *name*.
Astrifring *medicines*. 48 *g.* 141.*a.* 147.*a.* 148.*b.* 158.*i.*
161.*c.* 164.*g.* 163.*e.* 172.*d.* 175.*b.* 182.*m.* 191.*b.*
194.*e.* 195.*d.* 198.*i.* 223.*c.* 237.*e.* 240.*c.* *ibid.* 250.*g.*
255.*a.* 263.*d.* 275.*b.* 277.*a.* 278.*i.* 281.*c.* 284.*b.*
286.*k.* 287.*b.* 319.*b.* 418.*k.* 421.*e.* 473.*d.* 474.*b.*
493.*b.* 506.*m.* 511.*c.* 516.*b.* 519.*c.* 520.*m.* 529.*d.*
557.*b.* 559.*i.* 556.*a.*
Astrifring *medicines* and *binding* the *belly*, *see* *diureti*
cals.
Atribolos a *precious* *stone*.
Atriboris, a *precious* *stone*.
Atribitis, the *heerbe* *Leilufe*, why *so* *called*.
Atribitis the *richest* *part* of *Spain* *for* *gold* *mines*.
Atriboris, a *precious* *stone* the *forme* and *vertue* of it, 625.*a.*
Atriba, what *heerbe*.

A T
Talanta, her *picture* at *Lanuvium*.
Tibamantum, a *kind* of *Spikenard* or *Men*. 77.*a.* why
so *called*. *ibid.* the *description*.
Tibamantum, what it is. 138.*a.*
Tibon of *Marona*, an *excellent* *Painter*, wherein *he* *ex*
celled, and *his* *worker*.
Tibore, a *precious* *stone*. 624.*l.* the *forme* and *use* thereof.
Tiboris, what it is.
Tibamentum, *painters* *blacke*, an *artificial* *colour*.
Tibamentum *Sutorium* *naturals*. See *Pistivoli*.
Tibophia, what *infirmities* and *defect* of the *body*.
Tibore the *remedy* thereof. *ibid.*
Tibophi, who *they* *be*.
Tibistilis, an *heerbe*. 97.*c.* why *so* *called*.
Tibis, a *writer*.
Tibica *velis*, a *kind* of *kinde* of *cloth*.
Tibicabi, a *kind* of *unwaxed* *Lacini*.
Tibis in the *breast* & *chist* how to be *discharged*. 58.*g.* 67.*d.*
Tibis more in *breast*.
Tibiculus *medicines* to the *ostwardparts*. 139.*b.* See
more in *drawing*.

A V
Vin, an *heerbe*. 247.*d.* the *description* and *vertues*. *ibid.*
Vinui, a *lake* wherein *nothing* will *flote*.
Via, what *water*.
Via, a *precious* *stone*, *thought* to be *Calliste*, or the
same.

Turquo.
Augustus *Caesar* *figured* at *first* with the *image* of *Sphinx*.
601.*e.* the *reast* that *arose* thereupon. *ibid.* *he* *gave* it
away, and *use* afterward the *image* of *king* *Alexander*
the *great*.
Augustus *Caesar* *his* *owne* *image* *formed* as a *signe* unto his
successors to *feare* withall.
Augustus *Caesar* *crowned* with an *obisidional* or *graffe* *co*
rovet.
Auli, the *male* *bell* *fisher*.
Auriceni *commended* for *their* *indstrie*. 165.*e.* 208.*c.* for
their *love* to *pofterie*. *ibid.* 220.*c.* for *their* *labour*.
and *traile*.
Austrania, an *Island*, the *same* that *Gleffaria*.
Auriculus a *boy*, *represented* *lively* in *brasse* by *Leocae* as the
Imagines.
Autopros, a *kind* of *bread*. 141.*a.* how *medicinal*. *ibid.*

X
Ximomantia, what *kind* of *Magick*.
Xungia, what *greace* it is. 320.*d.* why *so* *called*. *ibid.*
the *vertue* and *use* in *Physick*, and otherwise. *ibid.*

Z
Azonaces taught *Zoroaster* *his* *Magick*.
Azur *mineral* or *naturall*. 484.*b.* what it is. *ibid.* *h.*
die *fort*.
Azur *artificiall*. *ibid.* how it is *coloured*.
Azur the *best* *how* it is *knowne*.
fals *Azur* *how* it is *made*.
the *vertues* *medicinal* of *Azur*.

B A

B
Abes how *preferred* from *eye* *biting* of *Witches*. 300.*h.*
See *Isfami*.
Bacchar, an *heerbe*. 85.*e.* the *root* only it *adorn* *flowers*. *ibid.*
what *flavour* it *hath*. *ibid.* where to be *lough* to *grow*. *ibid.*
how *medicinal* it is.
Bacchus *his* *image* *most* *cunningly* *worked* in *marble* by
Scopas.
Bacche *paine* *how* to be *cafed*, and the *weaknesse* *strengthen*
ed. 49.*e.* 52.*g.* 53.*a.* 54.*b.* 125.*a.* 191.*d.* 199.*b.* 238.*f.*
313.*b.* 450.*a.*
Baianni, a *vale* full of *medicinal* *Spring*.
Baines *naturall* *how* *became* of a *Judaide* *caid*.
Baines *bot* not *used* for *Physick* in *Homeri* *daies*.
Baines of *Brimsfome*, for what *good*.
Baines of *Bitumen* in what *diseases* *medicinal*.

The Table to the second Tome

Balanites, a precious stone. 625. *a.* two kinds of it and their
form. *ibid.*
Balanus, what they be. 165 *e.*
Baldness or *Bald* places occasioned by *Altophea*. how to be
replenished with haire. 364. *ibid.* m. 365. *a.* 432. *b.*
See more in *Haire* heading.
Balnear Islands yield chalybeate medicinal. 561 *d.*
Bells a wonderfull hearbe. 211. *b.* a young dragon and a
man were by it crucified. *ibid.*
Bellote an hearbe. 278 *g.*
Beltia an Island. 606 *f.*
Beltwee, what they be. 469. *b.*
Benchus a fish medicinal. 435. *e.* the fishes in the head
likewise medicinal. 441 *g.*
Bepes, a precious stone. 625 *a.*
Baraine women how to prone fruitfull. 306 *g.* 312. *k.*
313. *e.* 397. *a.* 402. *g.* 403. *a.*
See more in *Conception*.
Bernaisse what things do cause. 274. 403. *a.*
Barble fish medicinal. 433. *e.* hurtfull to the eye fish. 438. 442. *b.*
Barble of the sea. *ibid.* harme he taketh by tasting of the
Sea-bare. 427. *a.*
Barley what medicinal vertues it doth afford. 138. *i.*
140. *i.* which barley is best. *ibid.*
Barley grows. See *Polearia*.
Barley meale, what effects it worketh in water and wine.
176. *i.*
Barme, what it is and the use thereof. 145. *b.*
Baropacus, a precious stone. 625. *b.* the description. *ibid.*
Baropsis. See *Boreopacus*.
Basil, a kind of marble resembling yon. 573. *d.* there-
upon it took the name (out of the Hebrew).
basimae of *Isaiah* (within the title of *Seraph*) in *Thebes*
of *Egypt*. 573. *e.* the strange qualitye of it. *ibid.*
Basinax, a kind of touch or waterstone of the best kind.
500. *b.* 592. *g.*
Basil gentile, a sweet hearbe, which it flourisheth. 19. *f.* the seed
how to be sowne. 23. *b.*
Basil condemned by *Cheysippus*, and why. 54. *d.* the ef-
fects of *Basil*. 54. *i.* why goats refuse it. 54. *m.*
it hurteth the braine, eyes, stomacke and liver. *ibid.*
it bringeth forth one of their virus. *ibid.* it turneth into
a serpent, wasp, goat, and worms. 55. *a.* howe it gathereth
scorpions upon it. *ibid.* it engendeth lice. *ibid.*
Basil commended and maintained by other writers. *ibid.*
Basillivill, the vertues that it hath. 55 *e.*
Basillike, a serpent venomous and deadly with his eye.
55. *m.* the *Magicians* tell wonders of his blood. *ibid.*
they call it the blood of *Saturne*. 557. *a.*
Basill represented in blasse by diuers *Imagines*. 503. *b.*
Basile in picture first shewed by *M. Valerius Max.* *ibid.*
526. *f.*
Bass, what countries are reported of them by the *Magici-*
ans. 359 *f.*
Bass hurt by the *Plane* tree. 184. *e.*
Batis an hearbe, and the vertues medicinal that it hath.
111. *b.*
Batis of the garden, is *Sampier*. 254. *k.*
Batrachoglyph is a be. 256. *m.* 239. *e.* See *Crescent*.
Batrachies, a precious stone. 625. *a.*
three kinds thereof. *ibid.*

Batrachus and *Saurus*, two most excellent majons and creatures in flosse. 570*b*. their dewie alluding unto their names. ibid. k
Baume or Balsam oyle. 162*a*
the singular verities that it hath. ibid.
to be used warily. 162*b*
Baume the heave. 166*k*
the names that it hath in Greeke respectiue to Bees and honey. *ibid*. the medicinable verties that it is endued withall. ibid. l

B E

Beanes, their medicinable verties. 141*e*
Beearfoot, what beaue. 224*a* for what it is soveraigne. ibid.
ibid. 247*e*.
Beas grasie medicinable. 323*f*
Beas gall. 324*k*
Beasts how to be cured of many and sundry diseases. 58*d*
285*b*. 342*k*.
Bebois a finer mine in Spaine. 472*l*. of long continuance and very rich. ibid.
Bechon, an herbe. See *Falefoot* or *Conghwors*.
Beda, a fine imagine, and his work. 501*e*
Bedegarr or white *Thistle*, sofd bathing gairlands and also in meats. 92*d*. 194*f*
Bed-riv of long sickness, by what means to be recovered. 119*e*.
Beech tree what medicines it doth afford. 178*d*
Beer, a drinke used in oldtime. 145*b*
what nourishment it yeeldeth. 152*g*
Bees subiect to the lake how to be remedied. 93*d*
how they are to be fed. 93*e*. 94*e*. 95*e*
Bees what flower they delight most in. 92*e*
Bees straying abroad from the bine how to be reduced and brought home. 400*g*
Bees killed thine worst. 23*e*
Bees floure if a mensurwoman touch the hine. 308*m*.
Bees hines become well a garden of flowers. 93*d*
Bees hines how they are to be made. 95*c*. 93*d*
stand. ibid.
Bees sifing, how to be remedied. 40*b*. 56*m*. 95*a*. 106*k*.
153*b*. 174*a*. 363*d*. 399*f*.
Bees how to be drinen away that they shall not come neare to sting. 53*b*
to sting. 317*b*
Beestings, what it is. ibid.
Beestings cradling in the stomacke is payson. 323*b*. 317*b*
to be remedied. ibid.
See *Colostrum*.
Beet of sifler offered to *Apollo*. 17*d*
Beet feed cometh not all up in the first yeare. 25*e*
Beets of two sorts. 25*e*
Beets how to be eaten. 25*d*
Beets are of diuers and contrary qualities. 25*d*
how garden *Beets* and other herbes may be made to cabage. 25*d*
hage. 25*e*
Beets spread mast. ibid.
Beets restore the taste to wine. ibid.
Beets when to be sowed and transplanted. *ibid*. their medicinal verties. 47*e*
Beetles, certain flies, honored by the *Aegyptians* superstitiously. 390*e*
Appian would seeme to give a reason thereof to excuse his countermint vanitie. 390*e*

of Plinies Natural History.

Belu, a precious stone 625. b. consecrated to god Belus, b.
 Belu, lower and strong, how to be repressed and castrated
 664. c. 249. c.
 Belle ach how to be allind, 383. f. 422. c.
 See more in *Virgine*.
 Belle ach in beasts, 342. f.
 Belle subject to many diseases, 248. f.
 Belle and mouth together chiefly means to work our death,
 ibid.
 Belle spioke and hard how to be mollified, 401. 107. f.
 156. i.
 See more in *Tamari*.
 for the Belle appropriate medicines, 154. g. 158. g.
 Belle cofine how to be loosed, 406. 13. b. 47. c. 18. k.
 51. e. 53. a. 160. d. 18. b. 331. a.
 See more in *Solubis*.
 herbe Bete. See *Acant*.
 Beeners in much request among Physicians, 451. b
 they use on lead and water, 450. i. whether they bite
 off their owne fowes or no, ibid. the defecation of their
 fowes, and how they can be sophisticated, ibid. how Beeners
 stones be knowne the trase for falfshiffe, ibid. like degrees
 in goodness of their fowes, ibid.
 See *Caitorem*.
 Beeners drive a counterpoint, 431. e.
 stile of Bom the certaintie it hath, 161. e.
 Beeners of gold, silver and steele to be chased and
 reposed, 68. b. 108. k. 134. g. 168. g. 173. d. 178. k.
 259. f. 359. e.
 Beryls precious stone much of the nature of the Emerald,
 613. b. India the natural place thereof, ibid. how it is
 to be cut, 613. g. which is the best, ibid.
 Beryls of diverse kinds, 613. d. e.
 Chryso-beryllus, 613. e.
 Chryso-prase, ibid.
 Hyacinthines, 613. d.
 Aerodes, 613. d.
 Beryls, Cerins, Oleagins, Chrysalini,
 the elements and faults of Beryls, 613. d.
 the grace of Beryls within their l. 1. b. 613. d. e.
 how they be sophisticated, 613. f.
 etonic the how be called Petroselin, whereupon
 named Serenius, C. Gitor, and Pjcoron, ibid.
 the defecation and praise of this beanie, ibid. the vertues
 224. g. b.
 sawe and snow procured to the body by beanie in old
 time, 114. c. 231. f.
 how to be helped, 150. c. 314. k.
 B I
 a water of wine. 155. e. wherefore it is good, ibid.
 also a kinde in Physick, 342. g.
 galls, what pieces of silver come at Rome, 403. g.
 l. c. or if silver how to be dissolved or refined, 506. b.
 125. b. 130. b. 143. c. 153. g. 169. a. 587. f.
 knowe be
 reposed, 141. e.
 See more in *Impoibition*.
 bewed, Sualus Nicoporus an herbe, 190. l. the de-
 zcription, ibid. the certaintie it hath in Physick, 401. f.
 and its vertues, ibid.
 bewed. See *Elmone*.
 b. how they may be pulled by a pin, 546. g.
 b. of children, and how they may be pulled by a pin, 546. g.
 b.

41. d. 52. k. 66. k. 72. h. 110. g. 131. c. 173. d.
174. g. 180. k. 198. k. 202. g. 212. d. 268. d. 273.
288. b. 290. a. 299. e. 301. c. d. 313. c. d. 315. d. 330.
342. d. 340. b. k. 340. k. 353. a. 396. g. k. l. m. 448. a.
449. a.
how to be hastened, 205 c
after-birth how to be sent or brought away, 435 f 504
54. 57. f. 60. k. 65. d. 74. b. 78. g. 106. h. 110.
127. e. 129. d. 150. g. 157. e. 174. g. 181. m. 197. b.
199. d. 201. a. 216. g. 266. l. 267. a. c. d. e. f. 273 f.
279. a. 288. b. 290. a. 339. d. 341. c. 355. f. 447. e.
448. m. 448. l. 448. m.
Blisters. See Boils.
Biting by man or woman how to be cured, 61. b. 143. d.
172. b. 301. a. 443. d.
Bitumen approprieth the nature next to brimstone, 557. b
Bitumen stinketh in Lure, ibid.
Bitumen Mineral in Syria, ibid.
Bitumen liquid where it is found, ibid.
where it is white, ibid.
Bitumen vitellus in the territory of Agreogantum, 557. e
how the patients suffer, ibid.
the effect thereof, ibid.
marks to know good Bitumen, ibid.
the operation of Bitumen, 557. c. d.
be plaster of Bitumen for what it is good, 557. d.
how it serveth to embayk vessels of brass, 557. f. 558. g.
with cement of Bitumen the walls of Babylon were built,
558. g.
how Bitumen serveth young smiths and milters, ibid.
B L
blacks and blew under the eies how to be discolled, 272. b
277. c.
lacke of painters called Indicum, 530. k.
lacke of Dyari made of flory, ibid.
lacke of colour of painters called Trigonon, ibid.
yield much by Polygonum and Rhizon painters, ibid.
an artificial colour, 530. h. which is best, ibid.
lacke of Euphrasim, devised by Asclepias, 530. k.
an anklers Blacke, 510. k. m.
lacke and blew much upon stripes and bruise how to be
taken out, 390. a. 444. k. 500. e. 514. b. 62. b. 64. l. 109. b.
126. l. 134. g. 141. b. 143. f. 149. e. 161. e. 163. e.
172. a. 192. d. 200. k. 200. g. 272. b. 277. e. 289. e.
318. l. 337. f. 350. a. 352. a. 394. k. 413. b. 424. b.
like flours, 588. k.
how to be parsed how to be eased, 120. a. 130. e. 140. c.
201. g. 235. m. 254. g. 446. k. 455. a. c. 463. f. 584. f.
430. e.
idler Stopped how to be opened, 77. b
See more in urine.
idler itching how to be helped, 130. i.
idler feebled, excoaried, and excoaried, or otherwise
cured, how to be mended, 140. i. 38. a. 46. i.
179. f. 61. a. 70. b. 72. i. 102. f. 107. h. 110. i. 120. b.
161. e. 171. d. 206. f. 255. f. 267. h. 290. i. 352. b.
37. e.
the Bladder, appropriate and comfortable medicines,
181. f. 150. l. 103. b. 167. a. 171. e. 174. i. 179. d. 180. k.
181. f. 185. 290. a. 359. g. 384. b. 444. g. 589. f.
idler. See Boils and Piles.
to take of the Regioe of the

divers kinds of them described, *ibid.* and their sundry virtues, *ibid.*
 Blautaria, what he is, and why so called, 228. k. the description, *ibid.*
 Bleach, See Iuch and Scabs.
 Blechom, See Kerve.
 Bleeding occasioned by feeding much upon fish, how the same is cured, 447. a. *ibid.*
 Blets, a fleshly heave, 7. d. the danger thereof, *ibid.*
 Blemishes in the visage how to be taken away, 52. a. 55. e. Blemishes in the skin, 31. a. 32. a. 42. m. See more in 56. i. 58. k. 133. e. 14. g. 31. a. 32. a. 42. m. and Ereckles.
 Blennies in the eyes, 14. g. the affluence thereof, *ibid.*
 Blennies in the eyes, 14. g. the affluence thereof, *ibid.*
 Blindness what remedies for it, 121. d. See more in Eye-sight.
 Blisters red, how to be cured and prevented, 43. f. 139. b. 158. k. 3. d. l.
 red Blisters rising like purples how to be repressed, 186. b. Blisters upon burning or scalding how to be healed, 303. c. 351. e. 166. m.
 Blisters how to be raised, See more in Cantharick.
 Bloud what engender and encrease, 46. g. 152. g.
 Bloud-suckers, 361. d. See Hæmorrhoids.
 Bloud of a bucke goat is strong, 321. e. *ibid.*
 the effect that it hath in edge tools, *ibid.*
 Bloud of goats maketh a pale look, *ibid.*
 Drusus a Tribune of Rome drank it for that purpose, *ibid.*
 Bloud of red Deere, *ibid.*
 Bloud of Saturne, what it is, 357. a. 301. d.
 Bloud of men or woman is medicinable, 321. b.
 Bloud of horses and mares is corrosive and dangerous, 321. b.
 Bulls bloud venomous, *ibid.* unless it be at Ægria a citie in Achæa, *ibid.*
 Bloudsals how to be healed, 148. f. 175. e. 255. m. 324. k. 395. e. 589. b. See more in Chylblanes.
 flux of Bloud in horse how to be staid, 342. k.
 Bloud cluttered and congelated in the body, how to be dissolved and expelled, 39. e. 103. a. 110. i. 141. e. 156. g. 157. a. 167. k. 412. m. 557. e. how to be kept from cluttering, 162. b.
 Bloud breaking out at times in sandy places, how to be repressed, 265. f. 156. m.
 Bloud lost how to be recovered,
 Bloud-stone, See Hemorrhoids.
 Bleeding how to be stanchd, 45. e. 52. b. 57. d. 59. d. 78. k. 119. f. 120. i. 121. e. 140. d. 141. k. 146. k. 150. k. 169. d. 170. i. 171. d. 174. d. 178. d. 184. k. 196. b. 197. a. 199. b. 223. f. 245. e. 403. a. 272. d. 273. d. 284. b. 307. f. 337. f. 338. g. 350. b. 365. e. See more in Issue of blood.
 Bloud vomiting how to be repressed, 163. f. 424. i. 430. g. 529. a. 559. f. See more in Bloud voiding upward.
 Bloud stirring reaching and voiding upward, what remedies therein, 39. e. 43. e. 44. k. 48. b. 49. d. 55. e. 58. g. 59. d. 72. e. 75. f. 101. g. 138. f. 140. m. 145. f. 147. b. 149. e. 159. a. 160. g. 162. a. g. 164. f. 165. e. 171. e. 172. d. 174. b. 178. f. 179. a. 184. b. 186. d. 188. g. 190. e. 194. g. 195. e. 196. g. 197. d. 245. f. 246. g. 247. b. 249. f. 249. f. 272. i. 274. g. 275. a. 275. i. 289. e. 291. d. 303. e. 329. b. e

552. b. 553. a. 380. k. 381. b. c. 412. k. 424. i. 442. i. 559. d.
 Bloudie flux how to be cured, 37. b. 39. e. 40. k. 42. b. 46. i. 47. b. d. 48. g. 49. d. 52. k. 55. e. 66. i. 72. k. 73. d. e. 102. b. 106. f. 120. f. 126. g. 129. a. 130. i. 137. b. 139. f. 142. i. 146. f. 147. a. b. 148. b. i. 153. e. 161. e. 163. e. 165. f. 168. g. 172. i. 174. b. d. 177. b. c. d. f. 180. b. k. 195. e. 196. f. 197. f. 220. f. 248. m. 249. a. b. c. f. 250. g. b. f. 263. d. 272. i. 281. a. 285. b. 287. e. 289. e. 291. d. 311. e. 314. g. 318. k. 331. e. c. d. e. f. 332. g. 352. b. l. 353. e. d. 382. f. k. l. m. 418. k. 443. f. 516. g. 520. i. 557. e. 559. e.
 the paines proceeding thereon how to be assuaged, 148. f. See more in Dysenterie.
 a Blanding called in Latine Sanguiculus, 352. g.
 B O
 Bodies of those that have been stung with serpents or bitten by mad dogs, make eggs adde under a hen, and canse eggs and such to call their young untimely, *ibid.*
 the remedies, *ibid.*
 Boetius, an excellent imaginer and engraver, 483. b. A Minerva of his workmanship, *ibid.*
 a child obviating a goose wrought by him, 503. c. better he was in silver than in brass, *ibid.*
 Boy children, by what means they are thought to be gotten and bred, 215. f. 226. k. 257. b. 279. b. d. 288. m. 339. e. 340. m.
 Boies, how Salpe canse to look young and smooth, without hairs on their faces, 449. e. 625. e.
 Bole, certain pretious stones, 528. b.
 Bole armen common, a painters colour, 336. k. 132. m.
 Bolstion, what it is, 110. b.
 Boletis, what Musbrooms, 110. b.
 Boletis, what it is, 110. b.
 Bombace, See Cotton.
 Bone ach how to be eased, 67. d. 262. k.
 Bones griened how to be helped, 262. k.
 Bones broken how to be knit and powdered, 40. f. See Fractures.
 Bones growing within the ground, 588. b. stones of a Bone substance, *ibid.*
 a Bone found in a horse heart for what it is good, 326. m.
 Bones quailing rober upon and for what cause it arises, 350. a. 350. a.
 Borage, See Bugloss.
 wild Bore, wh at they do yield adverse to serpents, 322. b.
 wild Bore greace medicinable, 324. k.
 their crine like wife and gall, 325. d. 326. b.
 Bore greace medicinable, 322. l.
 Bores troubled and their with their own urines, 625. b.
 Bostrychites, a pretious stone, 326. l.
 Bats in beards how to be expelled, 326. l.
 Batches, See Impostumes.
 Batches in the emunctories, how to be dissolved or efflupe, 121. d. 122. g. 144. g. See Impostume called P. ani.
 Beryon, what medicine, 301. e.
 Berys, what he is, 222. b. the description, 301. e.
 Berys, 278. b. what names the Ca padoctians give it, *ibid.*
 Beryter, a pretious stone, 625. b.
 Borax natural, 454. g. a mine all and where found, 470. d. the degrees of Borax in goodnesse, and where to be had, 470. f. m.
 Borax artificiall, 470. m. called Lutea or yellow Borax,

rax, 471. a. how it is made and prepared, *ibid.* b. how coloured, *ibid.* of two sorts, *ibid.*
 Borax which is best, and how knowne, 471. e. the prices of the severall kinds of Borax, *ibid.*
 Nero passed the great Cirque at Rome all oner with greene Borax, 471. e.
 Borax of three kinds, *ibid.*
 Borax in powder, how to be laid in painting, *ibid.*
 Borax that goldsmith use, is called Chrysocolle, or Gold-soder, 571. f. it is altogether artificiall, *ibid.* how it is made, *ibid.* the vertue medicinable, 471. e.
 Borythenes, a famous river, 410. k. stretch over the river Hypanis, 411. c. once in the Summer looketh of a violet colour, *ibid.* the water of it very light, *ibid.*
 Borfices, a pretious stone, 631. a.
 Borels their obstructions how cured, 259. a. See Præcordiall parts.
 B R
 Brabyla, 278. i.
 Bracelets given to Roman citizens for their service in wars 461. e.
 Bracelets of gold worn by men next to their arme bare, 461. f. why they are called Dardani, 462. g.
 Brains and the pellicles thereof impostumat, how to be cured, 185. f.
 Braine pellicles how comforted, 189. d.
 Braines slight how to be staid, 67. a.
 Braines intoxicated, by Hælicacabus or Dwaile, how to be helped, 113. a.
 Braine how it is purged of phlegmaticke humours, 47. c. 232. l. 233. e. 234. k.
 Braines of a wild Bore adverse to serpents, 322. b.
 Brainsicke or besinght of wits, how to be cured, 44. g. 46. i. 56. b. 212. d. 283. a. 591. a.
 Brambles, what medicinable vertues they be ended with, 195. f. they are exceeding asringent, 196. k.
 Branded markes how to be taken, 240. g.
 Brankurine, an herbe to what uses it serveth, 129. e. two kinds thereof, *ibid.* the medicinable vertues, *ibid.*
 Branches for lights in temples made ordinarily of brasse, 489. e.
 Brasse pots how they may be scoured, and rid fro furring, 516.
 Brasse ore, See Cadmia.
 Brasse a metall greatly esteemed, 486. i.
 of Brasse founders a confederacie at Rome, *ibid.* k.
 Brasse weighed out for payment and money, 461. k.
 Brasse first coined by Ser. Tullius K. of Rome, *ibid.* l.
 what was the stamp, *ibid.* the value enhanced and raised at Rome, 463. a.
 Brasse mines where the best, 486. l.
 they are medicinable, 506. g.
 Brasse tried out of the ore, 486. k.
 Brasse made of Cadmia, 486. b.
 Brasse Cyprum or copper made of Chalchitis, *ibid.* m.
 Brasse Salsitranum, 487. a. why so called, *ibid.*
 Brasse Lincianum, why so called, *ibid.*
 Brasse Chalcianum, 487. a.
 Brasse Corinthe, *ibid.*
 Brasse Alsceina a cupord temperate of the best, 487. e.
 Brasse Corinthian, what mixture it was, *ibid.* k. highly esteemed, *ibid.*
 Corinths brasse metall of three kinds, 488. g.
 Brasse of Ægina highly esteemed, 448. b.

Brasse of Delos most accepted, *ibid.*
 Brasse of Corinths employed both in publicke and privatæ buildings, 489. a.
 Brasse Coronarium, what it was, and why so called, 505. b.
 Brasse Regularis, called also Dufite and why, *ibid.* c.
 Brasse Caldarium, 505. c.
 Brasse Campanum, *ibid.*
 Statuaria what temperate of Brasse it was, 505. e. and why so called, *ibid.*
 Tabularia, what temperate of Brasse, and whereupon so named, *ibid.*
 Brasse Collicinarum, what it is, *ibid.*
 the temperate of Brasse called Formatic, 505. f.
 the temperate called Ollaria, *ibid.*
 colour of brasse named Grecanick, 505. f.
 what vertue saueh Brasse from rust, 506. g.
 Brasse serveth for perpetuall registers, 507. e.
 Brasse skeler, 507. e.
 Brasse rust or Verdegris, 508. b.
 divers wates to gather it, *ibid.*
 how it is sophisticated, 508. i. how discerned, *ibid.* k.
 Brasse green rust or Verdegris how to be calined and prepared for use in Physicke, 508. k. l. uncalined, what medicinable vertues it hath, 509. a.
 Bread at Rome different according to states & degrees, *ibid.*
 Bread leanened, 141. a.
 Bread donne-right, *ibid.*
 Bread buket, *ibid.*
 besides nourishment, what vertues medicinable it yeeldeth, *ibid.*
 Sea-Breams Melanurus, how they feed of crumbe, 429. a.
 how they become of a haw within an hooke, *ibid.*
 Breath stinking an unseemly disease, 339. f.
 proceeding from corrupt lungs, how remedied, 339. f.
 what maketh a slowe and strong breath, 377. a. 441. a.
 Breath how it may be made sweet, 64. g. 65. e. 79. a. 105. d. 131. e. 140. i. 156. m. 162. i. 164. i. 174. b. 239. f. 240. g. 304. g. 313. a. 326. k. 328. k. 350. g. 377. a. 441. a. 624. i.
 for diseases and paine in the Breath, what medicines be appropriate, 461. 53. a. 56. b. 66. g. i. 74. i. 76. l. 120. b. 154. g. 180. l. 182. l. 186. e. 192. l. 193. b. 246. g. 247. e. d. 250. l. 290. k. 275. e. 284. b. 289. f.
 for Breasts impostumat, remedies, 141. e. 246. g. suppurations in the breast how censed, 144. b. 216. i.
 cisers in the breast how healed, 208. g.
 Breasts of women swelled how to be helped, 51. b. 54. g. 58. f. 59. f.
 for womens breasts convenient medicines, 587. f. 589. b.
 Breasts or paps of women how they may be trusted round decently and not hang downe flaccid, 397. a. l.
 Breasts of women newly laid, if they be swolle and hard, how to be mollified and eased, 395. e. 437. d.
 Breasts of women sore and impostumat, remedies therefore, 395. f. 438. b. 589. a. how to be perserved from swelling and the ague, 397. a. from pricking and shooting paine, 397. a. if they be in paves, how to be eased, 397. b. 589. a. See more in Women.
 Breast full of purulent matter, how to be discharged, 553. a.
 Breasts the name of a god and temple, 404. k.
 Bricks good, of what sort, 555. e. the best for making bricks, *ibid.*
 how

how old bricke ought to be before it be used in building. 555.d.
 Bricks of three sizes, ibid. how according to every size they be employed in Greece, ib. e. what buildings of perpetu-
 itie were made of bricke, ibid. f.
 Bridge Sublician or of wood over Tiberis at Rome, framed
 and set together without either pin or nail, 581. d. the
 reason why, ibid.
 Brimstone of wonderfull power, 556. i. k. where the best is
 found, ib. i. four kinds of brimstone, ibid.
 Brimstone natural, 556. i. the use of it, ibid.
 Brimstone artificial, 556. i. the use of it, ibid.
 how Anaxilanus was wont to make sport at a merry
 meeting of guests, with brimstone, 556. l.
 Brine to beate & comfort the sinewes, how it is made, 413. d.
 Britanica, what hearse, 112. l. the description, ibid. the
 vertues thereof, ib. why so called, ib. from whence it is
 brought, 269. d.
 Brixiaides, a famous Imaguer, 566. l.
 Broome, whereof they make chred and net cordage, 4. g.
 the Broome Genilis, for what uses it serveth, 188. g.
 Bees delight therein, ibid. 93. d.
 whether it be Spartan of the Greekes, or no, ibid.
 Bromet, what it is, 215. a. the description, ib. the medicinal
 properties, ibid.
 Broncheole, what disease it is, and how helped, 142. b.
 Brontia, a pretious stone, 625. b.
 Frontia, a picture of Apelles his devising & making, 541. b.
 Brooklime, an hearbe, 235. a. the description, ibid.
 for inward Bruises and cuttured blood, the proper medi-
 cines, 50. k. 58. b. 61. b. 73. a. 103. b. 109. b. 122. k.
 123. d. 141. a. 146. d. 157. a. 161. e. 167. f. 182. b. a.
 201. f. 226. l. 262. i. 264. g. 277. g. 289. e. 337. d. 349. f.
 350. a. 370. a. 412. k. 559. e.
 Buxaria, a famous founder of brassen images, statues, and
 calicets, 495. e. his works, 501. e.
 Buxon, a hearbe, 278. i. the description, ibid.
 & 445. b. good for the gout and isyms, ibid.
 Bryone the white, an hearbe, 149. f. the vertues, 150. g.
 Bryone the blacke, ibid. the vertues, ibid. b.
 B V
 Bubonim, an hearbe. See Asper. 625. b.
 Bucardia, a pretious stone, 625. b.
 Bucera, an hearbe. See Fenigreeke.
 running Buckenheat. See Elatine. 223. e.
 Buffler or wild bull, yeeld medicines, 223. e.
 Buglossus, an hearbe, 223. d. why so called, ib. wherefore it is
 named Empyrophon, ibid.
 Bulls how they may be taken and made to stand still, 169. a.
 Bulls blood a poison, the remedies for it, 51. a. 131. e. 168. l.
 323. e. 422. k. See more in blood.
 Bulls gall medicinal, 325. d. for what, 324. b.
 Bulls urine medicinal, ibid.
 Bulapathum, what docke, 73. e.
 Bularchus, an excellent painter, 535. a.
 Bulbous plants, 18. l.
 of Bulbs, diverse kinds, 19. b.
 Bulbous roots, when to be digged up, 19. e.
 Bulbous roots, as onions, and such, how they will grow
 big, 22. i. their medicinal vertues, 23. b. 52. b. their dis-
 commodities, 52. l.
 Bulbine, 19. b. the description thereof, and the use, 52. m.

Bulla, the brooch of gold or pendant tablet, how it first came
 up, 455. e.
 Bullous, their vertues, 169. d.
 Buildings at Rome in Plinies times compared with those of
 ancient time, 583. b. c.
 the Romanes exceeding in sumptuous Buildings, 583. a. b. c.
 Bulwerion, a public hall in Cyzicum, why so called, 581. e.
 the wonderfull frame thereof, 581. d.
 Bunnas, a kind of grape, 268. i.
 Bunch swelled of the throat, how to be cured, 142. b.
 See Phrychole.
 Buntia, what kind of Nauw, 39. a. the vertues, ibid.
 Buntion a kind of Nauw, 39. a. the vertues, ibid.
 Bupalus and Anthermus, two brethren and imagers in
 marble, 564. l. how they abused the Poet Hippoclytus by
 pouring him and proposing his image as a laughing
 stock, 564. l. their pride and waine glory, 565. a.
 Dupluron, an hearbe, 129. e. the description and vertues, d.
 Dupluron, 278. k.
 Enpreffus, an hearbe, 129. d. whereupon it took that name,
 in. in this hearbe the Greekes are constant, ibid.
 Enpreffus, a venomous worme or scie, hurtfull to kine and
 oxen, 362. b. 377. d. why it is so called, ib. e. what reme-
 dies against the poison thereof, if it be swallowed down,
 150. m. 157. e. 160. k. 161. d. 167. f. 318. b. 322. k.
 422. i. the use of this scie in Physicke, 362. j. how to
 be prepared, ibid.
 A Burre described, 99. d.
 little Bur, called Lappa Caxaria, 206. b. the description, ib.
 cloe-Burre, 227. f. the names, description, and vertues, ibid.
 bitter Bur, Perfoliata, 129. f. the names, description, and
 vertues thereof, 229. e.
 For Burns or scalds, proper remedies, 387. d. 423. k. 463. f. 475.
 d. 70. l. 71. k. 78. j. 110. d. 122. k. 123. f. 124. f.
 128. j. 129. f. 130. g. 139. b. 140. d. 141. e. 142. m.
 146. k. 155. f. 158. b. 160. m. 161. f. 167. e. 170. m.
 174. k. 175. a. 178. g. 181. e. 184. k. 185. f. 186. f.
 190. b. 194. g. 201. f. 203. e. 203. e. 273. f. 274. k.
 275. f. 306. f. 352. k. 392. k. 446. f. 473. f.
 fresh and new made, what is to be applied, 418. f. 419. d.
 how it may be kept from blistering, 159. b. 319. d. 337. f.
 350. f. 419. d. 587. b. 590. b.
 how to be skinned up without a skarve, 168. e. 262. k.
 337. f. 392. k. 422. k.
 to take out the fire of a burne or scalding, ibid.
 if the place be raw how to be skinned, 437. d.
 Burnt ston how to be remedied, 52. l.
 Euret shell medicinal, 458. b.
 Butyrus, an excellent Imaguer, 502. j. his works, ibid.
 Butyr held for a most damne meat, 219. a. it distinguisheth
 the rich from the poore, ib. whereupon Butyr took the
 name, 319. a. how it is made, it steale not ranke Butyr
 medicinal, 319. b. of what quality it is, ibid.
 Butyr-milke. See Chermilke, and Oxygala.
 Butterflies hurtfull to Bee-hives, 95. d. how to be chased
 away, 7. j.
 Byrrhwoort called Aristolochia, for what causes, 226. g.
 it is named Malum terra, ib. fewe kinds thereof, ib.
 their descriptions, 226. b. j.
 Bythm of Dyrhachium, a writer in Physicke, 309. f.
 Bythm, a strange beast, mentioned by Al. Cicero, 399. a.
 Cacus, 412. k.

C A

Cacalia, an hearbe, 246. h. See Caramanis wild.
 Cacalia, what hearbe, 223. e.
 Cacalyx, what it is, 193. b. 25. k. of diuerse kinds, 193. e.
 Cactacechnon, See Cactacichon.
 Cacterys, salted, are medicinal, 442. g.
 Caltos, what hearbe, and how it is used, 98. k.
 Cadmia, a kind of sundry sorts, 506. b. how to be prepa-
 red, ibid. the medicinal vertues, ibid. l.
 Cadmia Capitis, what it is, 506. i.
 Cadmia Barytis, the best, and why so called, ibid.
 Cadmia Placitis, 106. j. the reason of the name, ibid.
 Cadmia Onychitis, ibid.
 Cadmia Ostracitis, ibid.
 Cadmitia, a pretious stone, 625. e.
 Caecilius Bion, a writer, 330. i.
 Caecilia, what kind of Lettuce, 24. i.
 M. Caecilius accused Calphurnius Bestia for murdering his
 two wives, 207. g.
 Celia a kind of drinke, 145. b.
 Celsus, a Roman writer, 404. i.
 Cenna, a painter, 549. d. his works, ibid.
 Ceria, a kind of drinke, 145. b.
 Cervaletia, a fountaine serving Rome, 586. g.
 Cala, an hearbe, 278. l. of two sorts, their description and
 vertues, ibid.
 Calamit, a fine imaguer and engraver, 483. e. his works,
 501. a.
 Calamina, certaine sorts medicinal, 458. k. their descrip-
 tion, 439. b. why so called, 447. b.
 Calamitinus, what it is, 450. i. the description and na-
 ture, ibid.
 Calceifraga, an hearbe, 281. a. See Empetron.
 Calcining, how to be performed, 362. l.
 C. Caligula the Emperours seminaut apparell, 603. b.
 C. Caligula the Emperour his viall ship flayed by the fish
 Ebernet, 426. g. he was killed by his owne foundort,
 ibid. b. he was killed by his owne foundort,
 ibid. b. he was killed by his owne foundort,
 Calixenus, a writer, 575. e.
 Callina, a pretious stone, 625. e.
 Callis, a pretious stone, ibid.
 Callis the Athenian devised first the use of Vermilion,
 474. e.
 Callistophara, ointments to beautifie women, 473. e.
 Callistophara, the best oysters, 436. m.
 Callistocrates his passing fine workmanship in stone, 570. m.
 Callistia, what hearse, 202. k. the wonderfull operation
 thereof, ibid.
 Calligonon, what hearbe, 287. a.
 Callimachus, a Poet, 171. b.
 Callimachus, an imaguer in brasse, famous for his seruise
 Cactacechnon, 504. k. why he was so feared, 504. k.
 Callimachus wrote a treatise of gurlands & chaplets, 583. b.
 Callion, what hearse, 112. b.
 Callimachus, a fish medicinal, 438. b. he is named Ptra-
 noscopus, 438. i. and why, ibid.
 Callistia, a rich and fancied stue, 479. e.
 Callitribis, what hearse, 232. i.
 Callitriche, ibid.

Callosities, how to be softened and rid away, 108. g. 139. b.
 191. e. 320. g. 423. f.
 Calphurnius Bestia killed his two wives with the poison of
 hearbe Aconitum, 270. g.
 M. Calphurnius Flamma honoured with a chaplet of grass, 117. b.
 Caltrap this Tribulus described, 98. k. the properties of
 it, 98. l.
 Calues-front, an hearbe, 231. e. the description, names,
 and vertues, ibid.
 Calues yeeld remedies against scorpions, mad dogges, &c.
 322. f. their sewer and marrow medicinal, 324. b. m.
 their gall used in Physicke, 324. b.
 Calous the Orator, why hee used to wear a thin plate of
 lead to his backe, 418. l. he complained that Kichen-
 vessell was made of silver, 480. l.
 Calypso, a woman, a fine paintresse, 551. a.
 Camels bodie, what medicines it doth afford, 311. b.
 Camels branes, gall teile, what use they yeeld in Physicke,
 311. b. e. their dung reduced into oyle, and the haire of
 their tails, 311. e.
 Cammarum. See Aconitum.
 Campaspe a famous courtier, entertained by K. Alexan-
 der the Great, 539. a.
 Canachus an excellent imaguer, and his works, 501. d.
 Canalicum, or Canalicus, what gold ore, 466. m. the ma-
 ner of getting it and the reason of the name, 467. a.
 how it is to be ordered after it is landed up to the pits
 mouth, 467. a.
 Canaria, what kind of grasse, 225. b. why so called, ib.
 A Canalicus of brasse cost 50000 sesterces, 488. k.
 K. Candanus otherwise named Myrsilus, paired, the weight
 in gold for a painted table, 535. a.
 Canephorus, a virgin, wrought in marble by Scopas, 507. e.
 Cantabrica, what hearbe, 223. b. the description, ibid.
 Cantharides, a pretious stone, 630. i.
 Cantharides taken inwardly, how their venom is to be re-
 pressed, 40. m. 71. b. 150. f. 157. e. 160. k. 161. d. 318. b.
 323. f. 324. g.
 Cantharides hurtfull to the bladder, 366. e. how they are to
 be taken and used in Physicke, ibid. their wings medicinal,
 362. g. Physicians agree not where their venom is
 eth, 362. g. how they be engendered, ibid. diuerse kinds
 of them, ibid. their description, ibid. how to be prepared,
 ibid. their nature and operation, ibid.
 Cantharides held at an high price by Cato Priscus, 362. i.
 Capri, how, where, and when to be fowled and set, 30. b.
 Capri of Italy harmlesse, 62. l.
 Caprius, a pretious stone, 625. e.
 Capnos, what hearbe, 236. l. the description, ibid.
 Caprius, what it is, 518. b.
 Caramanis, why so called, 30. b. how & where they grow, ib.
 wild Caramanis Cacalia described, 232. l. the operation, ibid.
 Caruncle, a pretious stone, 616. b. it hath the same in
 Greeke of fire, and yet fire hath no power over it, ibid.
 Caruncles, a disease when it first came into Italy, 241. d.
 the manner thereof, and the accidents accompanying and
 following it, 241. d. e.
 Caruncles how they are brought to maturation, broken,
 and cured, 56. k. 58. b. 69. a. 70. l. 134. i. 143. b. 144. g.
 148. k. 158. k. 160. g. 163. e. 167. e. 172. i. 183. d. 193. d.
 260. d. 392. l.
 Kkk Carbu-

The Table to the second Tome

Carbuncles how to be cooled, 448.g.599.e
Caruncis, a precious stone, 630.a
Caruncetron, what hearbe, 287.b
Cardiacke passion, what it is, 153.c. what medicines be good for it, ibid. 154.m. 196.f. 346.f.
Caries in wine, what it is, 152.k
Carneades the Philosopher purposing to answer Zeno, purged his braine first with Ellobore, 217.f
Carnofa, what they be, 13.e
Carubi, their properties good and bad, 172.l
Carob tree alwaies blossoming about a certaine fountaine, 405.c
Carot or *Dauke*, 18.g
Carots of foure kindes, or rather of twaine, 228.m
Corat of Candie described, 229.a
Corat of Candie where they grow, ibid.
Carpasum, the iuce of it is poison, 436.b. the remedie against it, ibid.
Carpasum yeldeth a venomous iuice, 323.a. the remedie for it, ibid.
Carrae, a citie built all of salt, 415.a
the huge Carrick, that transported an obelisk out of Egypt, swike of purple in the haue of Othia, for the service of the harbor, 575.e
Carnisio Polio his wastfull excess in garnishing and making both tables and beds of silver, 481.d
Carnisio, a famous brasse-founder in Italie, 495.e
Caryatides, what images, 509.f
Cassidone or *Cassidone*, a faire stone, whereof cups and other vessels were made, 454.i. See *Onyx*, or *Onychite*.
Cassidone stones how to be chosen, 604.b
their sundry kindes, ibid.
a Cassidone cup of great price, 603.c
Cassidone vessel from whence it cometh, 604.g
the stone whereof they be made, described, 604.g
Cassius Hamina, an Historiographer, 345.e
Sp. Cassius his statue pulled downe and melted by antiochus, and wherefore, 493.b
Antonius Cassor, a notable Herbarist and Physician, 210.i
his garden, ibid. his age and health, ibid.
Cassor, a writer in Physicke, 78.l
Cassor, abesit. See *Beemer*.
Cassorum, what it is, 430.b. how prepared against sundry poisons, 431.a. the ordinarie dose of *Cassorum*, 431.b
Cassorum medicinable otherwise, 438.b. 442.g
Catagula, an image of *Praxiteles* his making, 500.k
Catane, 278.k. an amatory hearbe, ibid.
Catarrh or suffusion of the eyes what remedies proper for it, 105.g. 106.b. 198.m. 233.f. 237.b. 306.g. 312.g. 314.k. 316.g. 324.k. 366.j. 367.b. 419.a. 431.e. 432.k. 438.i. 509.a. 557.d
Catarrh, what pictures, 533.b
Catarrhis falling to the throat and chest, with what medicines failed, 378.b. 352.g. 380.l
Catarrhis violent, by what means they are restrained, 154.g. 156.g. 173.c. 182.c. 194.f. 286.f. 287.g.
Cato *Vicentis* endited for filling *Cantabardes*, 360.i
Cato, a writer in Physicke and naturall Philosophie, 48.k
Caus-haire, or *Seer*. See *Felens*.
Catechiter, a precious stone, 625.c
Catoprytes, a precious stone, 625.d
Catulle, how to be secured from all harmes, 193.f

Catus Aelius a Consul of Rome served with carthen vessels at his own board, 381.b. he refused a silver plate presented unto him, ibid. had neuer in silver more than his drinking cups, 481.b
Canaica, what snailers, 380.k
Cancalis, what hearbe, 430.l
Cancron, what hearbe, 247.c
Cassius, a kinde of *Lafer*, 9.a
Caulides, a kinde of *Colewort*, 45.k
Cautickie medicines, or potentiall canteries, 503.g. 506.k. 61.a. 65.a. 74.f. 109.f. 134.b. 162.b. 168.i. 172.b. 191.f. 207.b. 223.c. 239.d. 252.i. 267.c. 280.i. 281.c. 286.m. 362.b. 377.g. 385.e. 418.g. 443.c. 450.a. 485.b. 521.b. 595.c
Canterie actually of yron, what operation it hath, 516.g
Canterizing of a bodie performed by the means of a chry-stall glasse, 605.b
Canterie potentiall. See *Canstickie*.

C E

Cedrelate, what kinde of Cedar, 179.c
Cedria, what rosin, ibid. the strange properties that it hath, ibid. the difcommodities of it, ibid. the danger in using it, ibid.
Cedrat, what, 179.e. the vertues, 149.c
Cedrat, what plant, 149.c
Celendine the great, an hearbe, 223.m. why called *Chelidonia*, ibid. two kindes and their description, 223.a
Celendine the great, *fontaine* for the cities, 233.g
Celendine the lesse, 225.a. the iuice of *Celendine* wherewith be drawne, ibid. the vertues thereof, ibid.
Celeras at Rome, who they were, 461.a
Celers, horse runners in Greece, 490.l
Celsus, a writer in Physicke, 400.i
Celiberica, what they were, 462.g
Celicia, what they were, ibid.
Cement made very strong of carthen pots broken, 554.i
a Cement to solder broken glasses, 553.e
Cemos, a magicall and amatory hearbe, 278.k
Cenobris, a venomous worme, 75.d
the remedie against it, ibid.
Cenobrites, a precious stone, 630.k
Cenobron, a kinde of diamond, 610.b
Cendania, a river in Phoenice famous for the matter of glasses, 597.k
Cenaurie the greater, an hearbe, 220.l. why so called, ibid.
named also Chironom, and wherefore, ibid. a wonderful incarnative and healer, 221.a
Chen the *Cenaurie* healed by it, 220.l. the description, ibid. where the best growth, 220.m. the iuice drawne out of it in manner of Lycium, 221.a
Cenaurie the lesse, an hearbe, ibid. the sundry names it hath, ibid. why called *Lepton*, ibid. why *Libanion*, ibid. the description, ibid. b. why called the gall of the earth, ibid. when to be gathered, ibid. why the Gauls call it *Exacore*, ibid. the vertue, ibid.
Centaurus, an hearbe of the kinde of *Cenaurie*, why called *Trionchis*, 258.k
Centaurus, another hearbe, 381.a
Centipeda, what worme, 321.e
Centipello, what it is, 119.b
Centuncipina, the white Eryngium or Sea-huliner, ibid. c. wonders reported by it, ibid. c.
Centunculus an herbe, 199.d. the description & vertues, ibid. c. *Cepae*,

of Plinies Naturall History.

Cepae, an hearbe. See *Brookelime*.
Cephissus, a lake, 606.k. called otherwise *Eletris*, ibid.
Cephissodorus, a cunning imagur, and his worke, 501.d
Cephissodorus, of *Praxiteles*, 507.b. 508.f
Cepionides, precious stones, 626.b
Cepites, a precious stone, 625.d
Cepocapites, a precious stone, ibid.
Ceracabates, a precious stone, 622.e
Ceramicum, a famous streete in Athens, 552.k. whereupon it tooketh that name, ibid.
Ceramicus, a precious stone, 625.d
Cerastes, a venomous serpent, 62.k. the remedies against it, 62.k. 158.g. 183.b. 418.l. 431.b. 434.g.
Cerastis, what hearbe, 250.b
Cerastis, a kinde of wilde Poppie, 68.m. why so called, 69.a
Ceraunia, a white precious stone, 622.m. the description of it, ibid. the diuerse kindes, 623.a. their properties, ibid. which of them be called *Betuli*, ibid.
Ceraunia, another precious stone which *Magicians* only can find, 623.b
Ceraunum, a kinde of *Myrsine* or *Toadstole*, 7.f
Ceraneubolus, a picture of *Apelles* his making, 541.b
Ceremonies and circumstances observed in gathering and using sundry medicines, 106.b. 112.g. 122.k. 125.a. 126.l. 142.m. 164.b. 165.e. 168.b. 169.a. 170.f. 170.k. 178.i. 188.f. 198.l. 205.b. 206.m. 217.d. 217.f. 228.b. 234.f. 238.k. 245.d. 252.g. 256.f. 260.i. 283.c. 286.g. 330.k. 368.m. 381.d. 390.k. 391.a. 392.f. 515.f.
Cerithiean hearbe and stone, 93.f. the description, ibid.
Cerites, a precious stone, 625.d
Ceror, a spring, 403.c. the water of it maketh sleepe blacke, ibid.
Cerrus, a kinde of great oke, 178.k
Cerussa, a very poison being taken inwardly, 526.l
the remedie against it, 136.f. 160.k. 168.l. 318.b
Cerussa how it is made, 520.k
Cerussa burnt, a painters colour, 528.k
the occasion how it was first burnt, 529.e
Cerussa, purple, what price it beareth, 529.e. how it is made at Rome, ibid.
Cerussa, how it is used for a blanch or white complexion, 520.l
Cestron. See *Betonic*.

C H

Chareas an imagur, 502.e. his worke, ibid.
Chareas, a writer of fables, 79.a
Chares of gell beloved by Romans *pro auxiliariis*, 461.b
of silver upon naturall citizens, ibid. c.
Calamine. See *Cadmia*.
Chaladriscum, or *Chaladriscum*, the best kind of nitre, 420.i
the use thereof, 421.e
Chaladriscus, a precious stone, 630.k
Chaladriscus, what stone, 592.g
Chalcidum, what hearbe, 248.g
Chalcidic, a venomous worme, 431.b. called also *Serpis*, ibid.
the remedie against their venom, 431.b. 433.g
Chalcites, a precious stone, 631.a
Chalcites, what it is, 448.m. how it differeth from *Cadmia*, 509.d. where it is congealed, 509.e. the description, ibid. the medicinable properties, 509.e. f.

Chalcitis, a kinde of alum, 558.k. why so called. ibid.
Chalco, *Chalco*, *Chalco*, what kinde of Euerard, 613.a
Chalco, a precious stone, 625.e
Chalcothene, a famous potter or imagur in clay at *Albis* 552.k
Chalcus, what it is in weight, 113.c
Chalke of Rhodes causeth wine to be sooner refined, 176.i
Chalke of many kindes, 560.b
Chalke used for to make the feet of bondslaves to be bound and sold in market, 560.l
Publius the rimer, *Munitius* *Antiochus* the Astrologer, and *Tabernus* *Eros* the Grammarian, slanes marked with chalke, and came over all three to Rome in one ship together, ibid. m.
Chamabator, an herbe, 196.l. the description, ibid. why called *Neurospeltis*, ibid.
Chamaisifor, an herbe, 190.l. the description, ibid. the medicinable vertues thereof, ibid.
Chamaisifor, a kinde of *Cyclamine*, 229.f
Chamaisifor, an herbe, 199.b. the description, ibid.
Chamadaphne, what hearbe, 110.m. the vertues, ibid.
Chamalea, what hearbe, 198.k. the description, ibid. the vertues, 198.l. the iuice of *Chamalea*, 223.a
Chamaleon, an hearbe, 123.f. two kindes of it, ibid. why so called, 124.g
Chamaleon, a beast, 315.b. it affordeth many medicines, ibid. *Democritus* wrote a booke of this beast and the anomalies thereof, ibid. the description, ibid. *Chamaleon* most fearefull and therefore so miserable, ibid. a dierge to haue and all birds of prey, 315.b. c.
Chamaleon, what herbe, 199.a. the vertues thereof, ibid.
Chamamelon. See *Chamamelon*.
Chamapence, an hearbe, 199.b. the description, ibid.
Chamapitys, what hearbe, 181.c. what other names it hath, ibid. the diuerse kinds and their description, ibid. the vertues, ibid.
Chamapitys, the name also of the hearbe *Hypericon*, 255.a
Chamapitys, what hearbe, 248.i. the description, ibid.
Chamapitys, an hearbe, 198.l. the description, ibid.
Chamascelon, what hearbe, 228.f
Chamamile an herbe, 91.d. the description, ibid. how it flourisheth, 99.c. the sundry names that it hath, 125.c. d. why it is called *Chamascelon*, ibid. three kindes of it, ibid.
Chaplets of gold and silver foiles representing flowers of the garden, 81.a
Chaps in the fundament, feet, and elsewhere. See *Fistules*.
Charcole once quenched, give the greater heat afterward, 472.i.
Charcole and their nature, 599.b
Chares, a famous imagur and founder in brasse, 495.e
Chargers of silver weighing one hundred pound weight apiece, 481.l
a Charger of five hundred pound weight in silver, ibid.
Charris. See *Apelles* his grace or *Pennis*.
a Charrin of clay, growing bigger as it was baking in the furnace, what it becometh, 296.g
Charris with horses, what *Imagurs* delighted to cast in brasse, 503.e. 504.g
Charms condemned by Plinie, 213.e
Charms, whether they be effectfull in witching serpents or no, 296.k. why serpents seeme to avoid them and shrink away, ibid.
Charnus

Charmes for lous, 296. *k*. for *skerples*, *ibid.* for *stanching blood*, *h*. for the *clitatoria* or the *gout*, *ibid.* for *dislocations* or *bones out of joint*, *ibid.* for the *spleene*, 381.
Charmes for jaundie, *101. d.* 206. *h.* 207. *a.* 256.
 285. *a.* 289. *a.* 296. *k.* 309. *d.* 310. *b.*
Charmes of lous how to *withstand*, 316.
against charmes & enchantments, 55. *b.* See *more in Words*.
Casars Dilectors, *never set forward in any journey without*
pronouncing a certain charme, 279.
three Charms, images in marble at Athens of rare work-
manship, 396.
M. Charms a Maritian, professed Physick at Rome, 5. *b.*
be condemned for lous, and brought in bathing in cold
water, 315. *b.* he *was obliged to haue 200000 sesterces*
for one cure, 349.
Clait-tree, 257.
Cloths, how *folke may be made*, that were *loose and wan-*
tingly gone, 314. *b.* 316. *m.*
Chens *folded how to be assinged*, 158. *a.* See *Tiborat*.
Chens *is medicinable*, 318. *d.*
Chiefe of mares milk *used in Physicke*, 318. *d.* *ibid.*
Chiefe greene, figs, and *loft*, *ibid.*
Chiefe old and hard for what it is good, 318. *d.* for *what it*
is hurtful, *ibid.*
Cheefe rotten, purified, and moulded, in what case whole-
some, 318. *m.*
Chiefe swine medicinable, *ibid.*
Chiefe how it may be kept safe from the moule, and also con-
trary, 399. *b.*
Chelodina, a precious stone, 52. *a.* two sorts of it, *ibid.*
Chelodina, the Tortoise, is *held for a precious stone*, 625.
 630. *k.* the *magicians tell strange things of it*, 625.
Chelodinae precious stones resembling Tortoises, 625.
Cherrier, 171. a. their *properties*, *ibid.* how they *doe* *harm*
loosen and bind the belly, 171. *a.*
Chernimike, See *Oxydala*.
Chermis, a precious stone preferring dead bodies, 587.
in one of them Darius the K. was interred, *ibid.*
Chersiphant, famous architect, 580. *k.* he *reared the frame*
of the temple of Diana in Ephesus, *ibid.*
Chersiphre, *perillous snakes or adders*, 119. *a.* remedies *a-*
gainst their poison, *ibid.*
Cherubim an heaue, named Paderor, 31. *b.*
Cherubim toolepicks named Gygidiam, the *properties that it*
hath, 41. *a.*
Chersipis, *certaine wormes*, 158. *k.* *against their malice*, *med-*
icines, 138. *k.*
Chetants *is their medicinable vertues*, 172. *d.*
Chibbils, 20. *k.* *ibid.*
Chibbeea an heaube, See *Alfine*.
Children, what medicines are good for them, 57. *d.* 170.
 58. *a.* 64. *m.* 70. *k.* 76. *k.* 148. *i.* 158. *i.* 160. *b.* 168. *i.* 171.
 174. *i.* 182. *d.* 277. *d.* See *Bloudfall*.
against chills cold, what remedies, 54. *i.* 138. *i.* 169.
 175. *i.* 186. *i.* 218. *i.* 260. *k.* 305. *k.* 354. *k.* 387. *e.* 422.
 625. *a.*
Child *in pissing bed, how to be helped*, 358. *b.* See *Prine*.
Chilo dinama, an heaube, See *Pulmonia*.
Chincheugh in children, what remedies for it, 56. *k.* 105.
 315. *a.* 398. *k.*
Chios earth medicinable, 259. *b.*
Chloracina, what booke, 569. *b.*

Chironia, what plant, 150. i. what other names it hath, 161d.
Choking in young birds how to be prevented, 208g.
Choking by yowes how to be avoided, 302d.
Choking by bread going wrong how prevented, 302m.
Choler rising up into the mouth and causing bitterness how to be repelled, 148g.
Choler what medicines purge downward, 39a, 40b, 75c.
Choler, 110f, 111f, 118, 119, 140f, 162f, 171e, 182a, 186g, 198f, 121e, 214e, 237e, 250f, 36f, 4m, 251e, 252f, 36f, 284a, 288g, 442f, 443a, 273c, 275b, 277a, 281e, 282e, 291e.
Choler blacke and aduſe, what purgeth downward, 412m.
Choler, a diſſe, 346f, what remedies for it, 346f, 55c, 59f, 670m, 141f, 147f, 148g, 163e, 195e, 199g, 287e, 413f.
Chonſey a river in Perſia whereof the KK drinke, 406f.
Chonſey, a precious ſtone, 626g.
Chondrus in botland Diclamme, 239e.
Chondryle, or Chondrylon, an hearbe, 131e, the deſcription, 161d, the vertues, 161d.
Chorice, a precious ſtone of a graffe Greene colour, 626g, where it is found, 161d.
Chrys, a kinde of Emeraude, 612m.
Chryſocome, an hearbe, 110f, the deſcription, 161d.
Chryſomus, a wurmer in Phyſicke, 128i.
Chryſopea, what hearbe, 256k.
Chryſopus, an excellent herbe, 242k, he deale only in hearbes, 242k, he wryte a booke in p. aſe only of Calenworts, 48i.
Chryſopus a Phyſician alwaies the ſolele counſe of Phyſicke, 344g.
Chryſites, a precious ſtone. See Chalazius.
Chryſitis, an hearbe and Roree. See Chryſocome.
Chryſitis, the beſt kind of gold, 474i.
Chryſideryll, what precious ſtones, 612c.
Chryſocarpus, a kinde of Linie, 190g, what vertues it hath, 161d.
Chryſocolla. See Rorax.
Chryſocome, an hearbe bearing a faire ſoure, 89d, the vertues thereof, 161i.
Chryſocolcham, what hearbe, 279e, two kindes thereof, 161d, the vertues, 161d.
Chryſolampas, a precious ſtone, 626g.
Chryſolith, a precious ſtone, 630d.
Chryſolith, a precious ſtone, 628g.
Chryſopraſus, a precious ſtone, 619d, the deſcription, 161d, the uſe, and where it is found, 161d.
Chryſopraſus, a precious ſtone, 630d.
Chryſopraſus, a kinde of Beryl, 612c.
Chryſothales, what hearbe, 237d.
C I
Cicerum, a kinde of Sinoppe, 528d.
Cicerum, a kinde of aſt or b. ſprings ſoveraign for the ſpleene, 101f.
Cich peeke, and the properties that it hath, 142f, 143f.
Cichie Columbine, her vertues, 143e.
Cinab, and the properties that it hath in Phyſicke, 132e.
Cichorie the herb, the ſundy kind, 24d, their vertues, 44f.
Cichorie wild, 47d, the properties in Phyſicke, 36i, it callet Chreflon and P. neration, wherefore, 47d.
Cichorie wild of Aegypt how employed, 97d.
Cichorie of the garden, 48g, the vertues thereof, 97d.
Cici. See Cichorius.

Colima chalk of two sorts, 560.b. both medicinal
560.b. a kind of it called *Sa-da*, and why, *ibid.* i. for
what it is good, *ibid.* See *Waller's earth*.
Cimon, a cunning painter, 533.b. he denied the pictures
Citragrapha, and other curious points about him, *ibid.*
Cnecis, the only fishes all yellow, 451.d
Cinedia, what stones they be, 368.i
Cinacida, precious stones, 625.d
the forlorn forms and faire weather, *ibid.*
Cinnabari or *Cinnabaris* of the Indians, what it is, 476.g
an excellent colour for painters, *ibid.* The same that
Minium, *ibid.*
Cinnabaris of another kind, good in *Physick*, 476.g.b
Cingula for the beards, described, 228.l. the diverse names
that it hath, *ibid.* the affinity between it and the vine,
ibid. the use thereof, *ibid.*
Circæ, a famous witch, 210.k. canonized a goddess there-
fore, *ibid.* her fruits, 372.k
Circæus anabæbe, 278.m
Circæon, an hearbe, See *Mandragoras*, 278.m
Circæus, a pretious stone, 615.d
Grand-Cinqu at Rome made by *Cæsar* dictator,
the description of it, *ibid.*
Cirion an hearbe, 279.a. the description and vertue, *ibid.*
Cyclamen, a kinde of *Cyclamine*,
Cyllites, a pretious stone, 239.e
Cyllites, a pretious stone, 620.k
Cyllis Eriobaron, what plant, 190.k. the vertues, *ibid.*
Cyllis, how to make for to hold water, 594.b
Cyllis, a plant, 190.k. the medicinal vertues thereof,
190.b. the sundry kindes and their description, *ibid.*
Cyrons and their medicinal vertues, 164.i

C L

Claudius Cæsar put a gentleman to death, for having the
serpentine above him when he pleaded at the bar. See
Aquilon.
Clean, a bring of water, 404.g. why so called, *ib.*
Clarie the wild an hearbe, 256.l
the first *Claffs* at Rome, how valued and taxed, 462.m
Clasæ hearbe, 253.c
Clasæ, a painter, who drew first the linaments of a ba-
die in blacke, 525.e
Claspeum, a Physician, 131.d. 202.m
Clasma, what hearbe, 227.b
Clasmat, an hearbe, 191.a. the description, *ibid.*
the effects in *Physick*, *ibid.*
Clasmat, called in *Latine* *Cenunculus*, 199.d
Clasmat, a common name to many hearbs, 199.e
Clasmat of *Egypt*, 200.g. the sundry names that it hath,
ibid. and 202.m
Clas a painter, 549.d
Claspar the *Queene*, how shee made sport with *Antonie*
by a coronet of flowers, 82.d
Clasphæus, a Physician and writer, 200.c. see brought
in first the use of wine in *Physick*, 243.f
Clasphæus, a painter, who first portrayed a personage in
colours, 525.c
Clasphæus a painter, famous for the picture that he made of
the *Queen* *Sir-Iovance*, 549.e
Clasphæus, a brass-founder, how he played his part with
dame *Gegania*, 488.l
Clasphæus an image wrought by *Phidias*, 497.d. by *En-*
phæus, 502.k

Cliniae, what kinde of Physicke, 344.f.
Clonopodium, a hearbe, 199.c. the sundry names it hath, ibid.
Cltorius, a water which causeth loathing of wine, 402.e
Clturi, what herbe, 208.g. why called Philantropos, ibid.
the effects that it worketh in Physicke, ibid.
Clodian plate, ibid.
P. Clodius what paid for one house, 480.k
Clodia, a virgin honoured with her statue on horsebacke in Rome, 582.g
Clupea earth medicinable, 492.l
Clymene an hearbe, 221.d. why so called, ibid. the description, ibid. e. both fruitful and wholesome, 223.i. the succ medicinalbe, ibid. e.

C N

Cneoron an herbe, 60.b. two kinds thereof, ibid.
Crnicor or Cric an hearbe in Aegypt, 97.c. the diuerse kinds and the oile that it yeeldeth, ibid.
C O

Coaches all of filster, 480 l
Coccum Gnidium the berrie described, 280.k. the nature and vertue of it, ibid.
Cocclaba what they be, 421.b
Cochlidel, what precious stone, 631.b. how they be ordered in Arabia for milke workers, ibid. f. the sundry uses, ibid. an old Cocke how medicinalbe, 359.c. how a Cocke shall not crow, ibid. cockes, capons, and jereb like pullex, what medicines they do afford, 319.b
Cocke broth medicinalbe, how it was made, 359.d
Cocke-combe, an hearbe, 275.c
Cocke g-oad to expell grauell, 444.h
Coddle Fone have downe lower than the other what remedies, 445.a. Codlings by what meanes helped, 521.b.e
427.g.h.k. Iudas by his oile, 177.g. 128.g. 256.g. See more in Generall.
Codnamion, when it flourisheth, .92.g
Colons of clay for a dead corpe, 523.d
Colony, what kinde of Azur, 485.a
Colubico a poyson, the remedie against it, 318.b
Cold posion, 180.m
Colds extreme, how to be auoided or endured, 160.k. 189.c
193.b. 260.k. 329.c. 449.a
old fire in agues how to be sortened or purged, 173.f. 189.e
289.d. 322.l. 324.g. 446.g.
Colic how to be cured, 343.c. 55.e. 62.b. 129.f. 141.e
144.f. 383.c.de. 419.c. 511.e. 519.c. 521.a. 558.l. 559.g
104.l. 139.f. 163.l. 165.b. 167.d. 169.d. 171.f. 182.l
190.b. 253.d. 213.b. 318.g. 332.i.
Colique, when it first began at Rome, 242.g
Collyria. See Coniunction.
Olyria, a kinde of Butters. 441.a. their description and medicinalbe vertues. ibid.
Olyrie of Asaffron, 105.a. other collyries, 1137.f. 127.b
Olyries appropiate species, 160.g. 183.g. 187.g. 236.l
270.m. 272.k. 285.g. 350.a. 351.a. 356.b. 414.a. 430.g
471.e. 474.f. 575.g. 506.k. 508.l. 510.k.
Oleofia of Aegypt, 98.c. See more in Cyanois,
oleofrat, what infants, 317.b
oleofrum, what it is, ibid.
oleot, what it is and it is, 361.b
oles a famous painter, 532.m
olours in painning, what they beay and liuely, 521.i. which be deadd, flynd, and dwygh, ibid. the Colours foure which
Kkk 3
the

the best painters of what they were. 352.f
Colofie, gemlike images. 495.a
Colofie of Iupiter in the Capitoll, by whom erected. 495.a
the Colofian images at Rome of Apollo and Iupiter Pom-
pianus. ibid.a
Colofie of Hercules at Tarentum wonderfully made. ib.b
Col-ffe of the Sunne at Rhodes fenetic cubis high all of
brasse. ibid.c
Colofie made by Italian workmen as well as by stran-
gers. ib.e
Colofie of Apollo at Rome, an excellent peece of workman-
fhip. ibid.
Coluber, a water snake 435.b. the efficacy thereof in burn-
ing crocodiles, ib. is called in Greeke Eubrydis, 430.k
his teeth are good to skarifie the gums for toothach, ib.
Comagenum a sweet composition, 354.k. why so called, ib.
how it is made, ib. l. m. the vertues. ibid.
Comagen an herbe, and a country. 354.l
Combrum the hearbe and flower, 85.f. the vertues, 104.f
Comfrey the hearbe, 249.b. See Cumfrey.
Composita of fiftuall bodiales instituted by K. Seru. Tul-
lius upon what occasion. 559.d
a Complexion for a yed. See Fuke.
against compositions and mixtures in Physicke, Plinie in-
uenteib. 137.c. 348.k
Conception of men children, how to be procured, 79.a. See
more in Boies.
Conception by what means it may be helped. 361.40.l
43.c. 62.k. 130.k. 178.k. 279.b. 339.c. 340.l. 341.a
396.g. 399.a
what kind is it. Conception. 58.k. 179.d. 350.b
Concyllium, a felffish, the blond whereof is medicinale.
439.e.
Condyllan, what beare. 130.b
Condrylla, an herbe. 99.d
Conduits and their pipes, 411.d. the manner of carrying
water by them from the head of the spring. 411.d
the Conduits begun by Caligula the Emperour, and fin-
ished by Claudius his fuccellor, were wonderfull. 585.f
the charges of making thofe conduits, with their man-
fuld. 586.g
Conelwort. See Conies.
Come, an herbe. See Tragopogon.
Conderdum, an herbe. 235.c. the description and vertues. ib.
Conferua, what it is, 290.b. a wonderfull cure done by it. ib.
Conuatiours, whether they be of power to raise thinder and
lightening. 295.c
Conuatiours of funderly fortis, 153.e. how they may be preuen-
ed and withftood. ib.
Confilgo, i. Breafest an herbe. 224.i
Constitution of the lungs, 422.m. See Phlyfickie.
Consumption of the whole body by lungs, hefticke fierer, or
otherwise how to be recovered. 134.l. 259.g. 310.m
Con-za an herbe, 90.m. two kinds male and female, and
their description. 91.a. 267.e
Coponius, a cutter in fione, 570.a. his workmanfhip. ib.
Q Coponius condemned for fending an earthen ampolre to
one for his voice at the election of magiftrates. 553.f
Copper how to be calcined and washed. 507.a.b
Coracini, fiftes medicinale. 435.f. 438.i
Corall a pretious stone. 625.d
Corall highly esteemed among the Indians, 429.d. where

the best is to be found, ib. how it is gotten forth of the
feab, whereupon it is named Corallum, ib. in great ac-
count among the priests and wifards of India. 429.f
it resisteth the power of fire, 430.g. how the Frenchmen
ufe it, ibid. how it is become a fiftie, ibid. the medicinale
vertues of corall. 430.g
Corallo-Achates, 625.e. called the sacred agath in Candie,
ibid. the vertues. ibid.
Corallo-achates a pretious stone, 625.d
Corchorus. See Pimpernell.
Corchorum, an herbe much used by the Aegyptians, 113.b
Cordiall medicines, 41.b. 119.c. 130.i. 247.e. See Con-
terpofion.
Cordyla the Tunic fish, when fo called. 451.d
Coraefcia, an herbe, and the admirable nature of it, 202.k
Coriander an herbe, 70.k. the vertues thereof, the best com-
meib out of Aegyp. ibid.
Coriander rectified and corrected by wine, 153.b
the strange effects that Coriander worketh as touching
women teannes. 71.a
Corintian. See Aennis.
Corinthian work, 496.k. fo much esteemed that many ca-
rie them wherefoeuer they went. ibid.
Corinthian gallerie at Rome, 489.b. why fo called, ibid.
Coron, what beare. 255.a
Coris, what beare. ibid.b
Cork tree, what vertues medicinale it hath. 178.l
Corke of the feet or elsewhere, how to be cured. 38.g. 65.d
76.m. 103.a. 105.d. 134.g. h. k. 139.b. 141.a. 143.a
180.k. 186.k. 258.m. 302.l. 320.g. 343.f. 356.l
Cornaline, a pretious stone. See Sarda and Sardoin.
Corne, what vertues in Physickes doth affoord, 137.f
Corolle, and Corollaria, what they were. 80.m
Coronarum, what kind of brasse. 479.a
Corone and Coronis, 80.a. the original of these teannes, ib.
Coronets of gold bestowed upon Romane Citizens for good
service in the war, 461.c. by whom giuen first. ibid.
Coronopus, what beare. 98.m. 124.k
Corruptio how it may be procured, 152.m
Corroborative medicines, 152.e. 178.k. See more in Cordials
and Counterpoisons.
Corrofiue medicini, 159.f. 160.g. 168.i. 191.f. 286.f. 338.i
441.d. 447.c. 516.k. 521.a. See Canthickie.
Corymba, the wild Spurge, what other names it hath. 28.i
53.d. the vertues. ib. full to the bladder,
Corymbi, what they be. 418.f
Corrie, pretious stones, 631.c. their properties. ibid.
Corrie, a pretious stone, 625.d
Corrie, certain canes. 405.d
Corymbi in Ferula, what they be, 33.g
Corymbian, what it is. ibid.
Corymbia, fiftes, fiftes. See Collycia.
Coffin, what women. 339.f
Coffins killed with a potion of Cantharides, 261.f
Cofticia. See Tanchyfton.
Coftenia, what beare, 248.k. the description and vertues. ib.
Cotton and the fowth that beareth it. 31.c
Cotton found in certaine fruits, as Apples and goards. 42
Cotton-weed. See Chidwood.
Cotyledon, an herbe. See Pmblicus Veneris.
Coughwort, what beare. 246.a
Cough wiffe in the night, how to be staied. 329.b
for

for the Cough, remedies appropriate, 37.b.e. 39.b.
41.d. 41.e. 42.f. 43.e. 44.f. 52.g. 50.h. 57.d. 60.l
61.a. 63.c. 64.i. 66.g. 67.f. 72.b. m. 75.a. b. 101.c. 104.b
105.e. 107.d. 108.k. 110.g. 122.g. 123.c. 128.i
134.k. 136.f. 138.m. 141.e. 144.b. 145.a. 148.k
151.k. 153.c. f. 154.g. 156.g. 158.b. 159.a. 167.d
171.f. 172.g. k. 173.b. 179.f. 180.g. 182.g. m
183.d. 184.b. 186.i. 191.c. f. 190.f. 193.c. 194.b
195.a. 197.d. 198.i. 199.b. 200.k. m. 208.g. 219.e
245.f. 246.g. h. k. 247.d. e. 249.e. 263.d. 265.f
283.f. 287.f. 290.f. 303.c. 304.g. 305.b. 315.a. 320.d
329.a. 335.k. 352.g. 353.a. 380.l. m. 381.e. 382.i
419.f. 423.k. 442.i. 521.a. 557.d.
Conies or Conlewoits of three kinds, 26.g. 40.e. when to be
fenne, set, and cut, ibid. how they will cabbage and grow
faire in the head, ibid. how they will proue fweet in tast,
ibid. how to be dunged. ibid.
Conlewoits of funderly countries. ibid.
the crop or Conlewoits called their Cyma, how to be cut,
ibid.
the commendable of properties Conlewoits, 483.k
Conlewoits contrary to wine, 495.c. how they bind and loo-
fen the bellie, ibid. their difcommidities, 50.k
Conlewoits and Tines cannot agree together, 176.g
Conlewoits may not abide either Organs or Cyclamine, ib.
Countercharmes or profcriptions against forcetie, witch-
craft, enchantment, and Magicke, 149.f. 195.f. 229.d
300.k. 306.m. 310.h. 313.b. f. 320.k. 323.m. 357.a
364.g. 387.a. b. 430.e. 431.e. 433.b. 370.f. 515.f. 516.g
589.a. 609.a. 616.g.
Counterpoisons. 38.k. 39.a. c. 45.e. 56.l. 59.b. 71.e. 107.e
144.a. 160.k. 164.i. 169.g. 172. b. k. 174.m. 186.i
190.m. 192.e. 193.c. 200.l. 202.l. 215.e. 227.b
233.b. 246.g. 270.i. k. 288.i. 306.m. 314.g. 316.l. 321.c
323.a. b. f. 336.g. 364.g. 631.a. c. e. 433.e. 434.g. i. l
435.b. 437.g. 529.b. 610.m.
poisons how they become Counterpoisons and the manner of
their working. C R 270.b
Crabfishes, 435.d. their vertues medicinale, ibid. enemies
they beio ferpents, 435.f. 436.i
Crambe the best kind of Conlewoits, 48.k
for Cramps in fute or legs a remedie. 308.b
for Cramps in general, conuenient medicines. 40.k. 41.d. e
44.k. 46.i. 48.g. 49.e. 50.b. k. 52.k. 50.e. 60.l. 61.a
63.g. 64.k. 67.d. 72.f. 74.i. 75.b. 77.c. 102.g. 104.b
108.k. 119.g. 123.a. 128.i. m. 125.b. f. 134.l. 150.g
154.g. 191.c. 162.b. 167.f. 168.g. 179.f. 180.g. 183.f
183.g. 186.k. 191.c. 193.c. 194.k. 198.i. 199.e. 219.d
226.l. 248.b. 259.e. 262.l. 264.g. 275.e. 283.a. e
289.c. 290.f. 313. i. 313.g. 320.g. 335. i. 422.m. 431.a
432.a. 442.g. 599.f.
Crapsul, a mixture in headie wine. 153.f. why fo
called. ibid.
M. Crassus the richest Romane that euer was, but onely
Sylla Dictator 479.d. his apish gene. ibid. his lands
what they were, ibid. furnished Opium for his wealth,
479.e. his counterpoison, ibid.
Crategon, what beare. 279.e
Crategonum, what beare. 279.e
Crategonum, an herbe, 270.b. the description and vertues,
ibid. a fectious kind called Thelygoni,
ibid.

Craterites, a pretious stone, 625.d
Craterus a cunning painter and Comedian boy, 549.e
Cratenus, a renowned Physician. 129.b. See wrot of
hearts and fet them forth in colours. 210.g
Crathis a river, 403.f. the water of strange operation.
ibid.
Creffilbes the river how medicinale they be, 435.e
Creffilb head drier wormine out of a garden, 32.l
Creffas an herbe, 29.a. why called Niftrum, ibid. it
helpeth the wit and understanding, ibid. 56.g. two kinds
of it, and their properties, ibid. which be best, 32.k
Creftamarine, an herbe. See Sampion.
Cricket much esteemed by Magicians, 370.b. the reason
wherefore, ibid. the manner of hunting and catching
them. ibid.
Cricke in the nape or pole of the necke how to be caft, 570.g
See more in Crampe.
Crisis publicke at Rome waterish coats embroidered and
fudded with purple like as Senators, 459.d
Crimas of Afafiles, a famous Physician, 345.m. by what
means he woon credit, 345.a. b. a great Mathe-
matician and Astrologer, ibid. a ceruicous officer
of daies and horres. 345.b. a man of exceeding
wealth, ibid.
Crifta Gall, what beare. 275.e
Crocalis, a pretious stone, 625.d
Crociat, a pretious stone, 630.m
Crocinum, a sweet cement, 105.b
Croci, a magicall beare, 204.k. the strange qualities
thereof, ibid.
Crocodiles skered away by the voice onely of the Tentyri-
ans, 209.a
against the Crocodiles bitt what remedies, 158.b. 315.a
418.k. 195.f. 433.f.
Crocodiles affoord medicines from sundry parts of their
body, ibid. two kinds of them, ibid. one kinde living
both in land and water, ibid. a second kinde onely upon
the land, ibid. his dung is sweet and medicinale, ibid.
the reason why, ibid.
Crocod le good meat, all fene head and feet, ibid.m
Crocodalia, what it is, ibid. how to be chosen, ibid. how it
is fop i. fectious, ibid. the vertues thereof, ibid. k
Crocodalia an herbe, 279.e. the description and ver-
tues, ibid.
Crocomagma, what it is, and the use thereof, 105.b
Croxia rich in gold, 463.b
Cronia a cutter in pretious stones, 501.d
Crom-fow, what beare, 239.e. the funderly kinds, ib. their
description, ibid. why it is called Surme, ibid.
Cruadum, what vertue it is of fifters, 472.m
Cruadites in the stomach how to be digested, 64.b. 66.i. 67.e
Cruadus, a mixture in headie wine. 153.f. why fo
called. ibid.
Cryftall, 454.i. how it is engendered, 604.i. why fo called,
ibid. whereupon foundeth, how to be rectified, ibid. it
groweth remarkably fast corrected, ibid.
one peece of Cryftall weighing fiftie pound, 604.l
the Cryftall vessels of what capacitee, ibid.m
the impur affeas and blemishes in Cryftall, 604.a
a Cryftall glaffe once broken cannot be renewed, ibid.e
Cryftall without fume and blemish be called Cretacta, 316.b
Cryftallion. See Eucamora.

The Table to the second Tome

C T

Ctesias, a writer, 404.i. his opinion as touching Amber, 906.l
Ctesidamus, a painter, 549.d
Ctesistis, a fine Imageur, 501.e. his curious workmanship, ibid.
Ctesistis, a famous Imageur, 501.e. his work, ibid.
Ctesistis, a painter, 549.d. his picture of Jupiter in trauell with Bacchus, &c. ibid.

C V

Cuckowes meat, an hearbe, See Oxy.
Cucubalus, an hearbe, 280.g. Iudary names that it hath, ibid. the vertues, ibid.
Cucumbers of the garden a commendable meat, 13.d much affected by Tiberius the Emperour, 14.g. how preferred growing upon the ground all Winter, ibid.
Cucumbers without seed, 14.i. how to be preferred, 15.f
Cucumber seed how to be prepared and set in the ground, 14.b. when to be sown or set, 15.a
Cucumbers how they grow, and in what forme, 14.b. they lose water and hate oyle, ibid. i. how Cucumber plants may be kept fresh all the year long, 14.l

Cucumbers, a delicate salad, 37.d
Of Cucumbers three kinds, 14.l. how they blome or flower, 15.e
Cucumbers wild, 35.e. the fruit, ibid. where they best do grow, 36.k
root of wild Cucumber for what it is good, ibid. g
Cucumber Serpentine or winding Cucumber, 36.m. the decoction thereof, and the vertue, ibid.
Cudwort an hearbe, 258.l. 282.b
Curt, what medicinal properties it hath, 148.k
Curt called Sapa, the nature thereof, 157.e
Cuscuta of the rocks, an hearbe, 275.d
Cumin, an hearbe, 61.e. the description and vertues, ibid. where it loneth to grow, and when to be sown, 29.f. good to procure appetite, ibid.
Cumin seed how to be sown, 23.d
what Cumin is best, 30.g
Cumin causes paleness of colour, 61.d
Cumin Ethiopique, ibid. the properties of it, ibid.
Cumin of Aethiopia, 62.g. the vertues thereof, 248.b
Cumin wild, and the vertues, 30.i
Cumula, what hearbe, 30.i
Cumula Bubula, 63.b. why called Panax, ibid.
used by Torioles as a descortive against serpents, ibid.
Cumula Bubula, wild Origan, 226.m. the vertues that it hath, ibid.
Cumula Gallinacea: the same that Origanius Heraclitum, 63.e. the vertues that it hath, ibid.
Cumula Libanotis, why so called, ibid.
Cumula the soft, 63.d. the description and vertues, ibid.
Cumula, what hearbe, 30.i. the vertues, 63.d. moeths gather to it, ibid.

Cupid, an Image at Thebes, wrought by Praxiteles, 566.m
Cupid, at Parium, wrought by Praxiteles, 567.a. comparable every way to Venus of Gnidos, ibid. abused by a wretched woman, ibid.
Cupid wrought to the patterne of young Alcibiades, 568.g

Cupids fontaine and the effects thereof, 484.b
Curatium, See Corall.
Curatium, a stone. See Pyrites.
C. Ciria his deuse for two wooden Theatres at his fathers funerals, 584.i. k. l
Curtius, a fontaine serving Rome, 586.g
Custida, waters medicinal, 402.m. their nature and souveraine vertues, 404.a. they stand upon salnitre, 412.g
Cuttle fishes, their nature, 428.k. their medicinal vertues, 438.k. l

C Y

Cyanea, a pretious stone, 630.k
Cyamos of Aegypt described, 96.l. the use of this hearbe, 97.a
Cyane, a flower and a painters colour, 89.b
Cyane, a pretious stone, 620.k. which is the best, l. who deused first to give it a tincture, 620.f. male and female, ibid.
Cyathus what measure or weight, 113.e
Cybia, the square peeces of the Innies fish, 451.e
Cybium, an hearbe, 359.f
Cyclaminos, 229.f. what hearbe, ibid. called Tuber Terre, ibid. the description, ibid. the vertues, ibid. the root how to be ordered, ibid. the venomous qualitye that it hath, ibid. three kinds thereof, ibid.
Cydas, a famous painter, 547.d. his Argonauts, a costly picture, ibid.
Cydonia, a riner, 403.b
Cydonia, the tender crops of Coleworts, 36.g. how fruitful of them Coleworts are, ibid.
Cyncephalus, a magical hearbe, 375.b. much commended by Asopian the Great Grammarian, ibid.
Cynoglossi, what hearbe, 223.d
Cynoder. See Fleawort.
Cynomotion, what need it is, 145.a. why so called, ibid.
Cynomyia, an hearbe, 233.d. why so called, ibid.
See Fleawort.

Cynophates, and Cynopastors. See Dogbrier.
Cynorchis, an hearbe, 279.d. See Orchis.
Cynocolon, one of the names of the herbe Chamaleon, 124.i. the reason of the name, ibid.
Cyprie, what hearbe it is and the properties thereof, 101.e
Cyprian an hearbe, 99.e. the kinds and properties, 101.e
a distinct rubb from Cyprie, 100.m
Cyprian, what it is, 100.i. the description, 101.a. the distinct kinds and properties, ibid. the discommodities of it, 101.a.
Cypresse tree Appl't. their use in Physicke, 179.b
King Cyrus, rich in gold, 464.b
Cypres, a pretious stone, 615.e
Cyrinus Pomagranat, what they be, 165.e. their properties, ibid.
Cyscum earth hardeneth to a stone in the water, 554.l
Cysicus, a prince that built the stately temple at Cysicum, 581.a.

D A

Dactylus, what it is, 455.d
Dactylutheca, what it was. 602.g. who first

of Plinies Naturall History

had any such,
Dactylus, what grass, 207.b. why so called, ibid.
Dadalus, an excellent Imageur in brass, 501.f. his workmanship, ibid.
Dadalus described, 85.a. how they differ from Lillies, ibid.
their operations in Physicke, 103.e
Daisie, a flower and hearbe, 89.e. the description, ibid.
the medicinal vertues, 245.e
Dalion, a Physitian, 66.k
Damonius, what hearbe, 231.b. 256.a
Damon, a writer in Physicke, 52.i
Dampobolus, an excellent Imageur and workman in clay, 552.a. his workmanship, ibid.
Dampe in sucking of pits it may be foreseene, and the danger prevented, 409.d.e
Dandriffe in head and beard how it may be scoured and rid away, 44.b. 47.a. 52.g. h. 56.i. 59.e. 72.g. 103.b. 127.e. 138.m. 155.f. 157.e. 158.m. 161.b. d. 168.l. 171.e. 173.e. 174.k. 179.d. 182.b. 191.e. 207.f. 232.k. 249.e. 267.f. 306.a. 324.g. 305.e. 432.b. 559.b
Dawewort, an hearbe, See Walwort.
Daubus the riner, 405.a
Daphnia, a pretious stone, 626.b
Dardanium, what ornament of the bodies, 462.g
Dardanus, a magician, master to Democritus, 373.e
Dardel, what medicinal vertues it doth afford, 139.a. 144.l
Dates Myrobolane, 163.b
Datrece, Spathe, what vertues it hath, ibid.
Dates, what discommodities they bring, 162.l
The liquor of Dates, what use it hath in Physicke, ibid. m
Dates Caryae, what properties they haue medicinal, 163.a.
Date flowers their vertues, ibid.
Date trees resembled naturally within stones, 588.b

D E

the Dead, with what reverence and prostration they were named, 297.b
Deafnesse or hardnesse of hearings, what medicines doe helpe, 20.g. 413.e. See more in Eures.
Debit, why called in Latine Cuius Attenuum, 479.d
P. Decius Atus honoured with two gresse coronets, 116.k. his wife worthy dead, ibid.
Decrees of Indiges at Rome ordained by Augustus Caesar, 459.d. of what persons they did consist, ibid. sown in all at first, 459.e. a first offered by C. Calpurnia the Emperour, 460.a. with what regard they were elected, 347.b
A defensing against inflammation, 206.k
Deformities in the face how to be done away, 268.k. See P'sage.
Delphicus basons of brisse, 489.e
Demetrius a Physitian wrote a treatise of the number four, 305.e.
K. Demetrius in what regard he had Protogenes the painter, 543.a
Demetrius, an excellent Imageur and engraver, 501.e. his curious work, ibid.
Democritus, a philosopher and writer in Physicke, 203.a. reproued for his vanities and lies as touching the Clu-

melons, 315.b. e. added overmuch to the vanities of Magicians, ibid. condemned for sitting downe recents in Physicke made of mans bodies, 293.f. a maintainer of Magicke, 373.e. in some sort excused for his long lies, 316.g.
Demos Atheniensium, what picture it was of Parnassus his doing, 535.e
Demosthenes the great Orator carried poison ordinarily in his ring, 458.l
Demotritus, a writer in Philosophie, 606.b
Denarius or Denar, a silver peece at Rome for what it was current, 463.a. going for ten Asse, it was stamped with the Decussis X. 463.b. going for sixteen Asse, with this number XVI. ibid.
A Denier in soldiers pay was neuer above ten Asse, 462.a
Denarius, a peece of gold come, 462.a
Dendrachates, a pretious stone, 623.e. the reason of that name, ibid.
Dendratis, a pretious stone, 631.a
Densifices for to make the teeth white, 326.k. 327.b
Dependere, what it signifieth, 462.g
Depilatories, 504. 110.d. 110.k. 122.g. 146.i. k. 166.l. 171.a. 187.a. 190.b. 208.k. l. 280.l. 302.g. 312.k. 319.a. 316.g. 340.b. i. 341.a.
Dardel, what medicinal vertues it doth afford, 139.a. 144.l
Dardel, what medicinal vertues it doth afford, 139.a. 144.l
Dates Myrobolane, 163.b
Datrece, Spathe, what vertues it hath, ibid.
Dates, what discommodities they bring, 162.l
The liquor of Dates, what use it hath in Physicke, ibid. m
Dates Caryae, what properties they haue medicinal, 163.a.
Date flowers their vertues, ibid.
Date trees resembled naturally within stones, 588.b

D I

Diadodum, what composition it is, 68.b
Diademas, a pretious stone, 626.b
Diadema, an excellent Image of Polydorus his making, 497.a.
Diaglaucium, a singular collyrie or eyefalme, 282.k
Diagoras, a Physitian, 67.e
Diagraphes, what kinde of painting or pouring, 537.b
learned by gentlemen children, ibid.
Dialcon, a kinde of Saffron, 86.i
Diamant, the most pretious thing in the world, 609.f
Diamant, the ovely precious stone found in metall mines, 609.f.
six kinds of Diamants, 610.g
the Indian Diamant described, ibid.
description of the Arabian Diamant, ibid.
how the true and perfect Diamant is tried, ibid. why it is called in Greeke Adimant, ibid.
Cyprian Diamant, ibid. the description, ibid.
the Diamant Siderites, why so called, ibid. the secret Artistic betweene Joas and the Diamant, 610.k
Diamant how it may be broken & reduced into powder, ibid. the cause betweene the Diamant and Leadstone, ibid. the use of a Diamant in cutting other stones, ibid. the medicinal vertues of the Diamant, ibid. why the Diamant is called a nobilis, 611.a
Diamon a composition of Citiberries, 192.b
Diamon made if common lucke inamble berries, contrary to the other of Citiberries, 195.d
Diamon Image at Cien in marble, 565.a
the strange cut of the eye, ibid.
Diana Anatis, an Image of beaten gold, 470.g
carried away out of the temple by a Acous, ibid.
the playant asse of a Bononius to Augustus C., 470.g

far as touching this art of Amorie, 470.b
 Diarie or day feaster how it is dispatched, 155.e
 Dibutade, as some thinke devised first to forme an Image
 or likeness in clay, 555.f. by what occasion, ibid.
 his invention besides in building, 552.g. be devised
 ibid.
 Dioptra and Elipse,
 Diocum, an image of Leonteu making, why so called, 498.l
 Dillanum, an hearbe growing only in Candie, 225.c
 three kinds thereof with their description, ibid. d. c.
 the vertues of Dillanum, knowne to vs by means of
 the Hind, ibid. of great power to provoke womens
 teares, 266.m. women with child must be ware of it. ib.
 Distypheton, a kinde of worke in Masourie, 594.g
 Diadon, what sice of Bricks, 558.
 Diet of great power to correct the humors of the bodie, and
 to reforme the affections of the mind, 136.b
 Diet exquisit,
 Diet nothing exquisit and precise, best for health, 304.b
 Diemache, a writer in Physicke, 40.k. he wrote a booke in
 praise of Coleworts, 52.g
 Digestion by what means it is helped, 404.l. 41.e. 52.g
 63.e. 70.g. 132.g. 134.b. 151.f. 154.g. 156.l. 162.k
 183.m. 247.d. 259.e. 272.k. 277.a. 290.k. 303.e.
 Digestive medicines and concocting cruditie of humours,
 182.m. 249.d. 359.c.
 Dignitell, what hearbe, 237.c
 Dill, an hearbe, 30.l. the medicinable properties, 67.e. the
 discommodities thereof, ibid.
 Dinocrate, a cunning Architect, 515.a. his designe to
 cover the temple of Asinoe, with a ronse of Lead-
 stone, ibid.
 Diocetes, a writer in Physicke, 41.b. 112.l. 242.k
 Diodorus, a Physician and writer, 55.a
 Diodon, a writer in Physicke, 200.l
 Dionysius, a precious stone, 626.b
 Dionysius, an Herbalist and writer, 71.a. he deparied
 hearbes in their colours, 20.g
 Dionysius, a painter, 551.b. he was good at nothing but in
 portraying the performances of men and women, 544.i
 hereupon he was (surnamed Antropographos, ibid.
 Dionysodorus, a name Misicist, 601.e. he loved to be at
 his change of rings and precious stones, ibid.
 Diopates, small spots medicinable, 438.k
 Dior-Antioi, what manner of flower, 91.a
 Diofcorides, a cunning engraver and cutter in precious
 stones, 601.d
 Diopyron, 284.l
 Dinimius, a Physician and writer, 309.e
 Diapippus, a famous challenger at the games Olympica,
 549.c. pictured by Alcamachus, ibid.
 Diptirix, a precious stone, 626.b. male and female, ibid.
 Diptyges, what it is, and why so called, 512.l. three kinds
 thereof, ibid. the vertues medicinable, 513.a. how
 the good is tried, ibid.
 Dipannus, a renowned cutter & engraver in marble, 564.b
 his workes, where they were is, 565.b
 Diptacis, an hearbe, 280.k. See more in Tazill.
 Diptas a venomous worrne, 434.g
 Dire, zunkelke birds, 295.a
 Discoffuse medicines, 141.a. 180.i. 233.d. 273.d. 303.a
 319.c. 418.k. 421.e. 423.d. 556.l. 557.d. 560.g.
 588.m. 595.d.
 Diseases deadly of man or beast, what cureth, 313.a. di-
 verser diseases of a strange nature, 241.c
 Dislocations of joints, how to be helped, 46.i. 49.a. 52.k.
 63.f. 64.b. 73.a. 103.d. 108.g. 109.b. 121.d. 124.l
 129.e. 136.k. 141.a. 146.k. 154.f. 159.d. 161.d. 162.g
 172.b. 187.g. 191.d. 195.e. 201.a. 205.d. 208.g. 261.d
 275.e. 303.a. 320.g. 337.b. 349.f. 386.g. 414.g. 419.f
 450.i. 595.d.
 swelling occasioned thereby how to be asswaged, 261.e
 Distantes undizened and y carried by women, held omi-
 nous, 298.i
 Distander, an hearbe, 30.k. the description, ibid. where it
 groweth, ibid. the properties, 65.a
 Diuites, rich, who were properly called, 479.d
 Crassus, surnamed Diues, proued a bankrupt, ibid.
 Diueticall medicines, 149.d. 186.g. 190.k. 191.b
 254.k. 281.b. 287.b. 442.b. 443.g. 444.g. 445.b
 See more in Vrine.
 Discomessie of the head how it is remedied, 47.b. 60.b. 62.g
 67.a. 111.f. 149.e. 155.d. 157.a. 177.b. 219.d. 233.f
 283.f. 289.g. 381.b. 437.a. 591.a.
 D O
 Docke, an hearbe, the roots medicinable, 19.d
 Dodacitbeos, an hearbe, 214.b. why so called, ibid. the de-
 scription and vertue, ibid.
 Dogbrier or blemble, 196.k. called Cynobates and Cyno-
 phantos, ibid. the description, ibid.
 Dogs graffe Caxaris, 225.b
 Dogs how enuious to man, may be scene in that and another
 hearbe, ib. c
 Dogges are killed with the iuice of the hearbe Chamelon,
 124.g
 what else is deadly to Dogs, 53.d
 Dogs crucified and hanged alius yearly at Rome, 355.b
 the reason wherefore, ib.
 Dogs how to be kept from barking and doing harme, 352.m
 399.e. 450.b.
 curd Dogs how to be appeased, 435.a
 Dogs burnt to ashes, in what case medicinable, 324.i
 Dogs head medicinable, 362.l.m
 wormes engendered in a Dogs earke, medicinable, ibid.
 the haire of a dogs taile, for what it is good, ibid.
 Dogs blood ferueth in Physicke, 355.e
 Dogs head reduced into asper medicinable, 362.k
 Dogs biting that is not mad, how cured, 375.d. 422.g. 585.f
 121.d. 133.e. 134.i. 146.l. 155.f. 158.b. 172.b. 183.g
 314.g. 322.m. 443.b. 473.f
 mad Dogs how their tooth doth poison, 231.c
 mad Dogs biting how remedied, 43.e. 51.a. 52.b. 54.f. 57.a
 75.d. 105.e. 106.l. 166.m. 167.a. 168.k. 171.e. 172.k
 192.k. 199.c. 212.g. 231.e. 278.b. 301.b. 306.k. 309.d. f
 313.e. 322.l. 350.b. 363.l. 363.a. b. c. 418.i. 422.b
 434.b. 443.c. 516.g.
 a man bitten by a mad Dogge, cured by reuelation from the
 gods, 212.g
 the biting of a mad Dogge incurable, if Hydrophebe enue
 thereupon, 211.f
 how Dogs may be preferred from running mad, 308.b
 363.a.
 a braken Dog in Iunoes chappell, 494.m. with what charge
 it was kept, 440.g
 Dog-fish medicinable, 440.g
 Dog-

Dog-berrie tree, how it preferueth heartes from any ver-
 mine, 32.m
 Dolphin fish yecidebe asper medicinable, 440.g. the liver
 good in Physicke, ibid.
 Dolphins, pieces of silver plate, which C. Gracchus had,
 482.b.
 Donaces be the male of shell fishes, 444.b
 Donax, a case in Cyprus medicinable, 191.c. 450.i
 Dora, why gifts are called in Greeke, 455.d
 Dorra, what hearbe, 124.m
 Doron, what measure it is in Greeke, 555.d
 Dorothius, a Poet, and writer in Physicke, 131.f
 Dorycnem, the syonous Dwaile, 112.k. why so called, ib.
 the counterpoison thereof, 150.m. 308.g. what reme-
 dies more be appropriat for that poison, 308.g. 318.b
 436.b. 443.b.
 Doryphor, an hearbe. See Leontopodium.
 Doryphorus, an image of Polyceim his making, 497.e
 Doryphori, Images in brasse, resembling the guard of King
 Darus, 501.e
 Doves foot, an hearbe. See Geranium.
 D R
 Draconites or Dracontia, a precious stone, 626.i
 Draconium, an hearbe, 200.b. whether it be the same that
 Draconculis, ibid. the medicinable vertues of the herbe
 Dragon, whether it be the Draconem or Draconculis,
 201.b. three kinds of Draconium, ibid. i. differs from
 Aron ibid. how it took the name, ib.
 Draconculis the hybe of two sorts, different one to the
 others, 212.b. one kinde stoweth above ground, acari-
 reth backe againe, according as it is pent appears aboue
 the earth, or is hidden, ibid.
 Dragonis, an hearbe. See Draconium and Draconculis.
 sea-Dragon, a venomous fish, 246.k. the remedies
 against the pricke and poison thereof, 246.k. 277.e
 418.i. 433.f. 434.b.i.
 sea-Dragon medicinable for the hurt that himselfe hath
 done, 434.f
 Dragons have no venom within them, 357.a. their greace
 drieth away all venomous beasts, 357.d
 Dragous, Sea serpents.
 Dram Attique, what it doth pisse, 113.e
 for to Draw forth of the fleshe, sinewes, bones, thornes,
 arrow heads, and such like proper remedies, 44.k. 56.g
 71.f. 76.k. 103.d. 105.d. 108.l. 119.d. 122.l. 135.d
 144.k. 149.f. 1504. 167.a. 168.l. 191.d. 195.e
 206.g. 262.i. 264.m. 365.d. 266.g. 283.d. 291.c
 306.l. 338.m. 371.a. 394.i. 395.a. 447.d. e. 450.k
 511.b.
 to Draw skale bones out of the skull, 253.b. d
 Dreames fearefull and trouble some, what do cause, 231.a
 315.e. means to avoid them, 65.e. 315.e. when and
 how we dreame most, 303.e
 Drinking of cold water, more wholesome than of hot drinke
 304.e
 Drinking of waters naturally hot ouer liberally, hurtfull,
 412.b. where draughts maighd drier, and raine durt,
 410.i
 for the Drepit diuers remedies, 36.l. 39.d. 40.k. 42.k. 43.b
 44.g. 45.b. 51.f. 55.e. 57.d. 64.k. 66.k. 69.f. 73.b
 77.e. 121.k. 104.i. 106.g. 109.b. 110.m. 119.d
 124.f. 127.c. 128.k. 134.k. 142.a. 148.g. 149.b
 164.g. 166.b. 167.g. 174.l. 181.e. 182.g. 184.f. m
 186.g. 187.c. 190.g. 191.e. 192.b. 198.i. 203.g. 218.k
 219.d. 252.g. 253.g. 260.l. 261.a. 273.b. 276.b. 283.f
 284.f. 287.e. 290.k. 356.b. m. 362.f. 391.e. 414.b. 419.g
 422.i. 443.a. 446.g. 508.g.
 Droffe of brasse,
 against Drownsse remedies, 74.b. 106.g. 218.l. 260.f
 336.b. 446.k.
 Drownsse what doth engender, 101.e
 Drownsse occasioned by the venom of the Aspis, how
 cured, 356.i
 the drude, together with Physicians, Prophets, and Wisard,
 put downe by Tiberius Cesar, 374.d
 the Drude of France tell wonders of the serpents egge An-
 gunum, 354.g
 Drunkenesse, what meanes to withstand, 43.b. 49.c. 57.d
 103.e. 105.a. d. 119.d. 153.b. 171.f. 190.g. 201.b.
 259.f. 342.g.
 what things cause leaching of drunkenesse and wine,
 399.g. 626.b. 450.g.
 Drunkards, why they drinke pamijs stone, before they sit
 downe to quaffe wine, 591.d
 Drusillanus Rotundus his vanitie and wast in a silver
 charger, 481.e
 Drusus cured of the falling sicknesse, by purging with El-
 leboro in the Asie Anticyra, 218.g
 Dryetes a precious stone, 630.k
 Dryopbonon, 280.m. the description, ibid.
 Dryopteris, 280.d
 D V
 Ducks meat, an hearbe, 142.b. the medicinable ver-
 tues thereof, ibid.
 Ducks and Mallards blond bred in Pontus, medicinable,
 364.g.
 C. Diuitius his statue erected upon a Colonne at Rome,
 491.a
 Duueneffe comming suddenly, how cured, 42.b
 Durus, a writer, 498.m
 Duo, the bare word, a charme for Scorpions, 297.e
 D W
 Dwaile, a poisonous hearbe. See Dorycnium.
 D Y
 Dried colours, which be the richest, 88.l
 Dying cloth and wooll with the iuice of hearbes, 114.m
 123.c.
 Dyas i craft,
 Dyssenterie or vicer of the gutt, how cured, 66.f. 75.a. 126.g
 129.a. 137.b. 140.i. 141.f. 153.f. 318.g. 382.k. 418.k
 474.b. 520.a. 557.f. See Blondie fist.
 E A
 For Eares pained within, conuenient remedies, 38.g. 42.g
 44.g. 54.d. 57.g. 60.g. 62.m. 66.g. 68.70.f. 102.i
 103.d. 106.m. 131.a. 133.e. 140.g. 157.b. 161.e
 162.b. 169.f. 172.b. 173.f. 183.f. 185.a. 188.l
 189.f. 196.b. 200.l. 237.f. 238.g. 277.g. 307.e. 325.d
 326.g. 369.b. c. 418.k. 439.f. 439.g.
 Eares vicer, ear wiche, and running with attar, how
 to be clenfed and healed, 120.l. 160.b. 165.b. 174.m
 180.g. 181.a. 183.e. c. 189.f. 197.d. 216.f. 238.g
 277.e

276.e. 287.b. 306.h. 325.d. 326.g. 350.i. 369.b.d.
 370.g.i. 418.k. 431.c. 432.b. 442.g. 432.k.
 for Eares deaf or hard of hearing, good medicines, 36.b
 47.g.m. 44.g. 49.b. 54.b. 56.i. 57.e. 63.e. 75.c. 111.a.
 128.i. 149.a. 156.m. 157.b. 159.e. 161.b.d. 162.b
 165.a. 173.e. 325.f. 326.g. 369.b. 507.f. 511.e.
 comfortable things for the Eares in old infirmities, 131.d
 160.m. 161.b. 178.g. 186.m. 249.e. 259.e. 273.a. 274.i.
 303.e. 307.e. 356.b. 369.d. 370.k. 371.a. 439.d. 455.f. 558.l
 559.d. 609.b.
 for Eares ringing and ringing, or having in them any un-
 naturall sound and noise, 43.a. 47.b. 57.e. 62.b. 135.e.
 161.b. 162.b. 180.m. 308.h. 510.i.
 Eares smelling strong and stinking, how to be cured, 307.e.f
 325.e. 370.g.
 against Eareworms or such like vermine crept into the eares,
 300.k. 369.e.
 water gotten into the Eares, what medicines it doth require,
 305.b. 369.e.
 Eares having worms or vermine engendered within them,
 how to be cleared, 59.b. 62.m. 77.e. 78.b. 142.k. 161.b.
 306.h.
 Eares wounded or cracked how to be healed, 52.i. 326.g
 369.f. 429.f.
 Eares tingling, and glowing what they betoken, 297.e.
 Eares waxe medicinale, 301.a.
 Earth in or about the skull of a man or woman entered,
 held to be medicinale, 302.g.
 Earth Ebullient is medicinale, 561.d. See more in
 Earth-wormes.

E B

Eben, the vertues thereof, 191.e

E C

Echeneis or the stayfish fish, of a wonderfull nature, 425.e.f
 how it staith a ship, 326.i. the forme and bignesse there-
 of, 314.i. the medicinale vertues of this fish the Greeke
 writers contrarieties, 146.k.
 Echium, what medicine or collyrie it is, 366.l.
 Eclion, an hearbe, 227.e. two kinds, *ibid.* the description
 and vertue, *ibid.*
 Echium, a cunning painter, 537.f. his picture, *ibid.*
 Echium, a precious stone, 630.i.
 Echium, an hearbe deforbed, 199.e.
 Echo, what it is, 581.g. how it is caused naturally, *ibid.*
 at Cizycum there is an Echo by fortune, *ibid.* Olym-
 pia, caused by art, *ibid.*
 Eclipses of Sunne and Moone thought to be wrought by en-
 chantment and witchcraft, 210.k.
 Elypta, what they be, and who devised them, 552.g.
 Eucaloe, a writer, 536.g.

E G

Egs of Hens, and their medicinale properties, 551.e.
 Yolke of Hens Eggs, in what cases it is medicinale, 552.g.
 Egs all yolke, and without white, be called Schilla, *ibid.*
 skinned of an Hens Egg, shell good in Physicke, *ibid.*
 Hens Eggs reduced into asbes for what it serveth, *ibid.*
 the wonderfull nature of Hens Eggs, *ibid.*
 Hens Eggs, all whole as they be, what they are good for,
 253.a. the commendations of Hens Eggs, as a meat
 most medicinale, *ibid.*
 Hens Eggs, proper nourishment for sicke folke, and may go
 for meat and drinke both, *ibid.*

Egge-shells, how they may be made tender and pliable, 353.e.
 white of an Egge resisteth fire, 352.e.
 of Gese Egges a discourse, 354.k.
 the serpents Egge, which the Latines call Anguinem, what
 it is, and how engendered, 353.f.
 Egglaine brier, Cyarrhodan, 196.k.
 the root foueraine for the biting of a mad dog, 112.a.
 Egula, what kind of brimstone, and for what it serveth,
 556.k.

E I

dimmesse of Eies, what causeth, 438.i.
 for dimmesse of Eies, fights threatening blindness, appropriate
 medicines, 402.g. 41.f. 46.k. 50.g. 51.d. 56.g. 57.b. 65.a.
 73.d. 74.k. 75.f. 76.b. 77.f. 78.b. 107.a. 146.m.
 157.a. 158.m. 160.i. 161.b. 162.g. 165.a. 168.g. 179.b.
 180.k. 183.f. 186.f. 193.a. 198.m. 200.m. 218.i.
 222.m. 224.b. 233.f. 235.f. 236.g. 237.f. 256.k.
 304.l. 306.b. 311.b. 312.g. 314.m. 324.k. 325.f.
 366.k. 367.a. 368.g. 369.a. 422.g. 431.f. 434.f.
 432.a. 438.b. 439.a. 443.b.
 for eies enflamed, swelled, and pained, 37.e. 69.d. 104.g.m.
 108.l. 140.g. 141.b. 155.f. 159.f. 164.g. 165.d.
 173.a. 184.b. 234.m. 235.b. 236.b. 287.b. 307.d.
 308.b. 325.f. 351.a. 352.g. 368.g. 423.d. 435.e.
 511.b. 529.a.
 for Eies bleared, 52.i. 66.g. 120.k. 157.f. 165.f. 178.g.
 179.e. 184.l. 193.e. 194.b. 195.a. 196.g. 272.b. 280.f.
 307.f. 367.f. 368.k. 325.f. 174.i. 214.g. 234.m.
 286.g. 301.f. 304.g. 305.f. 311.f. 324.g. 331.f.
 338.a. 325.a. 368.b. 423.d. 439.a.
 for Eies blind, blott upon a ship, or otherwise stierie red,
 58.k. 120.l. 177.f. 234.k. 307.d. 308.b. 367.f. 419.a.
 431.f. 438.k. 589.f.
 vicers in the eies how to be cured, 143.b. 168.b. 237.f.
 351.a. 367.f. 473.a. 507.a. 591.f. 594.d.
 corners of the Eies excoriated how to be healed, 197.d.
 asperities of the Eies how to be helped, 307.b. 312.g. 324.k.
 510.f. 511.b. 528.m. 559.a.
 cures of the Eies, how to be
 cicatrice, scars, clouds, and fumes of the Eies, how to be
 rid away, 125.e. 146.m. 180.k. 198.m. 225.b. 233.f.
 275.e. 286.k. 306.g. 312.g. 317.f. 318.k. 367.b.
 421.f. 507.a. 433.f. 438.l. 441.g. 474.e. 514.b. 557.d.
 609.b. 48.b.

Pin and web in the Eies, what medicines doe scoure
 and scatter, 106.l. 144.k. 179.b. 191.f. 198.f. 203.f.
 306.g. 315.e. 316.g. 367.f. 368.b. 438.l. 556.f.
 509.a.
 cures, mailes, and spots in the Eies how to be dispatched,
 144.k. 179.e. 180.k. 191.f. 306.g. 312.g. 315.e.
 316.g. 324.f. 325.f. 366.b. 367.f. 422.g. 438.f.
 443.e. 507.a. 509.a. 557.d. 566.f. 367.b. 368.g.
 369.a.
 for Eies troubled with a violent flux or rheume falling into
 them, 307.d. 308.b. 423.d. 473.f. 506.m. 511.b.
 561.e. 559.f. 366.k. 368.k. 4369.a.
 Eies galled and rawe, so fast out of the head, how to be
 repressed, 69.f. 158.k. 196.b. 306.b. 519.f. 550.g.
 Eies full of filthie gum and viscum matter, how to be clein-
 sed, 236.k. 237.f. 506.g.
 Eies of little children, if they be red and blind, rotten, how
 to be cured, 351.d.
 191.m.

twines of the Eies broken, what things do heale, 325.e.
 367.b. d. rough how to be smoothed, 509.a.
 mores in the Eie how to be rid away, 395.b.
 Eies how to be cleared from the laundise, 307.e.
 excrecence of fleshe in the angles of the Eies, how to be
 repressed, 418.m. 438.b.
 Eies weared with watching how to be comforted, 512.b.
 Eies blacke and blew upon a stripe, how to be helped, 419.a.
 439.b.
 dents and excavations in the Eies how to be helped, 312.g.
 for Eies continually weep and watering, 375.f. 38.b.
 423.f. 435.e. 47.b. 47.d. 52.a. 53.e. 57.c. 60.g. 61.e. 65.e.
 66.g. 67.f. 69.d. 70.f. 73.d. 76.b. 102.k. 103.g.
 104.g. 106.b. 108.b. 109.a. 122.k. 128.g. 138.g.
 140.l. 141.e. 147.b. 153.e. 155.e. 158.k. 162.i.
 169.g. 177.e. 186.i. 197.m. 199.e. 200.k. 206.l.
 234.g. 235.f. 236.b. 237.e. 239.a. 273.f. 277.g.
 281.a. 282.k. 289.g. 301.f. 305.f. 307.e. 324.k.
 325.f. 351.a. 366.k. 368.l. 473.e. 508.i. 511.b. 516.i.
 529.a. 587.b. 590.g. 591.a.
 for all infirmities and accidents of the Eies in general, com-
 fortable medicines, 36.g. 42.e. 45.d. 46.d. 48.l. 49.d.
 403.b. 416.b. 419.a. 423.f. 432.k. 511.e. 559.g. 589.b.
 590.i. 613.f.

Eie-browes how to be embelished and beautified, 163.a.
 560.g.
 Eie-lids, roughnesse, itch, and curse, how to be amended,
 146.m. 147.b. 166.l. 172.b. 350.k. 368.k.
 their asperities and excrecence of fleshe, how to be cured,
 421.f. 424.k. 438.k. 443.e. 510.b. their hardnesse how
 to be mollified, 140.d. 351.a.
 Eie-lids excoriated, how to be skinned, 158.k. 272.b.
 the outward haire of the Eie-lids growing into the eyes,
 how to be rectified, 131.f. 183.a. 184.b. 324.l. 325.e.
 351.e. 366.g.
 from the Eie-lids what cause the haire to fall, 417.d.
 See more in Haire, how it is made to grow, 366.g.
 for all the imperfections generally of the Eie-lids, appro-
 priate remedies, 36.g. 63.e. 74.k. 106.l. 306.e. 324.m.
 438.l. 509.a.
 fistulas about the angles of the Eies, how to be cured, 529.a.
 in Eies of Horse or Beest, how the Flaw is to be healed,
 69.a. 198.l. 233.f. 234.k. 366.l. 410.g.
 Eie-fallacies, 280.k. 324.f. See more in Collyries.
 Enlyls & Eclogues of poets, why stored with charms, 296.k.

E L

Elapoboscen,
 Elapoboscen, an hearbe, 129.e. the description, 225.e.
 for what it is used, the medicinale vertues it hath, 16.f
 Elate, what Date tree, 163.b.
 Elaterium, what it is, 35.f. how it is gathered, *ibid.*
 how reduced into troches, 36.g. how long it will last, *ibid.*
 the proesse of it, *ibid.* the effects thereof, *ibid.* how to be cho-
 sen, *ibid.*
 the full dose of Elaterium one Obolus, *ibid.* it is a pur-
 gative, *ibid.* it cleaveth the matrice, 37.a. it hasteneth
 an abortive fruit, *ibid.*
 Elatine, an hearbe, 281.a. the description, *ibid.*
 Elatrine, a kinde of blood-fine crude, 590.b. being calcin-
 ed, it becommeth Aluties, *ibid.*
 Elatus a river in Arcadia medicinale, 403.a.
 Elder tree, 185.f. the vertues in Physicke, *ibid.*

ground Elder. See Walwort.
 Electricis, Islands, why so called, 605.f.
 trees, according to some, 366.b.
 Elictor, the name of the Sunne in Greeke, 605.e.
 Elixirum, base, whitish gold, naturally, 469.e. the temper
 thereof with silver, *ibid.* of credit in old time, *ibid.*
 Elixirum artificiale,
 a cup of Elixirum dedicated by ladie Helena to Mucrona
 at Lindos, 469.f.
 the singular properties of Elixirum, *ibid.* it discovereth
 poison, 470.g.
 Elixirum the same that Ambor. See Ambor.
 Elecampagne, an hearbe, 41.e. the medicinale vertues ther-
 eof, *ibid.* why called Helenum, 91.b. See mercur
 Helenum,
 Elethipacae, what hearbe, 142.k.
 Elephantus bodie affordeth good medicines, 310.l. their
 blood medicinale, *ibid.*
 Elephants tooth medicinale, *ibid.*
 the trunk of an Elephant used in Physicke,
 Elephantiasis, a fule disease. See Leprie.
 Elephantus, a woman Physician & writer in Physicke, 309.e.
 Elichysor, a flower and colour artificiale, 89.b.
 Ellore the hearbe, 217.b. two principall kinde, *ibid.* their
 description, *ibid.* b. c. d.
 blacke Ellore, a very poison to caruall, 217.e. the best
 growth upon mount Helicon, *ibid.*
 blacke Ellore, why called Melampodium, 217.g. where it is
 used, *ibid.* what crenomium denoteth it to be
 gathered, *ibid.* d. e. it is called likewise Eutonon and Pa-
 lyrrhizon, *ibid.* it purgeth downward, *ibid.* other cer-
 ves thereof, 218.l. the dose, *ibid.*
 white Ellore, 217.d. where the best growth, *ibid.* with
 what regard and circumstances it is gather- ed, 217.e.
 it purgeth upward, *ibid.* how to be chosen, 217.f. the
 dose, 219.a.
 circumstances to be observed in the taking of Ellore, *ibid.*
 Ellores at first were dangerous purgatives, *ibid.*
 taken by students to purifie their eies, 217.f. corrected
 by the mixture of Scamoleus, 218.g.
 Ellore the white, what it properly doth correct, 431.e.
 Ellore called in Latine Eterarium, and why, 218.g. for
 use in Physicke how it is to be chosen, *ibid.*
 the medicinale vertues of the Ellores, *ibid.* how they are
 prepared, *ibid.*
 unto whom the giving of Ellore is prohibited, 219.e.
 the strange operation of the white Ellore, 220.d.
 great care to be had in taking white Ellore, 218.f.m.
 the time of ministering it, 219.g.
 the manner of the working of Ellore, *ibid.*
 Ellore, an hearbe. See Eppallus.
 Elme, what vertues it yieldeth in Physicke,
 Ellops, a venomous serpent, and the remedy, 432.g.
 Elutia. See Leadore.

E M

Embolodidone, why they carried a rod or mace with serpents
 portrayed about it, 351.k.
 Emeraud, the most precious things in the world after the
 diamond and perles, 611.b.
 the green colour of the Emer and most pleasing to the eyes,
 why Emerauds are not cut and engraven, *ibid.*
 of Emerauds and emeralds, *ibid.*
 111

The Table to the second Tome

Syrian Emeralds,	ibid.
Balkan Emeralds, where they are found, and how.	611 c
Ægyptian Emeralds, ibid. where they are found, ibid.	
the first are gotten out of a few mines, ibid. the best	
there are in Cyprus,	ibid.
fishes how they were scarred with Emeralds. standing as	
scars in the head of a marble Lion,	612 g
the scars and blemishes in Emeralds, ibid. g. in their	
colours, ibid. in their bodies and substance,	ibid.
Æthiopian Emeralds,	ibid.
Persian Emeralds,	ibid.
Hermianian Emeralds,	ibid.
the Atreke Emerald,	ibid. k
the Median Emerald,	ibid.
Carthodian Emeralds,	ibid. l
Leconice Emeralds,	613 g
Emeralds of great bigness,	ibid. b
Empetron, a species called Calicis, a what bears,	381 a
the description and vertue,	ibid. b
Emphites, a what work in Mesotim,	593 f
Emphites, what Tortois they be,	431 d

Enamelling. See *Encaustice*.
Enamelled, a precious stone named also *Cardice*. 626.k
Encaustice, the feat of painting with fire, or enamelling.
Enchiridia, who disquif it, *ibid.* who excelled therein, *ibid.*
Enchiridiums. See *Charmes* and *Words*. 213.c
Enchiridia, what beaue, 213.c
Enchiridia, the diuers kinds and their medicinable properties, 124.m

47.d		
<i>Erycinus</i> in silver who were famous,	503.d	
<i>Erycinus</i> what serpent, 376.g, the properties of it,	ibid.	
<i>Eubrotus</i> , a precious stone,	630.l	
<i>Euseucrotes</i> , a famous fountain at Athens,	410.g	
<i>Eucacphyllon</i> , an hearbe, with nine leaves inist, 281.e, the nature and vertues,	ibid.	
<i>Eueorchis</i> , a precious stone, 626.k why so called,	ibid.	
<i>Eumules</i> diseased, what medicines are proper therefor,		
158.g. inflamed how to be cured,	105.d	

<i>Ephemerides</i> , an ancient invention,	210.i
<i>Ephemeron</i> , what herbe,	261.e
<i>Epithemon Colicicum</i> , a poysonous herbe, with the remedy thereof	222.a.d

Epichermis, a Greeke writer in Physicke, 50.
Epicurus his picture much esteemed, 522.
his month-minds, *ibid.*

Epigenes, a writer, 406.k
Epigonus, in excellent Imagery, 504.g. renowned for repre-
sented an infant by the mother lying slain, ibid.
Erasmias in precious stones, what is sanctified, 626.l

Epimenidion, an hearbe described, 281.c. *hertfull to women*, *ibid.*
Epimenidium, a kinde of squilla or sea-Onion, 18.m

Epinephelus, accidents to the eyes, how to be helped, 438.l.m
Epinephelus, how Plinius taketh it, 42.l. what is meant
 thereby in other writers, ibid.
Epithymum, what hearbe. 250.l. the true description,

Equisetum, an hearte, 263, b

E R

Erantemum, what beaſt, 125, 4 why ſo called, *ibid.*
Erafitratum, a Phyſician, 68, &c. who condemned Opium, *ibid.*
 he altered the colour of the former Phyſicke, 234, 4, *ibid.*
 much money he recuired for one cure, *ibid.*
Eratria a white earth ſerued for painters colour, 518, 8
 why ſo called, 520, 6 the uſe in Phyſicke, *ibid.* two kinds
 thereof, 555, 9 how the good to knowe, *ibid.*
Erigonum, a plant, 550, 6 how he came by knowledge, *ibid.*
Erineas the name of the wild figger in Greeke, 169, 6.
 the name alſo of an heaſty ſide, the deſcription of the beaſte,
ibid. & the veruies, *ibid.*
Eriſpa a frange beaſte, 204, 1, the deſcription, *ibid.* how
 it tooke that name, *ibid.* the uſe thereof in Phyſicke, *ibid.*
Eriſtula, a pretious ſtone, 626, 6
Eriſus an heaſte, 27, 1, the fundry names it hath, *ibid.* why
 called *Eriſus*, 29, 2, the veruies medicinal, *ibid.*
Eriſthales, one of the names of the Iſſe Hauſtee, 237, c
Eryolus, a pretious ſtone, 626, 6, called likeſiſe *Aſpic-*
em and *Hierocemum*, *ibid.*
Earth is like by the ſeare to beate water within, 409, 6

what not, ibid. 42.
in what place Earth trench is time to be alone, 554. 47. a.
the bonnie of the Earth invariable, 553. 6.
Erlhen works and vessels both in divine and civic uses, ibid. 45.
also, inquis. 553. b. of great price, ibid. 45.
Erlh pure, will not flame, 473. 6.
Erlh medicinable, how to walk and be prepared, 559. 8.
Erlh quakes as they discover springs, so they find out them
 ϕ , 111. 8.
Erlh-wormes medicinable, and therefore preferred, 361. d.
Ernde the Passif, what vertues in Physick it hath, 143. 6.
the difformities made, ibid. 4.
Ery, a Iuravage hearse against all poisons and fer-
 ϕ , 118. m. the description, 119. 5. d.
Eryfcepion, what plant, 195. b. the sundry names of it. b.
 the medicinal vertues wherewith it is endued, ibid. 4.
Erythim filices, concerning a property to pay the Luke, 443. e.

<i>Efopus</i> , wheat hearbe,	45.6
<i>Esubopes</i> , a kinde of the Colchians, rich and sumptuous both in flower and gold	46.1

<i>In juncis angustis,</i>	E T	404 ⁿ
<i>Ethe, what they be,</i>	E V	541 ^d

Euax, a K. of Arabiz, who wrote of hearbes, 210.g
Euclia what hearbe, 2; 1.f. the effects thereof, according to
the Magicians, ibid.

Eucnemus Amazon, an image, 503. a. why so called, b. why esteemed so much by Nero the Emperour, *ibid.*
Eudemus, a Physician, 347. c. *over familiar with* Livia the princeſſe. wife to Drusus Caesar. *ibid.*

<i>Endrius, a painter and Imageur in brasse,</i>	549.0
<i>Enenor, a writer in Physicke,</i>	112.6
<i>Enenor a Painter, 53 + g. father and master to noble Para-</i>	

Eulau, a river, out of which the kings of Persia use to
drinke,

<i>Esquarus</i> , a famous Painter,	533.a. he first distinguished	ad.
male from female,		626.k
<i>Pumices</i> , a precious stone,		Lunc.

Nummulus, a pretious stone, 626*f.* ca.
ibid.
Emnicus, an excellent graver,
Eumachius, a kinde of Lelluce, 224*k.* wh.
Eupatori, the herbe, otherwise call'd
 the reason of the name, *ibid.* the d.
tures,
Eupetolus, a pretious stone,
Euphorbia, an herbe, 222*k.* why so call'd
 by giving Iaba in one entire booke
 on *ibid.* where it groweth naturally,
Euphorbism, the uses of the herbe *Eum*
 manner of gathering it, *ibid.* how it
 223*a.*
Euphorbism, a Physician, brother to Ant
 Physician,
Euphrasius, an excellent Image, 502*b.* c.
 he was besides a cunning Painter, 544*.*
Symetric, whereof he wrote booke, *ibid.*
 on *ibid.* his waker,
Euphrasia, an herbe. See *Englossa*.
Eupomus, a cunning Painter, 537*a.* his
 great authority,
Eureas, a pretious stone,
Euricus, a kinde of rish, 101*c.* the pro
 bath,
Euron, the river represent'd in brass, 502
 the workmen thereof,
Eurotus, a pretious stone,
Eurysci, a pretious stone,
Eulycrates, found to Lysippus, a singular I
 wherein he excell'd, *ibid.* his waker,
Eutomus, what herbe,
Eutychides, an imager famous for the rin
 his painting,
Eutychides, a painter,

Exacos, an hearbe. See Centaurie the lesse.
Exagon, one of the Ophiagenes, 199. a. not hurt
but licked by them.

Exchange and bartering ware for ware, the
merchandise,
Excrements of man: bodie medicinable,
Excrements of

Excrements of mans bellie, a counterpoison,
Excrements of a sheepe baliced about their tails
the medicinable properties thereof,
Excrecence of proud and raving beasts, how to be used.

and repressed, 146. l. 158. k. 165. a. d. 167. a.
265. a. 273. e. 338. i. 447. e. 474. i.
Excretions, bannings and curfings in a form
thought to be 5

Exedum, what beare, 206.g. the effects
ibid.
Exercise of the bodie maketh much for health.

Exorcismes a pretious stone,
Exorcismes beleueed to be available,
Exorcismes and prayers interrupted by unlucki
ca,

*Exorcisme of the Devil,
Expensa, what the word signifieth,
Experience, the first ground and foundation of*

242, 177.

Plinies Naturall History

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F A

Abiannu a writer in Physicke, 303.
Fabius (Ciniliator) honoured with a grasse Coronet, and, 116.m. saluted by the name of Father, by the regiment of *Munatia*, 117.
Fabricius, a patron of frugalitie, 483.
Face rough and blistered with Sinne-burning, how to be cured, 366.
Face broken on, by what means healed, 422.
Face to be cleansed from freckle and pimples, 440.
Face to look full, fair, and plump, 440-441.
Face to be rid from spots and Lentils, 441.
Faint cold sweats, how to be remedied, 48.b. 49.f. 52.
Faint cold sweats, 58.g. 313.d. See more infuents Diaphoretical.
Faintings about the heart how to be helped, 134.l. 155.d. See *Swimming*.
Falernum, a kinde of Amber, 608.i. why so called, 161.
Falling [scilicet] deteiled by the fume of *Brimstone*, 556.k. by a perfume of *Bitumen*, 557.e. by the fume of *tear*, 589.c. by what means else it may be disordered, 533.d.

549f For to prevent and cure the falling sicknesse, appropri
remedies. 404.444.103.57.60. 66.66.
70b. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844. 845. 846. 847. 848. 849. 850. 851. 852. 853. 854. 855. 856. 857. 858. 859. 860. 861. 862. 863. 864. 865. 866. 867. 868. 869. 870. 871. 872. 873. 874. 875. 876. 877. 878. 879. 880. 881. 882. 883. 884. 88

for the verie fit of the Falling sicknesse, what remedies be
conuenient, 432. i. k. 445. c. d. a singular chyster for this
purpose,

Falling sicknesse thought to be cured by drinking of mans
blood, 296.
False from an high place how to be cured, 350.
See more in briefes.

303.d Families driving serpents away with their very presence,
298.m.
626.k a Families how to be kept in concord and agreement, 312.m
298.f

295.a
ibid.

462.g Far, a kinde of wheat, for what to be used, 138.b
Phyſicke, Farfugium, as a carbe. See Fole-foot.
Fartins v. Horſes, and ſcalds in beaſts, how to bee healed,
111.3

The Table to the second Tome

128.l. 130.l. 161.e. 183.f. 184.g. 196.h. 218.k. 310.g.
338.l. See *Scab and Mlange*.
Farcus in barf-neckes how to be cured, 150.i. 281.f
Fascium, what it is, and of what force, 300.l
Fasting precisely for all meat is medicinal, 303.c
Fau of leafs, much esteemed, 319.b
Fattesse and copulencie, what things doe procure, 319.b
172.k. 303.d. 318.l. 445.e. what doth diminish,
443.e
Faucie Lingsib, what it meaneth, 291.m
F E
Feet benumbed with cold how to be recovered, 38.k. 334.k
Feet pained and itched about the ankles, how to be cured,
185.d. 314.b. 560.b
Feet pitted, ga ed, and excoriat, how to be remedied,
334.k. 386.k
Feet scorched with heat of Sunne, how to be reduced into
temper, 334.k
Feet cramped, how to be helped, 431.f. See *Fiffures*.
Feet furished how to be eased, 334.k
Feet called by *Stalborne* Joints, how to be cured, 334.l
Feet of *Kine* & *Oxen*, how to be kept from furishing, 342.l
Fell tone, an hearbe. See *Centaurea* the lesse.
Fellows how to be healed of a prevented, 56.i. 64.m. 71.b
140.i. 141.e. 144.k. 161.b.e. 167.a.d. 180.g. 188.m
262.g. 300.b. 309.d. 320.g. 337.b. 370.d. 392.k
419.b. 488.m
Fennell, uncharbe wherein serpents delight much, 31.e. 77.b
Fennel cleareth the sight, 77.b
Fennel twice how to be drawn, *ibid.* which is best, *ibid.*
Fennel of divers kinds, *ibid.*
Fennell much used in the kitchen, pastrie, and bake-houses,
ibid.
Fennell-gent an hearbe. See *Fennel*.
Fengreke, 87.i. 207.e. the sundry names that it hath, *ib.*
why it is called *buceras* and *Agoceras*, *ib.* the vertues
thereof, *ibid.*
Ferne of two kinds male and female, 281.d. why it is called
in Greeke *Pteris*, *ibid.* the roots when and how to be
used, *ibid.*
women must beware of Ferne, for feare of abort and barren-
nesse, *ibid.*
Oke Ferne, 280.l. the description, *ibid.*
Fennel, what plant, 322.i. the description, 78.i
the stalkes good to be eaten, *ibid.* how to be served up to
the table, *ibid.*
Fennel an enemy to Lampreys, *ibid.*
pyonion for fish, 176.b
Fennelacea, what they be, 13.d
Fenu Oculis, what hearbe, 234.l. the vertues thereof, *ibid.*
Feveri periodical, what they be, 38.g. 314.b. how to be
cured, *ibid.* 335.e. 445.e
Feveris intermitted how to be cured, 38.g. 260.i. 310.h
See *more* *Tertian*, *Quartan*, and *Quotidian*.
Fey-Flaver. See *Diure*.
Feveris called *Stegens*, what they be, 167.b
Feveris a dent, what remedies they require, 50.b. 70.b
138.g. 160.l.
Feveris cold, coming with cold fits, how cured, 260.b
445.e. See *intermittent*.
for Feveris in generall proper remedies, 187.b. 260.i. 310.i
335.e. 446.l. 335.b. 609.b.

Fewer few an hearbe, 111.e. the description, *ibid.* the sundry
names it hath, *ibid.*
F I
Figwort an hearbe. See *Celandine* the lesse.
Figtree yeldeth a milke iuice, medicinal, 166.k
Figtree albes medicinal, 167.f
Figtree bark reduced into powder, what remedies it affor-
deth, 168.b
Figs, their properties good and bad, 167.a.b
Filicorda and Hazellnut, 172.g. their medicinal verities
ibid.
their discommodities, *ibid.*
Filicorda, what hearbe, 251.a
Finger which were honoured with rings first, 458.e
middle finger adorned with a ring in Brittain and France,
ibid.
Finnals in house-tops who denised, 552.g
Finkle, See *Fennell*.
Fire what doth sonnest quench, 472.b
Fire awerted by fewerfull words, 296.l. See *Fyre*.
Fishes reduced into 176 kinds, 450.m. their names accord-
ing to the A B C, *ibid.*
Fishes glow, what vertues it hath in Physicks, 439.a. 441.a
Fishes cured by Perfish, 53.e
Fishes broths is laxative, 442.l
ordinance of King *Numa* at touching *Fishes*, 429.e
Fishes small denoured by gent, for what they are medi-
cable, 445.a
sea Fish in request at Rome from the beginning, 429.c
Fishes, where they bee in fteed of an Oracle, 404.k
Fishes in some water all blacke, *ibid.* in what water they
be all dead, 404.m. 405.a
Fishes in the Arabian seas of extraordinary bignesse, 427.c
the wit of some fishes is desired, *ibid.*
Fishes tame, and coming to hand, 428.k
Fishes lured with a whitele, *ibid.*
they give passage of fume enemies, *ibid.*
Fishes tame, playful, and wandon, within the pool of *Ce-
nus*, 428.m
Fishes about Pele tast all bitter, 429.a. where they be all
of a sweet tast, *ibid.*
where Fishes of the sea be naturally salt, *ibid.*
salted Fish which be medicinal, 434.g. 440.g. 440.g
444.m
salt Fish in Italy may be made very fresh at Beneven-
tum, 429.b
Fishes, chops, and clifts in the fundament, how to be cu-
red, 104.g. 105.e. 120.i. 146.k. 169.a. 187.e. See
Fundament.
Fissures or chaps in the feet how to be healed, 52.g. 128.b
169.a. 183.d. 258.d. 306.i. 334.k. 351.f. See *more* in
Feet.
Fissures or chaps in any place of the bodie, what things
doe cure, 128.g. 144.e. 159.g. 161.d. 169.a. 177.d
230.g
Fistulas or hollow sores, what remedies are appropriate for
them, 444.k. 494.a. 50.m. 61.e. 104.h. 150.g. 144.i
146.l. 159.d. 181.a. 185.d. 201.e. 218.k. 264.f
265.b. 279.e. 280.f. 285.e. 290.f. 307.g. 350.i
430.h. 448.g. 470.k. 509.b. 510.k. See *more* in
Fistulas.
Fistulas how to be kept open, 191.e
Fistulosa

of Plinies Natural History

Fistulous sores in the secret parts, how healed, 156.k. See
Primities.
Fistula betweene the angle of the eye and the nose, how it is
to be cured, 125.e. 149.m. 286.g. it is called *Agri-
topis*, 235.a
Fistulas how they are bred in any part of the bodie, 262.b
Fist cold and halting in an ague, how to be purged, 57.d
61.b. 143.a. 162.b. 260.f. 313.a. 314.i. 315.l
Fist otherwise of child cold how to be eased, 57.f. 61.a. 67.d
See *more* in *learned*.
F Five finger or five-leaved grass. See *Cinquefoile*.
F F
Flage what hearbe. See *Xiphon*.
Flacke dyed how to be cured, 37.e. 40.k. 54.i. 275.e
Flatusio. See *Pentostis*.
Cu. Flammis for what doerment be was created, *Adile* curule
and Tribune of the Commons, 457.a.b
Flax the wonderfull power thereof, 1.d.e.f
the plant throught up, *ibid.* the seed how it is sowne,
how it cometh up and groweth, 2.i
Flax of Spaine, 3.a.b
Flax of Zeel, 3.a.b
Flax of Cume, 3.c
Flax of Italy, *ibid.*
sowning of Flax what manner of worke, 3.d
Flax how to be dyed, becheilled, spun, beaten, woven,
G.C.
Flower, the bea be described, 233.e. the diverse names it
hath, *ibid.* the nature and vertues, *ibid.*
Flax how to be killed, 60.l. 63.e. 120.l. 124.m. 187.f
against the breeding of Fleas, 38.f
Fleasome vapours sticking in the chest and throat, how to be
cut and dissolved, 46.g. 47.b. 473.c. 74.g. 107.d. 121.e
122.b. 130.l. 167.d. 173.e. 183.c. 195.f. 200.i. 206.d
246.g. 257.a. 277.b. 329.b
Fleasome and fleasomatic humors how to be purged down-
ward, 126.g. 175.e. 140.b. 150.b. 170.g. 172.b. 182.b
185.e. 186.g. 198.l. 218.i. 250.l.m. 251.a.b. 252.b.l
281.b. 288.g. 291.b
Flemmings used Flax, and made linnen in old times, 2.l
Flesh bracke and prand in waters how to be repressed, 50.m
61.b. See *more* in *Placit* and *Exercence*.
Flesh meat how it may be kept fresh and sweet all Summer
long, 71.a
Flesh it is preferred for maggot and corruption, 342.i
Flexuities at Rome, what they were, 461.a
Flint place, where it is cut with the saw, 558.i
Flory of Painters, what it is, 531.b
Flor-Salina, Sperma Citi, 416.k
Flas or flow of Astrumme, what it is, 473.g
Flowers that bring tidings of the Spring, 87.d
Flower de-Lis root medicinal, 87.d
Flower de-Lis where the best groweth, *ibid.*
Flower de-Lis of Myricum of two sorts, *ibid.*
Flower de-Lis called *Rhipantia*, and why so, *ibid.*
why it is named *Rhipantia*, *ibid.* the ceremonious
manner of taking up the root, 87.e.f
Flower gentils, 17.p. all flowers for pleasant colour,
89.a. the description and nature thereof, *ibid.* why it is
called *Amaranthus*, *ibid.*
Spring Flowers, 92.g
Summer Flowers, 92.g
Fistulous sores how to be kept open, 191.e
Fistulosa

of Plinies Naturall History,

Garlicke sweet and comming up of seed. 22. k
 how Garlicke and Onion are to be preferred for use, with-
 out spitting. 223
 Garlicke mild or Crow-garlicke, called *Alum*, 22. k
 use thereof, ibid.
 Garlicke mild called *Trifurcum*, 22. k
 Garlicke helpe beaſts that be ground in the bellie, and cau-
 not ſtale, 45. a
 Garon or *Garum*, a kinde of ſauce or pickle, 12. i. why ſo
 called, 17. e of *Jundry fortis*, 45. b
Garum ſealed to many uſes, 418. b
Garum medicinale, 418. b
Garum Socinarum, 417. f of what requeſt in old time, 418. g
Garon a ſſib, and the effects of it in a perſone, 417. e
 whereof the ſauce or pickle *Garum* was made in old time,
 417. f of what it was made in later daies, ibid. the
 price, 418. g
Caiſidanes, a pretious ſtone, 627. a

G E

Cegania, a *simplicius* done at Rome, 488 d. enamoured
upon a fowl ill-favoured by a fowl, *ibid.*
Gei a bird. *See Culture.*
Gl'on a string of water, wily so called, 404 g
Geolophilis, a magical bear, working a fit of laughter
in them that taste it,
Gemices, a precious stone, 631 a
Gemysia, a disease in old time, now cleane gone, 242 g
Genealogie of *Pandora* portrayed most artificially by *Ply-*
dus, 566 b
Genitors or *Cods*, *swolne* hard, pained, and enflamed, how
to be remedied, 141 e, 142 l, 144 i, 145 k, 157 d, f
159 d, 163 e, 174 a, 175 f, 179 a, b, 187 e, 254 a, 255 d
333 c, 344 a, 421 d, 433 c
swelled with wind or water is *lumors*, how to be assuaged,
413 b, 424 a, 570 a
exulcent, how to be healed, 141 e, 254 a, 385 b
Genitors called how to be cured 18 i

Ads of Steele quenched, what effects they doe worke

If one be relaxed, and long done inwardly, how to be reduced, 385. b. how to be preferred from inflammation, 432. b.
for the Generators in general, appropiate medicines, 385. b.
Serp. b. See Cod.
Gentian the hearbe, 231. e. how itooke that name, id. the description, id. the temperate thereof, and nature medicinalle, 221. f.
Geometrie necessarie for painters, 517. g.
Geranium, a precious flower, 630. i.
Geranium also hearbes, 259. b. the sundry names and description, ibid.
German, what hearbes, 198. f. the sundry names that it hath, id. the description, id. why it is called Serrata, ibid. the medicinable vertues that it hath, ibid.
Gentia, the Senat-horse at Sardes, 556. g.
Gesser of a stone medicinalbe, 264. g.
Gestation, as exercise for bodily health, 303. d. of diverse sorts, ibid.
Geibum, what heabe it is, 220. k.

G I

Guidingesse of the heart and braine. See Discreesse.
Guid in sleepe, how to be helped, 218. k.
Gullesore of the wall, 104. g. the medicinable vertues that it hath, ibid.

The Table to the second Tome

If *Guirlands*, *So. b. i. why they were called Strephon*, *Soi*
Guirlands and *sofe-gates*, called in *Latine Seria* and *Ser-*
vice, and *wherefore*, *ibid.*
Guirlands *Aegyptian*, what they were, *80. l.*
winter guirlands what they were, *ibid.*
Tisane *Guirlands*, what they were, *ibid.*
 the *use* of *Guirlands* representing health,
 ordinances concerning *Guirlands* *moon* at *solemn*
gances, *81. c.*
 the *honour* belonging to *such Guirlands*,
 abuse in *Guirlands*, *81. e.*
Guirlands of *flowers* how they were employed, *82. g.*
Guirlands *planted* were the best, *ibid.*
superfluous and *excessive* in *Guirlands*, *82. b.*
 costly *Guirlands* or *chaplets* of *filke* performed with *daintie*
odours, *ibid.*
Guirlands consist properly of *flowers* and *beverages*, *89. e.*
Gums in general their *virtues* *medicabale*, *194. a.*
Gums *good* diffuse in *vinegre*, *176. k.*
Gum of *Chamelon* called *Lixia*, *venomous*, *39. d.* the *re-*
medies proper *therefor*, *ib. 6. 4. b. 153. b. 157. b. 182. m.*
277. c. 323. a. 325. d. 431. b.
Gums of *young infants* *pained*, how to be eased, *449. e.*
Gums *flavie* how to be *boile* and *confirmed*, *161. c.*
Gums *swelled* and *impossu* *hum*, how to be *allaid* and *cure-*
d, *161. e. 238. d. 29. c. 419. b.*
Gums *fore*, *ranked*, and *exulcerat*, how to be *healed*, *159. c.*
160. j. 287. d. 351. b. 509. j.
 for *Gums* *pained* or *otherwise* *diseased*, *general medicines*,
51. e. 63. g. 70. g. 102. i. 156. m. 158. k. 165. d. 169. e.
177. f. 178. l. 184. g. 195. f. 197. d. 238. i. 272. i. 276. k.
443. b. 509. e.
Gurrie in *horses* & *other* *beastes*, how to be *struck*, *41. c. 78. b.*
 for the *paine*, *wring*, and *carofion* in the *Guts*, *proper re-*
medies in general, *37. d. 53. b. 60. c. 61. a. d. 62. e. 66. b.*
77. b. 187. e. 265. d. 31. c. 58. g. 72. l. 76. l. 77. g. 78. l.
102. l. 105. e. 106. k. 109. f. 111. a. d. 174. g. 238. m.
318. g. See more in *bellicie* *ache* and *Wring* of *Guts*.
Guts *exulcerat* how to be *cured*, *38. i. 76. e. 107. e. 200. k.*
207. e. 249. c. 272. k. See more in *Dysenterie*,
 and *Blundie* *flux*.
 grinding of the *Guts* in *young children*, how to be *assaid*,
318. i.
 to cleanse the *Guts* *proper remedies*, *272. k. 283. i. 443. i.*
Gutti the *name* of *certain* *people*, *406. a.*
 G Y
Gylding of *m. w. b. l.*, *466. g.*
Gylding of *wound*, *466. b.*
Gylding of *brasse*, *ibid.*
Gylden, the *filke* *Aurayotah* at *medicines* it doth *afford*,
433. d.

H A

H Abergeon of K. Amasis wrought of sinnen twist exceeding fine. 3 d.
Haddocke fish hath a stone in the head medicinal, 44 s. c.
Hamachates, a pretious stone, 62 s. c.
Hamatites, a red Bloudstone, 367 d.
Hamatites the Bloudstone described, 587 b.
Hamatites, a meeve mineral, 589. a how calcined, ibid. how

specified, ibid. wherein it differeth from the stone
 Schilpas, the medicinal virtues that it hath, ibid.
 fine kinds of Hamarris or Blond-floe. 596g
 Hamarris, a precious stone, 627. why so called, ibid. where
 it is found, ibid. the wonderfull properties thereof ac-
 cording to the vulgar magician, 627f
 Hamarris a worme or Serpent, 352. g. whyfo called, ibid.
 Against the hurt of the Serpent Hamarris, what remedies
 431f. 692. 148g. 150f. 153b. 196g. 352g.
 Hemorrhoid veins how to be opened, 42f. 300b.
 Hemorrhoid veins running immoderately how to be stopped
 191b. 256g. 272f. 511b. 516g. 519d. 476g.
 593b.
 Hemorrhoids aching how to be eased, 199f. 351e.
 Hamia a mountain, yielding strings of water, said by
 occasion of a fall of wood, 410k.
 Hail-water hurtfull, 406g.
 Hail flooding how to be retained and reconced, 332f.
 42b. 47f. 50b. 567f. 74f. 78m. 103a. 113k. 129f.
 127a. 128b. 130g. 163c. 164m. 174k. 177b.
 178f. 183d. 185d. 191c. 196d. 206g. 212b.
 233f. 239d. 249d. 272b. 280m. 291a. 320g.
 323f. 324f. 364m. 437f. 458g. 446f. 450a.
 516b. 521a. 531e.
 Hare of mans head medicinal, 301b. of a womans head,
 in what case effectfull, 307b.
 Hare means to cause the Haire to growe thick on head or beard
 where it was thin, 146f. 161d. 173e. 185d. 199f.
 280m. 316f. 324g. 334f.
 Hare of eye-lids growing crooked into the eyes, how to be
 cellified, 307f. 438b. 555f.
 Hare of eye-lids how to be kept from growing, 236f. how
 to be taken away, 312k. how it may grow, 320g.
 how preferred, 324c.
 Hare of eyelids how to be kept from growing, 438k. 439e.
 Hare of eyelashes how to be trimmed, 102k. how to have
 a lounely blacke, 397f. how to be fetched off, 302g.
 how it shall grow more, 324d.
 Hare how to be curled, 127a. 128d. 181b. 311c.
 how Hare shall come up blacke, 365a.
 Hare how to be coloured blacke, 475f. 476f. 127g. 143d.
 163c. 170e. 174d. 175b. 178g. 179a. 184b. 186g.
 190b. 194m. 196m. 268g. 277e. 324f. 438g.
 590b.
 What coloureth the Haire yellow, 162g. 268k. 328f.
 432k. what giveth haire a red colour, 158b. 192f.
 Hare how to be made bright, 475a.
 Haire growing upon a mole or wart of the face, some make
 script to clip or flue, 300g.
 Hare how it shall grow upon scarred places, 364d.
 Hare what hindereth it from growing, 339f. 379e.
 397b. 449e.
 Hare how to be preferred from beardness, 249e. 374d.
 397d.
 Hare of a man-child not yet come growne, thought to be
 medicinal, 501a.
 Halcemicon, what it is, 441e. the several kinds, said their
 descriptions, which is best, 441f. their properties, ibid.
 Halcemicon, a dangerous haire, commended by some,
 112l. the description thereof, ibid. the hurtfull qualities
 that it hath, ibid.
 Halcemicon, a becke of the Port Orient, 474d.
 Halcemicon,

of Plinies Naturall History.

*Baldring of hautes against ill spirits and sorcery, with
 bismole, 557-1*
*Halmors, or Halmorigs, what it is, 422.b. where found,
 ibid.*
Halmorigs, a kinde of Celcewort, why so called, 27.a
Halm, what it is, 243.b
Hams of the legs paired, how to be eased, 303.b
*Hammels, apertious floor, and the description,
 Hammochors, a precious stone, 627.d*
*Hammors borne, a precious stone, 617. dable description and
 properties, ibid.*
Hanch, See Lairs.
Hand swolne or broken out how to be healed, 106.m
*to fit with one Hand to another and crosse fingerd, what
 effect it wrought, 304.m*
Handfoot, can be, 250.d
feeding upon Hares flesh causes filke to looke faire, 334.e
Hares good for the cye sight, 325.d
a Hare burnt to ashes medicinal, 324.i
Hares remedy medicinal, 324.k
the sea-Hare vntomus, 71.f. her wonderfull nature, 427.a
*the feeding upon this fish serueth to alluing ven-
 eries but the Sea-fable, 427.b*
the use of Hais be killed with the touch of a man, 427.b
*the symptoms incident to the stone that be lunt with the
 sea Hare, ibid.*
against the venome of the sea Hare, remedies, 71.f. 165.a
179.d. 231.b.c. 318.b. 307.f. 323.a. 323.f. 434.i
436.b. 437.b
against the venome of the Handfish, remedies, 140.i
155.f.
*Harmandus honored with a statue of brass for killing the
 tyrant Phylarcus, 490.g*
Harmonie in painting, what it is, 516.d
Harpatation, an emplover made with bismole, 556.m
why so called, ibid.
Harpat, why amber is so called, 606.k
Harpatates his image worne in gold ring, 464.b
*Harpatang, 229.f. the description, 202.g. the vice how it is
 drawn by the voice, 204. a wondrous healer, 205.c*
Harts bone burnt to ashes medicinal, 324.g
 H E
*Head how to be diseased against the extreme heat of the
 Sun, 424.f*
Heauties of the head how to be eased, 150.m. 150.g
304.k
Headfild, how to be cured, 437.b. 437.d. 435.b. 474.i
*Head armed with blisles and priuers, what remedy,
 443.f*
*heat of the Head in children called Sinapiss, how to be am-
 ended, 58.b. 59.e. 101.g*
*Head how to be purged of fleumes, 74.102. 74.109. 118.b. how to be
 preferred, 74.102. 74.109. 118.b. 118.d. 118.e*
*Headach the greatest paine that is, except that of strin-
 gure and fowlsie, 207.e*
against Headache, process: 103. 43.a. 447.f. 43.b. 447.f.
55.b. 56.f. 57.b. 60.g. 61.c. 65.b. 66.g. 68.b. 69.e
75.f. 76.g. 102.k. 101.g. 105.d. 106.m. 109.e. 126.f.
127.d. 139.4. 146.b. 147.b. 185.e. 188.k. 160.h.
161.b. 173.c. 173.e. 174.f. 175.f. 178.m. 181.a.
182.b. 187.d. 187.k. 192.d. 194.b. 198.g. 203.b
205.b. 207.m. 233.b. 233.d. 237.e. 272.b. 250.b

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The Table to the second Tome

Hempe stems as big as trees, 312
Hens eggs. See *Egg*.
Hens flesh put into melting gold, what it worketh, 359
Hens dung, what part of it is medicinal, 363
Herbena, a dangerous hearbe, 215. c. and the remedies
 against the poisonous qualitie thereof, 39. d. 43. c. 69. e.
 121. c. 136. e. 308. g. 323. a.
Herbena found by Hercules, 215. a. the sundry names
 that it hath, ib. what vertues Herbena hath, 228
 many kindes of Herbena, and their descriptions, with
 their properties good and bad, 215. b. c.
Hennu, a precious stone, so called among the Indians, 628. g.
 the description thereof, ibid.
Hepatice, a precious stone, 630. b.
Hepatizon, a kinde of brasse metall in scelline, 488. g. why
 so called, ibid.
Hephelites, a precious stone, 627. c. the description and tri-
 all, ibid. where it is found, ibid.
Hephaphon, a gallerie at Olympia, why so called, 581. c.
Hephapton, one of the names of Plantaine, and why so
called, 223. e.
Heracleus Siderion, why so called, 215. a. the descrip-
 tion, ibid. the vertue that it hath, ibid.
Heracles a Physician, 366. m. and a writer, 41. b.
Heracles, a notable painter, 548. i.
Herichon, a kinde of Poppy, 69. a.
Heracion, an hearbe, See *Nemaphar*.
Hi ractus Lapis. See *Touchstone*.
Herbs which come up fonsit after they be sowne, 221.
 which be late ere they shew above ground, ibid.
Herbs of the garden come up by diverse means, 22. c.
 they doe degenerate, 32. b.
Herbs are subiect to discolor, ibid.
Herbs losing the compoite of other herbs, 30. f. 31. b.
Herbs why they be no more of them knowne, 211. d.
Herbs annoid with vermine, 32. i.
Herbs restoring to life againe, 21. b.
Herbs differing in taste and otherwise, 33. f.
Herberie in old time yielded a reuenge to the state of Rome,
 12. g.
how we come to the knowledge of Herbs, 211. e.
Herbustif, their maliciois facile, 105. f.
Herbs written of after diverse sorts, 210. b.
Herbs are of mischievous operation, and yet the opinion of them
is greater, 211. c.
Pythagoras wrote of Herbs, and attributed their inuention
to the Gods, 211. a.
Herbs growing upon flunet, 205. b. of what effect such
 are, ibid.
Herbs somewhat continue longer than others, 291. e.
Herbs haue eternied the names of the inuicitors, 208. m.
 213. a.
At Cato the first Roman who wrote of Herbs, 209. b.
C. Plinius wrote of Herbs, and dedicated his book to Au-
gustus Caesar, 209. c.
Pompeius Lenaxus wrote of Herbs, ibid.
Herbs portrayed in colours give no great light to the rea-
der, 210. g. h.
Herulanes, certaine pismires medicinal to scower the
skin, 377. d.
Herulancus, a riveret about Rome, 308. b.
Hercules the paron of the Carthaginiens, why his image

standeth at Rome upon the bare ground without a Ti-
estad, 570. g.
Hercules Triumphant, an image at Rome, why so called,
 493. f.
Hercules Oeteus of brasse, in what habit and countenance
portraied, 501. m. 505. a.
 three titles thereupon, 505. a. *tyrannus* who was the
 workman thereof, 504. m.
Hercules his statue of yron and Steele, wherefore, 44. g.
Hermocrates, what images, 569. b.
Hermefias, what composition, 204. b.
 the wonderfull operation thereof, ibid.
Hermippus, a writer, 372. b. the commented upon the Poeme
 of Zoroastres concerning magicks, 372. d.
Hermodorus honored with a statue, erected upon a colunne
at Rome, for translating the Lawes of the iudicialles,
 491. c.
Hierophilus, a singular Physician, he cured alwaies with
simples, 222. k. his first searched into the causes of disca-
 ses, 222. k. his speaking was touching the operation of
 white Earth, 219. b. he altered the course of the sum-
 mer Physick, 344. i. he observed the pulses, ibid.
Herpes, a running cancerous sore, called if some a Wolfe,
 394. b.
Herpes, a worme, souveraine for the sore of it same, 394. g.
Hert fainting how to be relieved, 37. d. 60. b. 258. m.
Hertisse how to be recovered, 156. g.
Hert trembling and beating, how cured, 312. i. See more
 in trembling, ibid.
Hesperia the herb, why so called, 87. c.
 H I
Hiberis an hearb, and deuised name, by Serulius Dano-
crates, 224. k. the description, ibid. the vertues in Phy-
 sicke, ib. how to be used, ibid.
Hibiscum, or Hibiscus, what herb it is, 40. b. the medicines
 that it doth afford, ibid.
Hicetius a Physician and writer. 41. b. 123. a.
Hieracius, what hearb, 45. d. why so called, ibid.
Hieracites, a precious stone, 627. d. the description, ibid.
Hieracum, a collyrie or composition, 508. m. the vertues
 medicinal thereof, 509. a.
Hierobotrys an hearb. See *Vernane*.
High-top. See *Lungwort*.
Hucket or Hacquet. See *Yex*.
Hicway, a bird enuious to the gathering of Pearles, 214. i.
 282. l.
Hills, some admit raine and are Greene with woods on the
North side, some on the South side onely, and others all
ouer, 408. k.
Hinds not enuious to mankind, but doe steele us medicina-
ble hearbs, 255. c.
 they haue a stone in their excrement or wombe that is
 medicinal, 339. c.
bones found in the heart and wombe of an Hind medicinal,
 ibid.
Hippace, what it is, 318. l.
Hippace, another thing, 321. c.
Hippiades, certaine images resembling women, 569. e.
Hippace, what hearb, 223. f.
Hippocrates the Physician, 71. b. when and where hee
 flourished, 343. f. the first Clinicke Physician, 344. g.
 he first reduced Physicke into an Art, 242. i. he dealt
 onely

of Plinius Natural History.

anely with simples, 242. i.
Hippocras, a Medication, 372. i.
Hippolytus raised from death by Esculapius, 343. e.
Hippomanes, a venomous thing, 325. l.
Hippomarathrum, what kinde of Fenell, 77. e.
Hippocras the Poet, how he was abused by Anthemus and
Bupalus, 564. m. how he was reuenged of them, ibid.
Hippoc, an hearbe, described, 121. a. the reason of the
 name, ibid.
Hippodamia. See *Epithymum*.
Hippodamus, 283. e. the description, 7. ibid.
Hippolytes, an hearbe, described, 120. m. the reason of the
 name, 121. a.
Hippus. See *Equitum*.
 the Greeke writers varie much about the name of this
 hearbe, 263. c. why it is called Anabasis, ibid.
 H O
Hogs grease how to be prepared and tried, 320. i.
 See *Greace*.
Holcus, an hearbe, 283. d. the description, ib. the vertues, ib.
 why it is called Aristida, ibid.
Holland fine linen made in old time, 2. l.
Holme oak, what vertues it affordeth in Physicke, 177. d.
 the graine of Holme oak medicinal, ibid.
Holochrynos, an hearbe, the vertues, 106. i.
Holochrynos, a kinde of yelb, 100. k.
Holochrynos, what kinde of Image, 470. g.
Holofenes, an hearbe, 283. d. why so called, ibid. the descrip-
 tion, ibid.
Homer the Poet, Prince of learning, and father of antiqui-
ties, 210. l.
Honey commended and compared with Lase, 135. c.
Honey, when and where it is venemous, 94. g.
 how to be discouered from that which is wholesome, 94. b.
 what symptoms happen to them that eat of this honey,
 94. i. the present remedies of this kind of poisonous honey,
 94. i. 362. k. 433. d. the singular properties that honey
 hath, 135. d. the discommodities of honey, 135. e.
Honey called Menomonon, and why, 94. k.
Honey of Carina, medicinal, 95. b.
Honey-combs their vertues, 137. b.
Honey-combs wholesome and hurtfull, in one and the same
hine, 94. d.
 a glut or surfeit of Honey how to be helped, 433. e.
Honey wherein Bees haue been extirpated stifled, medicinal,
 362. k.
Hoplides, what picture, 536. g.
Horatius Cocles his statue erected upon a colunne at Rome,
 for making good the bridge against the Fensina, 491. c.
Horobound, an herbe, 74. m. the sundry names that it
 hath, ibid. the iuice of Horobound, of what vertue it is,
 and how to be used, 75. a.
Horobound to be taken warily for danger of exulceration
of reins or bladder, 75. c.
Horobound of two sorts, 75. e.
stinking Horobound, 272. g. the sundry names, description,
 and vertue, 278. b.
Hormion, a louely precious stone, 627. e. the description, ib.
Hormodius, a precious stone, 627. d. the reason of the name,
 ibid. the description, ibid.
Hormum, a kinde of graine or corne described, 144. k. the
 vertues that it hath, ibid.
Hornets sting, what remedies therefore, 40. b. 56. m. 75. f.
 110. l. 153. b. 166. l. 173. a. 361. d. 418. m.
Horsetaile, an hearbe, 263. b. the vertue that it hath in wa-
 shing the swelled spleene, ibid.
Horfes haue agues, and how to be cured, 260. k.
Horfe dung greens, & burnt it to alke, medicinal, 325. e.
Horfe-flesh and horfe-dung aduerso to serpents, 322. k.
Horfes how they shall neuer tire, 341. c.
wild Horfes are medicinal, and more than tame, 323. b.
Horfes laden with fruit are some wearie, 176. b. what re-
 mede, ibid.
riuer. Horfe taught vs the feat of Phlebotomie or blood-
letting, 316. k. the ycelidde many medicines, ibid.
 his blood Painters vs, 316. l.
sea Horfe Hippocampe medicinal, 436. b. 437. f. 440. l.
 harm in Horfe eyes how to be cured, 438. l. See *Eyes*.
Horfes and mares pained in staling, how to be eased, 339. b.
 pained in the gait, or vexed with the boris, how helped,
 339. f.
Horst and affe tired, how to be recovered, and made lustie,
 153. c. staling drop by drop how to be helped, 335. m.
Horsteebs if they be swallowed downe in drinking are ve-
nomous, 323. c. the remedies, ibid. 356. b. 361. d.
Horsteebs medicinal, 438. g.
Horsteebs how they draw blood, 447. b. their vs in Phy-
 sicke, ibid. the discommodities that ensue in applying
 Horsteebs, 447. b.
 how they fall off from the place where they suck, 447. e.
 the danger in plucking them off, ibid.
 how they may be forced to fall off as they are sucking,
 356. b.
 how to be taken off without danger, 447. d.
Messallinus died by setting a H rse to his knee, 476. c.
Horsteebs occasioned by a rheume, how to be helped, 371. c.
 271. d. 275. e. 289. d. 353. g. 378. l. See more in *Voice*,
 and *Throat*.
Hortensius the Oratorist great store by the Image of
Sphinx, 496. l. how M. Cicero scoffed at him for it, ibid.
Hortensius what kinde of bulb, and their vertues, 52. l.
Bornu K. of the Assyrians deuised a medicine against drun-
kennes, 399. c.
Hortensius a writer in Magicks, 306. m.
L. Hostilius Mancinus attempted to be Consul by decem-
ping onto the people of Rome the picture of Carriage by
him assaulted and forced, 526. l.
Hot waters or balnes naturall, for what diseases in gene-
rall they be good, 401. e. f.
Hot waters naturall be not alwaies medicinal, 412. g.
 See more in *Bains*.
Howlets, by a secret antipathie in nature, be most aduerso
to Horsteebs, 361. d.
Hounds tongue, an hearbe, 223. d. why it is called Cyno-
 gloss, ibid. two kindes thereof, ibid. their description, ib.
Horse, what hearbe, 237. c. two kindes thereof, ibid. d.
 their description, ibid.
Horseleeke chafeth away cankers and other wormes out of a
garden, 32. l. the sundry names that it hath, 237. c. why
 it is called Stergathron, ibid. why called Hippogloss, ib.
 named commonly in Latine *Serpentivorus*, 237. d.
 H V
Hucklebone discaied, how to be helped, 143. f. 149. b. See
 more in *Sciatica*.
 A I m m
Hulter,

Huluer or *Hollie tree*, 194.e. the medicinable operation, ib.
Hunger whether it be good in diseases, 140 l
Hunger, how it may be put by or satisfied, 120.b. 223.f
Hungrie worme in the stomacke, how to be repressed and cured, 259.d. See *Phagedana*.
Hurds or *Hirds*. See *Ton*.
Hwaked barley, 139.c.d. whose invention, ibid. the vertues that it hath in Physicke, ibid. See more in *Trifana*.

H Y

Hyacinth the flower, why so called, 92.i. where it loneth to grow, 110.k
Frenchmen dye their cloth with it for defects of graue, 110.k other properties and uses that it hath, ibid.
Hyacinthizones, what *Beryls* they be, 613.c. why so called, ibid.

Hyena the wild beast, yieldeth from sundry parts of her bodie many medicines, according to the Magicians, 311.e the very body of the *Hyena*, transmeth and allureth the senses of man and woman, 311.d
Hyena changeth the sex each other yeare, ibid.
Hyena aduise to *Luxuria* or *Panthers*, 311.d
how the Hyena flitteth in hunting, 311.f. she doth intoxicate the head of the hunter, ibid.
the wine of great efficacie, 203.d
Hyaes, how they be hunted and taken, 311.e
Hyems haire (said to be a medicinable thing), 311.f
the skin of their head conuict medicinable, ibid.
their gall applied in Physicke, ibid.
the graine or dripping of their liver esteemed medicinable, 312.g
what parts besides are used in Physicke, 312.g. b. i. k. l. m. 313.a. b. c.

Hyama, a precious stone, 627.e. the reason of the name, ibid.
where it is found, ib. the vertues thereof according to the magicians, ibid.

Hydargyrum, is quicksilver artificiall, 473.c
where of and how it is made, 477.d
a verie poison, ibid.
used in guiding silver, and otherwise, 477.e
Hydrocele, a kinde of rupture and descent of humours into the bag of coide, how to be cured, 58.i
Hydrocephalum, what kinde of Docks, 73.b
Hydromel, what kinde of mead, 136.g
two kinde thereof, ibid. how made, 136.g. 413.c
the vertues and operations thereof, 136.g
the discommodities that come thereby, 136.k
how of 4412.c. wherefore rectified, ibid.
Hydrophobie, what it is, 363.a. the remedies for this fearefull accident, 309.f. 362.l. 435.e. d. 437.g. 516.g.
See more in mad Dogs biting.

Hydrus, a kinde of water, 344.i. in some cases medicinable, ibid. See more in *Emlyaris*.
Hygium a Greeke writer in Physicke, 54.i
Hygremplastrum, what kinde of emplastre, 516.k
the composition thereof, ibid. in what cases used, ibid.
Hyphatium, a precious stone, 630.i
Hyphosus, an hearbe, 283.d. the description and vertues, ib.
Hypanus, a river, 411.c. sometimes it runneth under, and otherwhise above *Rorsythemes*, ibid.
Hypercicon, an hearbe, 283.b. the description and vertue, ib.
Hypericon, what hearbe, 255.a. the names thereof and their description, 255.b. a second kinde described, ibid.

Hypobarus, a river, 606.l. what the name significeth, ibid.
Hypochondriall griefs, and the remedies thereof, 39.b. 277.d
See more in Flanke.

Hypochoisus, an hearbe, 190.k. 249.e. where it groweth, ib. two kinde thereof, 249.e. how it toke that name, ibid.
Hypogonion, what hearbe, 237.c. See *Hemfleeke*.
Hypoglossa, an hearbe, 284.g. the description, ibid.
Hypophlomis, what hearbe, 235.b
Hyspe an hearbe, contrary to *Radixis*, and corrected thereby, 40.g. what *Hyspe* is best, 233.a. the properties that it hath, ibid.
Hyspe according as it is taken, purgeth upward or downward, ibid.

I A

I A what *Violet* they be, 85.d
Iace, a kinde of Corall, 429.d
Iacinti, a precious stone, 621.d
how it differeth from the Amethyst, ibid.
sundry kinde of Iacinti, 611.d.e
which be the best, ib.
how goldsmiths set them in gold, ib.
Iacinti, called *Chrysolitri*, and why, 621.f
a Citrin Iacinti or *Chrysolitri* weighing 12 pound, 622.g
Iacinti named *Leucochrysi*, ibid.
Iacinti which be called *Capnie*, and wherefore, ibid.
Iacinti how counterfeited, and by what means detested, ibid.

Iacinti called *Melichrysi*, and the reason why, ibid.
Ialysus and his dogs some, a famous picture of *Protegenes* his doing, 512.b
K. Demetrius respecting it, forbare to burne the citie of *Rhodes*, 542.m

Iamnes a great Magician, 373.d
Ianthina Vestis, what kinde of cloth, 85.d
Ianus his image of brass at Rome, 194.g. the god of times and ages according to his portraiture, 194.g.
Iasone, what hearbe, 99.d. the description, 130.b. the vertue, 130.i

Iasser, a gem, or precious stone, 619.e. of a greenish colour, 619.f
ib. common to many countries, 619.f
ib. of India, Cyprus, and Persia, ibid.
the Persian Iasser why it is called *Atrichusa*, ibid.
the Iasser of the Caspian hills, ibid.
Iasser about the river *Thermodon*, is blew as a rose, ibid.
Iasser in Phrygia purple, ibid.
Iasser in Cappadocia, *Pontus*, and *Chalcedon*, ib. 320.g
sundry kinde of Iasser different in goodnesse, 620.g.f
Iasser Terenthiensis, ib. what be the faults and blemishes of the Iasser, 620.h. how it is falsified, ibid.

Iasser which resembleth the *Emerald*, most set by in the East parts, 620.i
Iasser, when it is called *Grammatias*, when *Polygrammatos*, 620.i
ib. vanitie of Magicians as touching the *Iasser* stone, ib.
Iasser Onychopuncta, 620.k. the *Iasser* Caput, ibid.
the bignesse of the true Iasser, ibid.
the whole visage of Nero portrayed in one *Iasser* stone, ib.
Iatralapice, what counse of Physicke, 344.7
Iaudice in a feauer, when it is a deadly signe, 261.e. why
it is called Regius Mortuus, or a kings disease, 136.m

Iace, a kinde of Corall, 429.d
Iacinti, a precious stone, 621.d
how it differeth from the Amethyst, ibid.
sundry kinde of Iacinti, 611.d.e
which be the best, ib.
how goldsmiths set them in gold, ib.
Iacinti, called *Chrysolitri*, and why, 621.f
a Citrin Iacinti or *Chrysolitri* weighing 12 pound, 622.g
Iacinti named *Leucochrysi*, ibid.
Iacinti which be called *Capnie*, and wherefore, ibid.
Iacinti how counterfeited, and by what means detested, ibid.

Iacinti called *Melichrysi*, and the reason why, ibid.
Ialysus and his dogs some, a famous picture of *Protegenes* his doing, 512.b
K. Demetrius respecting it, forbare to burne the citie of *Rhodes*, 542.m

Iamnes a great Magician, 373.d
Ianthina Vestis, what kinde of cloth, 85.d
Ianus his image of brass at Rome, 194.g. the god of times and ages according to his portraiture, 194.g.
Iasone, what hearbe, 99.d. the description, 130.b. the vertue, 130.i

Iasser, a gem, or precious stone, 619.e. of a greenish colour, 619.f
ib. common to many countries, 619.f
ib. of India, Cyprus, and Persia, ibid.
the Persian Iasser why it is called *Atrichusa*, ibid.
the Iasser of the Caspian hills, ibid.
Iasser about the river *Thermodon*, is blew as a rose, ibid.
Iasser in Phrygia purple, ibid.
Iasser in Cappadocia, *Pontus*, and *Chalcedon*, ib. 320.g
sundry kinde of Iasser different in goodnesse, 620.g.f
Iasser Terenthiensis, ib. what be the faults and blemishes of the Iasser, 620.h. how it is falsified, ibid.

Iasser which resembleth the *Emerald*, most set by in the East parts, 620.i
Iasser, when it is called *Grammatias*, when *Polygrammatos*, 620.i
ib. vanitie of Magicians as touching the *Iasser* stone, ib.
Iasser Onychopuncta, 620.k. the *Iasser* Caput, ibid.
the bignesse of the true Iasser, ibid.
the whole visage of Nero portrayed in one *Iasser* stone, ib.
Iatralapice, what counse of Physicke, 344.7
Iaudice in a feauer, when it is a deadly signe, 261.e. why
it is called Regius Mortuus, or a kings disease, 136.m

Iace, a kinde of Corall, 429.d
Iacinti, a precious stone, 621.d
how it differeth from the Amethyst, ibid.
sundry kinde of Iacinti, 611.d.e
which be the best, ib.
how goldsmiths set them in gold, ib.
Iacinti, called *Chrysolitri*, and why, 621.f
a Citrin Iacinti or *Chrysolitri* weighing 12 pound, 622.g
Iacinti named *Leucochrysi*, ibid.
Iacinti which be called *Capnie*, and wherefore, ibid.
Iacinti how counterfeited, and by what means detested, ibid.

Images sorted together, according to the workes wherein they excelled and delighted, 503.f
See more in Statues.
Imagines in Cley, who invented, 552.g. See *Fotteric*.
Impendia, what it significeth, 462.g
Impendia, an hearbe, why so called, 205.e. the description and vertue, ibid.

Impissumes behind the eares called *Parotides*, with what medicines to be cured, 36.b. 51.b. 62.m. 64.l. 72.m. 73.d. 76.b. 119.d. 121.d. 128.i. 143.e. 144.i. 167.d. 168.b. 179.a. 180.g. 183.g. 182.b. 301.f. 320.b. 326.b. 371.a. 312.d. 437.d. 439.f. 441.f.
Impissumes breeding how to be driven backe and dissolved, 49.a. 103.e. 120.k. 138.i. 141.e. 150.g. 158.g. 161.f. 167.d. 179.f. 181.e. 182.b. 184.g. 185.c. 188.l. 205.d. 274.g. 278.e. 286.f. 556.l. 560.b.
Impissumes about the midriff, and in the bowels or precardiall parts, how to be cured, 39.e. 75.d. 123.g. 154.g. 186.e. 381.b.c.

Impissumes betweene the eye corner and the nose, how to be healed, 174.i
Impissumes hard, how to be mollified, 141.e. 162.b
Impissumes painefull, how to be eased, 141.d. 162.b
Impissumes tending to suppuracion, how to be ripened, broken, and drawne, 47.e. 49.a. 54.l. 65.c. 70.k. 103.f. 158.l. 166.l. 171.a. 184.f. 198.i. 205.a. 218.k. 233.b. 262.i. k. 261.f. 286.l. 337.b. 356.i. 308.k. 119.d. 123.c. 134.i. 138.i. 167.d. 179.a. 192.k. 195.d. 233.d. 262.i. k. 274.g. 283.b. 289.e. 290.i. 265.a. 510.i.

For all Impissumes or swellings in generall, six remedies, 194.m. 197.b. 201.a. 245.f. 379.c. e. 473.f.
See more in Tumors and Inflammations.
the Impression or exorcisme in a prescript forme of the ve. 381. Non. Tuccia, 295.a. See *Exorcisme*.

Incarnative medicines, 50.m. 119.d. 121.d. 134.k. 140.i. 159.f. 167.f. 183.b. c. 265.b. 272.g. 285.d. 303.a. 319.b. 320.l. 475.a. 485.f. 529.f.
Incolitula, or *osse* itselfe so artificially tinned, as that it seemeth silver plate, 517.f. whose invention, ibid.

Indica, a precious stone, 628.g. why so called, ibid. the description, thereof, ibid.
Indico, a rich painters colour, 528.i. why so called, 531.a
Indico, a kinde of azure or blew, 485.a. the price thereof, ibid.

Indico the Painters colour, what it is, 531.b
the artificiall Indico is *Floray*, 531.b
how the good Indico may be sophisticated, 531.b
how the decent is found, ibid.
the worth of Indico, ibid. and the use in Physicke, 531.c

Indip, pepper. See *Piperitum*.
Infants how to be kept from iudiciall frights, 341.e. 440.c
Infants stirring and striving in their sleepe, 340.c
Infants from being forward, 351.d
Infants troubled with the wens or paines in the eares, how to be eased, 398.k. 449.e
Infants bleeding or breaking out of Infants, how to be helped, 449.f
Infant sucking in the birth how it may be borne, 395.d
Infant tired, quench, how to be healed, 559.a
Infants sucking, how to be eased of the grinding and mewing in the bellie, 397.a
Infant, 397.a

Incarnative medicines, 50.m. 119.d. 121.d. 134.k. 140.i. 159.f. 167.f. 183.b. c. 265.b. 272.g. 285.d. 303.a. 319.b. 320.l. 475.a. 485.f. 529.f.
Incolitula, or *osse* itselfe so artificially tinned, as that it seemeth silver plate, 517.f. whose invention, ibid.

Indica, a precious stone, 628.g. why so called, ibid. the description, thereof, ibid.
Indico, a rich painters colour, 528.i. why so called, 531.a
Indico, a kinde of azure or blew, 485.a. the price thereof, ibid.

Indico the Painters colour, what it is, 531.b
the artificiall Indico is *Floray*, 531.b
how the good Indico may be sophisticated, 531.b
how the decent is found, ibid.
the worth of Indico, ibid. and the use in Physicke, 531.c

Indip, pepper. See *Piperitum*.
Infants how to be kept from iudiciall frights, 341.e. 440.c
Infants stirring and striving in their sleepe, 340.c
Infants from being forward, 351.d
Infants troubled with the wens or paines in the eares, how to be eased, 398.k. 449.e
Infants bleeding or breaking out of Infants, how to be helped, 449.f
Infant sucking in the birth how it may be borne, 395.d
Infant tired, quench, how to be healed, 559.a
Infants sucking, how to be eased of the grinding and mewing in the bellie, 397.a
Infant, 397.a

Incarnative medicines, 50.m. 119.d. 121.d. 134.k. 140.i. 159.f. 167.f. 183.b. c. 265.b. 272.g. 285.d. 303.a. 319.b. 320.l. 475.a. 485.f. 529.f.
Incolitula, or *osse* itselfe so artificially tinned, as that it seemeth silver plate, 517.f. whose invention, ibid.

Indica, a precious stone, 628.g. why so called, ibid. the description, thereof, ibid.
Indico, a rich painters colour, 528.i. why so called, 531.a
Indico, a kinde of azure or blew, 485.a. the price thereof, ibid.

Indico the Painters colour, what it is, 531.b
the artificiall Indico is *Floray*, 531.b
how the good Indico may be sophisticated, 531.b
how the decent is found, ibid.
the worth of Indico, ibid. and the use in Physicke, 531.c

Indip, pepper. See *Piperitum*.
Infants how to be kept from iudiciall frights, 341.e. 440.c
Infants stirring and striving in their sleepe, 340.c
Infants from being forward, 351.d
Infants troubled with the wens or paines in the eares, how to be eased, 398.k. 449.e
Infants bleeding or breaking out of Infants, how to be helped, 449.f
Infant sucking in the birth how it may be borne, 395.d
Infant tired, quench, how to be healed, 559.a
Infants sucking, how to be eased of the grinding and mewing in the bellie, 397.a
Infant, 397.a

The Tacke

Laser, a sweet liquor or dring, and the vertues thereof; 8.b.
Laser the liquor of Luperum; 8.b.
the price thereof; how rare it is; &c. is specified; 8.a.
the manner of driving Laser out of the plants; 9.a.
the ordering of the said liquor; 9.a.b.
how the best is knowne; 8.b.
Laserpitium, the plant that yieldeth *Laser*; ibid.
destroyed by Pulicars; ibid.
a plant of *Laserpitium* sent as a great nonette; 8.i.
what effects it worketh in cattell that feed upon it; 8.k.
how *Laserpitium* was engendered about Cyrene; ibid.
the nature of *Laserpitium*; ib.
the description; 8.l.m.
what effect it doth for men and cattail; 9.a.
the root thereof; 9.c.
Laserpitium of Persia and Syria;
a *Laser*; by what means medicable it may be stopped;
41.c. 43.d. 47.e. 55.b. 67.e. 70.w. 73.e. 76.i. 77.e.
101.e. 102.f. 107.e. 120.k. 124.m. 127.b. 130.g.
131.f. 139.a.d.e. 140.f. 141.a.d. 147.b.f. 153.d
156.g. 160.b. 163.b.e. 164.k. 165.b.f. 166.g.f.
169.d. 170.e. 171.b. 172.l. 174.k. 177.a. 179.f
181.a. 184.g. 186.i. 187.e. 190.b.k. 195.c.d. 196.b.m.
199.d. 202.b. 206.f. 248.l. 249.b.c. 250.b.i. 255.a
257.a. 263.d. 267.e. 272.l. 273.b.k. 280.k. 283.b
284.b. 286.l. 290.k. 305.g. 318.4. 330.l.m. 331.a.c.d.e.f
331.k. 333.g. 333.h. 443.c. 528.m. 289.e. 354.l
Lassitude how to be eased;
See Wormesse.
Laurae, a magist all heart; 244.b. the operations thereof; 276.k.
Laurine, what feignall bodydaus; 486.m
Lavos brosse; 250.g.
Lavos what heare; 250.g.
Laurus Tallius his Decasticon upon Ciceroes Academiæ;
and the fontaines there; 402.i.
Lauvretice, the manne thereof, and vertues medicable;
173.a.
Laxative medicines; 140.b. 141.d. 161.b. 163.f. 167.e.
165.d. 180.f. 191.a. 192.k. 201.a. 218.i. 250.k.m.
251.a. 252.g. 272.g. 275.b. 287.e. 311.c. 442.l. 443.d
See mine in Purgative.

L E
Lea, what kinde of Colewort; 48.k.
Lead used without gold; 457.d.
finner-Lead, Argentine; 517.d.
two principall kinds of Lead;
white lead called Plumbum Candidum in Latine; 516.l.
in Greeke Cassieron; ibid. where it is found;
how fine; ibid.m.
Lead ore Eleuria; 519.a. why so called; ibid.
blacke Lead or common Lead; 517.a. two kinds thereof; 516.b
white Lead or Tinglaffe Cassieron in request of old; 577.b
how it is knowen to be good and perfect; 518.g.
the use of blacke or common Lead; ibid.b.
Lead ore Greth-depe in Spaine and France; 518.b. ebbe in
Brittaine; ibid.e. the principall kind of lead; ibid.
Lead mines for let-growne againe; 518.a. thereon followeth;
518.b. how a leaden pan will witt over the fire; ib.k.
Lead in what case medicable; 518.m.
plate of Lead applied to backe and brent; ibid.
Lead, how to be prepared and waished for use in Physicke;
519.a.b.c.

the operation of Lead in Physicke; thus prepared; ibid.
Lead, how calcined into ashes; 519.d.e.
droffe of Lead medicable; 519.e. which is best; ibid.
vapour of Lead in the furnace killeth dogs; 519.a.
Leave, an image of Iphigeneas his making; 501.b.
the historie thereto following; ibid.
how a bodie once-fit may be made Leane; 184.m. 503.d.
318.l.
how a mans shoulde drinke to be Leane, and how to be corpor-
lent; 152.m.
Leanes of hearbes different; 20.g.
Leanes which be employed in coronets; 89.e. 90.g.
Q. Lecanum Bassis droef of a carbuncle; 241.d.
Lecture an heave of sundry kindes; 24.g.
Lecture Lacomcon; 24.b.
why Lecture is called in Latine Lectura; 24.i.
the nature of Lecture; 24.k.
Augustus Caesar recovered from sickness by the meanes of
Lecture;
Lecture much used;
Lecture Capita a 24.l. 45.n. the properties thereof; 45.b.
Lecture how to be dissolved in the cable; 25.b.
how Lectures are to be replanted; 25.g.
Lecture mild and the diverse kindes thereof; 45.a.
Lecture milder than the diverse kindes medicable; 45.d.
the uice of mild Lecture medicable; 46.g.
garden Lectures their medicable properties;
their discommodities; 46.m.
Leechcraft belonging to kine and oxen who wrote of a-
mong the Romanes; 209.b.
21.a.
Leekes;
Leeks headed or bulled; 43.c. their medicable properties;
ibid.
Lecky or wisser Leckes; 21.a. used much by Nero the Em-
perour for to cleave his voice; 21.a. of two Kindes; 21.e.
Atela killed by the uice of Leckes; 157.d.
Lees of wine the nature and properties thereof; 157.d.
Legs infirmities helped by the Assuse stone quaries; and
hurt by metall mines; 587.e.
to sit or stand a coss Legged; what effect it workerh; 305.a.
to sit at cities prohibited by law; ibid.
Lemonum; what herbe; 228.k. the g.m. and vertues thereof;
ibid.
Lentive medicines; 111.c. See in Aollitine.
Lentiles the pulve; what medicable properties they have;
141.d. their descriptions; ibid. 142.g.
Lentils wild; 421.d. their description and medicable ver-
ties; ibid.
Lentiles of the massif or poel; 142.b. See Duckes-mat.
Lentiles or spous in the skin how to be joined; 125.c. 150.l.
132.e. 138.l. 577.d. 441.d. 443.b.c. 450.c. See more
in Fickles, Disage, and Face;
Lentile or *Maidlike tree*, the vertues medicable that it
affordeth; 184.g.
Leocras, a famous image ear, and his works; 550.g.
Leonard, a painter; 630.d.
Leonards, a precious stone; 232.d.
Leonins, what herbe; ibid.
Leontiscus, a cunning painter; 549.f. his pictures; ibid.
550.g.
Leotium, a cunning imager, and his works; 458.k.l.
Leostepet, how herbe; 254.i. the description; 250.f.
Leontopodium, what herbe; 250.f.

the sundry names, description and vertues, *ibid.*
it causeth strange visions and illusions, *250.i.*
Lepidos, a pretious stone, *628.b.*
Lepidus his stately house at Rome, *588.a.*
Leptis in brass what it is, *507.c.*
Leprie or leprouse Elephantiasis, when it began first in Italy
241.c. the description and manner thereof, *ibid.*
a maladic naturall and proper to the Aegyptians, *422.g.*
against the said Leprie sundry medicines, *443.g.* 50.g. 51.c.
53.b. 58.b. 59.c. 65.c. 66.c. 73.d. 74.i. 103.b.
122.b. 124.f. 125.c. 131.a. 139.a. 144.g. 146.j.
149.e. 153.f. 157.f. 168.i. 179.d. 185.c. 191.e.
192.m. 205.b. 210.d. 300.i. 318.g. 328.g. 362.i.
370.k. 377.d. 393.k. 429.b. 432.f. 440.f. 441.f.
443.b. 455.f. 557.d. 559.b.
Lepsius, a pretious stone, why so called, *628.b.*
Lethargie, what remedies for it, *395.d.* 423.c. 558.f. 577.
74.b. 75.e. 76.b. 121.d. 160.f. 179.e. 181.a. 183.d.
187.f. 205.g. 260.f. 315.e. 338.g. 353.f. 392.b. 430.m.
446.b.i.m. 447.a. 573.c.
Lette, a fontaine, *403.d.* the water whereof causeth illu-
sion, *ibid.*
Leucacantha, an hearbe, See Phalangites.
Leucacanthemon, See Phalangites.
Leucacanthus, what kinde of Thistle, *123.a.* the diuers
names it hath, *ibid.*
Leucacathar, a pretious stone, *621.c.*
Leucacathite, what hearbe, *613.e.*
Leucacanthemum, what hearbe, *125.d.*
Leucacanthemum, what hearbe,
the vertues thereof, *109.a.*
Lence, an hearbe, 285.c. the description, *ibid.* why so called
ibid. why named Melencolon,
Leucocoron, an hearbe, See Leontopodium.
Leucocrobyll, a pretious stone, *628.b.*
Leucocari, medicinable spring, *403.b.* their vertues,
ibid.
Leucographis, *285.d.*
Leucopetalis, a pretious stone, *628.b.*
Leucophoron, what kinde of fixe, *466.b.* how it is made,
529.c.
Leucopitulum, a pretious stone, *628.b.*
Leucosclitosis, a kinde of Porphyrite marble, *573.c.* why so
called, *ibid.*
L I
Libanon, an hearbe, See Centaurea the lesse.
Libanoticus, a pretious stone, the description, *628.b.*
Libri bane, a venomous hearbe, *433.e.* why so called, *ibid.*
Libards how they be cured after this manner, *270.k.* See
Aconium.
Libratis Al, and Libella what it was in Rome, *462.c.*
Libraries by whom deuised at Rome, *523.f.*
Libripender, who they were, *462.d.*
Lichen, an hearbe, See Linivort.
Lichen in Plum trees, what it is, and the vertues medi-
cinable, *169.e.*
Lichen in horse legs, what, *228.l.*
Lichenie, a kinde of mild and soule tetter, *240.l.* how it
began, *240.l.* why it is called Aemegral *ibid.*
the manner of this soule disease, *240.m.* who brought it
first to Rome, *241.v.* what persons especially it annoy-
ed, *ibid.* by what meanes it was contagious, *ibid.*
the manner of curing it, *ibid.*
what remedies for Lichenie, *131.a.* 289.d. 362.i. 440.g.
441.d. 470.k. See more in Tetrars.
Lice or vermine of the bodie how to be killed, *399.b.* See
Lousie disease.
Lice in the head, what killeth, *413.b.* 422.g. 559.b.
Licinius Mancer, a writer, *428.b.*
Lice in patne and sickenes, is misery, *292.m.*
Light in Pictures, *528.b.*
Lightning with what ceremonies adored, *557.a.*
Lightning resembleth the smell and flame of brimstone bur-
ning, *ibid.*
Lights and their infirmities how cured, *580.j.* stuffed with
vicious steame and purulent matter, how to be delectra-
ced thereof and cleansed, *380.i.* 443.a. 556.m. See
more in Lungis.
Ligusticum, an hearbe, 303. called Panax, *ibid.* the de-
scription, *290.b.* why called Smyrrinum, *ibid.*
of the garden Lillie, *ibid.*
smice of Lillie flowers, *102.b.*
oyle of Lillies called Lirion, *ibid.*
Lillies well commended and described, *84.k.*
Lillie roots how to be set, *ibid.*
Lillies will come vp strangely of their owne liquor, *ibid.*
Lillies red, described, *85.a.* where the best are to be found, *ibid.*
Lillies purple, *ibid.*
Lillies how they may be artificially coloured, *ibid.*
Lillie roots bane ennobled their flowers, *103.a.*
Lilue-Lillie, See Nempfar.
May-Lillie described, *239.b.*
Lime for mortar, which is good, and which bad, *594.i.*
Lime medicinable, *595.c.*
Quick-Lime catcheth fire soonest by the meanes of water,
472.b.
Limann, a French hearbe, *285.b.* the vertues, *ibid.*
Limonia, what hearbe, *130.m.*
Limoniater, a pretious stone, *628.i.*
Limonium, a kinde of Beet, 475.c. the description and ver-
tues thereof, *ibid.*
Limpins, [stiff] fibres medicinable, *443.b.*
Limyra, a faunting sinne, gisfing remouing, and thereby pre-
serving somenath, *404.i.k.*
Linden tree, the inner bark thereof soaked wth salt, *176.b.*
the vertues that it hath otherwise, *185.d.*
Line feed where it loneth to grow, *201.*
Line much used, in what countries, *28.k.*
Line how it is knowne to be ripe, when it is gathered, and
how dried, 478.b. how to be watered, dried againe, pun-
ned, and otherwise ordered, *478.i.*
Line-catchers, what it is, and the vertues thereof, *41.i.* where it
groweth, *ibid.*
Line feed serueth for meat, 478.i. it is medicinable, *ibid.*
Line called Byffus, and the lawne or rissiane thereof, *59.b.*
the price it beareth, *ibid.*
Linum Stric ma, 229. Allium, 36. Faenatin, 39. Retenue, 66.
Linum cloath how to be bleached, *29.b.*
Linum weaues wth they were wont to worke, *61.*
Linum, where the best is made, *256.*
Linum cloath vnt to asies how employed, *59.b.*
Linum dried, as well as woollen, *50.c.*
Linum comens and vries of diuers colours, described by
the Theatres and Forum of Rome, *50.c.*
Linum

Linmen white esteemed best, 5f
 Lint of Linmen cloth, for what purpose it is good, 5b. See
 morcin Flax.
 Lings. See Heald.
 Lingua, an herbe, the vertues thereof, 205.c
 Lingulace, an herbe, described, 232.i
 Lintus, a medicabile river, 403.a
 Lions paw, an herbe, 250.j. the sundry names that it
 hath, ibid.
 Lions bodie yeldeth medicines, 310.m. the grease, the
 teeth, haire, gall, and heart, 310.m. 311.a, b
 Lions danger how to be avoided, 359.b
 Lipra, among the Greke writers, lenitive and vniuolous
 plasters, 173.f. 174.b. how such be made, 620.i
 Lipari, a pretious stone, 628.i
 Lips chapped how to be cured, 327.f. 328.b. 352.f. 377.b
 See Chaps and F. fissures.
 Lips chapped, excori at, or otherwise diseased, how to be hea-
 led, 173.f. 377.b. 509.a
 Liquirice described, 120.g. the best Liquirice, ibid. the me-
 dicinable properties thereof, ibid.
 Liquirice iuice, 320.b. why called Adipson, ibid.
 Litharge of three sorts, 47.4. how it is made, ibid.
 why called Spuma argenti, the froth of silver, ib. what
 it is, and how it differeth from droffe, 475.a
 Litharge, how to be prepared, 474.d. 475.a
 the medicinable virtues of Litharge prepared, ibid.
 Lithogermor, an herbe, See Grimalle.
 Lithofratura, what payments, 596.m. when they be deni-
 fed, 597.a
 Lither obstructed or stopped how to be opened, 167.e. 189.e
 329.e. 442.d
 Lither paind how to be eased, 380.m. 442.f
 Lither hard and swelled, how to be mollified, 142.f. 189.e
 for the Lither feeble or any way diseased, comfortable medi-
 cines, 377.0. 411.d. 47.4. 57.d. 59.d. 61.a. 62.g
 63.a. 69.a. 75.e. 76.f. 77.s. 104.f. 106.f. 113.f
 120.b. 124.f. 125.e. 127.s. 130.g. 138.f. 143.f
 147.a. 150.f. 163.b. 171.f. 173.b. 181.a. 184.f. 185.a
 185.a. 191.e. 193.a. 207.d. 238.m. 247.b. 248.g
 254.e. 277.f. 278.f. 281.e. 301.f. 359.f
 590.b
 in the Livers of Swine little stones medicinable, 332.k
 Luermort the herbe why it is called Lichen, 244.m. the
 sundry kinds and description, 245.a. the vertues, ibid.
 Luving creatures be most medicinable, 451.b, f
 Luuius Drusus, how much plate he had, 599.c
 Lix, what it is, 599.c
 Luuian Cini or tie after, ibid. the medicinable vfe thereof,
 ibid. what vfe fences and sword-plaies make of it, ibid.
 Lizard male, how they be knowne from the female, 358.b
 I O
 Loadstone, 515.a. where it is to be found, ibid. b. it is not the
 right rocke Magnis, ibid.
 the wonderfull nature of the Loadstone, 586.f. why called
 Magnes, ibid. how it was first found, ibid. the kinds
 thereof, ibid. m
 Loadstone male and female, 587.a. the different sorts there-
 of, ibid.
 Ethiopian Loadstone best, ibid. b. where it is found, and
 how knowne, ibid. c
 the medicinable properties of all Loadstones, 515.a. 587.b

Lungwort, an herbe. See Longwort.
 Lupines wild, 143. a. their properties in Physick, ibid.
 how Lupines may be made sweet, ibid.
 Lupus, a kinde of Phalangium or venomous spider, 360.b
 Luse, a citie, near which, a well of a wonderfull nature,
 403.d.
 Lust how prouoked or repressed, See Venus.
 Lustie or gloss in painting, what it is, 518.b
 Lutca, a kinde of Borax, 471.a
 Lutca, an herbe, ibid.
 I Y
 Lychnie, what flower, 83.c. why called Flaminea, 110.f
 Lychnite, the white marble of Paros, why so called, 365.b
 Lycinites, a pretious stone, and a kinde of Rubie Balais,
 why so called, 617.e
 the Indian Lychnites best, ibid. f. the second sort is named
 Ionie, and wherefore, ibid.
 Lychitau, an herbe, and why so called, 230.k
 Lysicim, an excellent Imager in brasse, and his worke,
 502.k
 Lycium, what it is, and where of made, 197.b
 the best Lycium, ibid. c. how it is knowne, ibid. e
 how Lycium is made, ibid. b
 Lycophthalmus, a pretious stone, 630.i
 Lycopit, an herbe, 284.k. the description and vertue, ibid.
 Lycos, a kinde of spider, 381.e. See Lupus.
 Lycus, a Physician, 71.b
 Lydius Lapis, See Torchstone.
 Lydius Lapis, what stone, where to be found, and how
 vfed, 574.b
 Lying in bed upon the backe for what it is good, 303.e
 upon the bellie for what, ibid. upon the sides by turnes
 for what, ibid.
 Lyncerium, what it is, according to Demosthenes, 606.b
 whether it be engendered of the Onces urine, 607.c. d
 Plinisthinketh alio to be fables that is written of Lynceri-
 um, ibid.
 Lyon, what herbe, 231.b
 Lysias, a famous Imager and grauer in stone, 569.d. his
 excellent workmanship, ibid.
 Lysimache, priestresse to Minerva 64. years, 501.e
 represented in brasse by Demetrius the Imager, ibid.
 Lysimache the herbe, 221.f. it beareth the name of king
 Lysimachus, ibid. the description, 222.g. the operation, ibid.
 it may be called Lysimachia, i. Loose-frise, in another
 respect, ibid. b
 Lysippus, an excellent Imager, 494.k. he made in his time
 60. mollen or cast images, of exquisite workman-
 shipp, 494.k. how it appeared that he wrought so many,
 ibid. he learned the art of no teacher, but attained un-
 to it by himselfe, ibid. m. his rare skill and admirable
 workmanship, 499.a. b. c
 Lysistrus of Sicione drew a mans visage to the life in Al-
 baster or fine Plaster, 522.b. and so proceeded to the re-
 sonage of the whole bodie, ibid.
 M A
 Macedoniam, a kinde of Diamant, 610.b
 Mads or Earthwormes, great heales, 393.f. 394.g
 Medi. See Wormes,
 Mad lake, why so called, 404.g
 Madir, an herbe, 9.d. the description, ibid. where it grows,
 ibid. the sundry names it hath, 192.i. how it is employed
 by diuers, ibid. by curriers, ibid. by Physicians, ibid.
 against Madnesse, what remedies, 72.k. 140.b. 212.d
 Madon, what plant, 149.c. See Nempfar.
 C. Maximus his statue erected vpon a colunne at Rome,
 491.a.
 Magicks, foolish, vaine, deceitfull, and yet professed with
 credit, and long time maintained, 371.e. why it hath so
 long continued, ibid.
 Magicks proceeded first from Physick, ibid. c. closed by reli-
 gion, 372.g. intermeddled with Astrologie and Mathe-
 matiques, ibid.
 Magicks studied by the greatest Philosophers, 373.f. flow-
 rished about the Peloponnesacke warre, 373.d. professed
 by Democritus, ibid.
 Magicks of old time practised in Italie, ibid. f
 in France, ibid. f
 Magicks Ciprian, ibid. d
 Magicks in Brittain, 374.g
 Magicks of diuerse kinds, and which they be, ibid. b
 Magicks sacrifices and ceremonious rites can be ex-
 ercised by them that haue red pimples in their faces, 328.f
 Magickal herbes of sundry sorts described, with their
 strange properties, 202.k. 244.g
 Magicians first discredited Physick herbes, 202.g
 Magicians commended by Pliny, and their vanities derided,
 213.e. 359.e. f. 244.b. 357.c.
 Monarchs in the East, much ruled by Magicks, 371.b. ibid.
 first began in the East parts, ibid.
 Magides, what diuers they were, 482.b
 Magistricia, what cups, 484.g
 Magnet stone growing in one entire rocke, differeth from the
 Loadstone, 515.b
 S. Magnus enill. See Leprie.
 Magydarius, what it is, 9.b
 Maiden-haire, an herbe, 126.m. why called Adianum, ibid.
 why Polyticon and Callitricon, 127.a
 Maiden haire of two kinds, ibid.
 Maiden-haire Trichomanes described, 190.m
 Maiden-breasts by what means they shall not grow, 236.f
 281.c. 339.e.
 Maiorin Marietom, an herbe, described, 91.e. how it
 cometh vpon, ibid. it is called Samoluchum and Amara-
 cas, 109.a. the oyle thereof, 109.a. Amaranum or Samolus-
 chinum, ibid. b. the vertues, ibid. m
 Makrals pickle or Juice called Garum, medicinable, 442.b
 Maladies incident to mankind, innumerable, 213.b
 Maladies growing away as the first game of Venus, 301.e
 which be most greuous and deadly, ibid.
 Maladies of maidens ending at the light of their first flow-
 ers, 301.e.
 Maladies of the bodie vniuersall how to be remedied, 259.a
 Malandres in horses, how cured, 338.l
 Malache, what kinde of Mallow, 71.e
 Malice, the first grauer in stone of any name, 565.c
 Malicorium, the rind of a Pomgranate, 164.f. why so cal-
 led, ibid.
 Malobabram, what vertues it hath, 162.s
 Malope, what Mallow, 71.e
 Mallores grow to be trees, 13.d. e
 Mallores

Meliter, a precious stone, 630.*m*
Meliter, a kinde of Honied wine, 136.*m* the properties it
 hath, 137.*a*
Meliter, a stone, why so called, 589.*b* the vertues that it
 hath, 137.*a*
Meloir their meat and medicinable properties 37.*c*
Melapocot, what they be, 14.*c*
Melobron, what plant, 149.*c*
Membranes wounded, how to be kept from inflammation,
 423.*c*
Memitla, See *Glaucon*.
Memmaria, a precious stone, 628.*b*
Merie helped by some water, 403.*d*
Mephitres. See *Alabrie*.
Mew, why bodies are thought medicinable from top to toe,
 298.*m*
Mew who had some efficiaall part of the bodie medicinal
 to others, 299.*f*
Menechmus, a famous Imaginer and his works, 502.*k*
Mennis, what herbe, and the vertues thereof, 202.*k*
Mennander, a Poet commended for good literature, 372.*m*
Menefratus, an excellent Imagin in stone, 568.*m*
Meneantes, an herbe, and a kinde of Trefoile, 107.*b*
Mentagare, a kinde of fyre Tetraz, 240.*i* how the name
 came up first, ibid the remedies thereof, 444.*c* See more
 in *Lichen*.
Mentomonon, 606.*i*
Menor, a famous grauer, he wrote of Imagery, 502.*k*
Mercurie, the herbe he, found by *Mercurius*,
 the diuine names, kindes, and vertues described, ibid.
Mergals. See *Gali*.
Mercadants in *Homer* were witches, and their songs en-
 chantment, 372.*k*
Meroles, a precious stone, 628.*b*
Merois, what herbe, and the medicinable vertue thereof,
 203.*c*
Melencas, See *Lence*.
Melencolicus, when a gem is so called, 628.*i*
Melomela when a gem is so called, 467.*c*
Mellissina dead by setting an Horfe-leech to his knee, 146.*c*
Mettalls, what melting they require, 472.*b*
Mettall mines and furnaces, the full and ends, 519.*b*
 See *Almes*.
Metopocop, who they be, 539.*b*
Metrodorus an excellent Philosopher and Painter, 548.*b*
 he wrote in *Pythagoras*, 70.*i* he painted herbes in their
 colours, 210.*c*
Mium, an herbe, 77.*a* two kindes thereof, 210.*c*
Mazils and small pocks how to be cured, 584.*i* 157.*d* 167.*a*
 174.*k* 189.*c* 337.*a* 338.*f* 418.*m* 421.*c* 422.*b*
 437.*d*
 N
 Mice how to be kept from gnawing booke and writings,
 77.*c* 85.*c* temptible creatures, yet medicinable, 355.*d*
 betweene Mice and Planets, what sympathie,
 the liker of what vertue, ibid.
Milion, an Herbarist and writer, 78.*c*
C. Alindus rich in gold, 464.*b*
Madrife and precordiall parts sweetned and diseased, how to
 be cured, 54.*k* 55.*c* 64.*i* 66.*i* 67.*d* 102.*i* 104.*d*
 107.*c* 113.*c* 119.*d* 138.*f* 163.*b* 202.*c* 207.*c*

239.a. 247.c. 290.k. how to be cleansed, 160.m.
Migraine, what kinde of headach and how to be eased, 235.c. 418.m.
Milesum Halconum, 441.d.
Militaria, what weed, and the vertues thereof, 144.f.
Militaria, an hearbe, why so called, 204.m.
Milke in women nonnes breasts, how to be encreased, 399.f.
 49.e. 65.e. 77.e. 109.e. 130.a. 131.c. 149.e. 187.e.
 193.c. 199.f. 268.d. 282.b.k. 288.a. 291.c. 340.b.k.
 395.g. 397.g. 448.b.l.
Milke by what meanes it is dried up or diminished, 55.c.
 158.g. 236.l. 279.a.
Milke, what milke cruddle, 166.k. 168.i. how it shall not
 cruddle in the stomacke, 137.b. being cruddled, 168.
 d. 168.d.
Milke cruddled in womens breasts, how it may be dis-
 solved, 131.d.
Milke called in the stomacke, how to be dissolved, 134.f.
mothers Milke best for all suckling, 317.b.
Milke of nonnes with child, burrsfull to sucking babes, 117.
Milke of nonnes with child nutritive, 317.c.
Milke of women most nutritive, 317.c.
Milke of goats next to womens milke, ibid. it agreeth well
 with the stomacke, and the reason why, 317.d.
lupins suckled with Goats milke, as Petrus sables, and why,
 317.c.
Confidia cured by Goats milke, 184.i.
Goats Milke for what diseases good, 318.i.
Milke of Camels sweetest next to womens milke, 318.b.
Asse milke for what good, 317.c.
Milke of Asse most medicinable and effectuall, 317.c.
 322.a. excellent to beautifie and make white the skin,
 and so on. it some lesch the vertue, and therefore must be
 drunke new, 323.b.
 what *Milke* is easiest of digest on, 317.d.
Milke of Kine aromaticall and medicinable, 323.b. it
 keepeth the bodie soluble, ibid. it is a counterpoison,
 323.c.
Milke of Kine Physicke to the Arcadians, 225.f.
 best *Milke* how to be chosen, 317.d.
 what *Milke* is thinnest and fullest of whey, and when, ibid.
 what *Milke* made of Cow-Milke in Arcadia, for what in-
 firmities, 317.d.
 for what diseases Cow-Milke is appropriat, 318.b.
 womens Milke or breast milke medicinable, 307.c. sweetest
 of all other, ibid. how to be chosen, ibid. allowed as an
 ague, 318.b.
Milke of a woman that bare a man-child better than of
 another, 307.d. especially if free bare two boy twins, ib.
Milke of a woman bearing a maiden child, for what it is
 good, 308.g.
Milke of Kine feeding upon Physicke hearbes, is likewise
 medicinable, as it appeared by two examples, 226.g.
Milke boiled, is flatterous than raw milke, 317.d.
 an artificiall milke called Schillon, ibid., for what dis-
 ease it is medicinable, 318.g.
Milke of Ewes for what good, 318.g.
 Sows Milke, for what sickness it is good, 318.g.
Milke how to be civilized for the blondie flux, how for the
 collicke and other diseases, 318.g.b.
 a clyster of *Milke* much commended for the gripes of the
 belly occasioned by some strange purgation, 318.g.
Milke in what cases burrsfull, without good caution, ibid.k.

the vertues medicinable of *Milke* in general, 317.d.
Milke, let, an hearbe. See *Tarvon*.
Milquid, what worme, and the venomous nature thereof,
 37.d. the hurt comming thereby how to be cured, 37.d.
 42.b. 478.g.
Milke the medicinable vertues that it hath, 139.e.
Militer, a kinde of bloodstone, 550.b.
Milios, See *Vermilion*.
Milner, or *Miln*, what weight, 113.e.
Minerva, an Image in brass wrought by Demetrius, 501.e.
 why it was called *Musica*, 501.d.
Minerva Cautiana, another Image of *Minerva* in brass
 wrought by Euphranor, and why so called, 502.g.
Minerva of Athens an Idol of gold and yvorie, 26 cubits
 high, wrought by Phidias, 566.g. the curious work-
 manshp of Phidias about the shield of that *Minerva*,
 ibid.g. k.
Minerva *Kalamis* wrought by Phidias, 597.d.
Miner, minerals, and mental, the riches of the world, 453.c.
Minis of silver and gold why called in Greeke *Meialla*,
 472.l.
Minum. See *Vermilion*.
Minis, the hearbe, when and where to be set or sowne, 29.d.
 wild *Min* will propagat and grow any way, howsoever it
 be set, 317.d.
Minis called in Greeke sometime *Mintha*, but now *Hedy-*
otmos, 317.d.
Minis, a principall hearbe in a country house, 317.d.
 gard. *Minis*, the singular vertues thereof, 59.e. it keepeth
 milke from cruddling in the stomacke, 317.d.
 water. *Minis*, where and how it cometh to grow, 317.d.
 wild *Min* named *Ministrum*, described, a rub the vertue,
 58.m.
Min masters at Rome chosen with great regard, 347.c.
P. Minutius his statue erected upon a Column at Rome,
 491.b.
Mirrors of time were before any of silver, 517.d.
Mirrors of silver plate, 478.i. the reason why they represent
 an image, 517.d.
Mirrors of sundry making, and shewing strange shapes,
 478.k.
 which were the best *Mirrors*, 517.d.
 silver *Mirrors*, the invention of Praxiteles, 517.d.
 the King of the bodie how to be cured, 259.c. 279.c. See
 Consumption.
Misof. See *Misof*.
Misof of the Oke is best, 178.b. how glew or birdlime is
 made thereof, 178.b.
Misof or *Misof*, a kind of exercise out of the ground, 7.d.
Misof, a mineral, 510.b. how engendered, ibid. the medicina-
 ble vertues, ibid. the best, how knowne, ibid. how cal-
 cined and prepared, 510.b.
K. Misuridates his practise, 209.e. he was beneficiall to man-
 kinde, ibid. his ordinary taking of poysons and pre-
 venting thereof, 209.e. he devised counterpoysons, 209.f.
Misuridates the famous composition, was his deuse, 209.f.
 he spake readily two and twentie languages, 209.f.
 he studied Physicke, ibid. his cabinet store with secrets
 in Physicke, 209.f.
Misuridates, an hearbe found by *K. Misuridates*, 220.b.
 the description, 220.b.
Misuridates his opinion as touching Amber, 606.m.
 612.

Mitigation of paine, 703.f. 76.k. 103.b. 423.d. 471.e.
 511.e.
Mitre, a precious stone, 628.k.
Mitre, a King of Egypt first caused Obelisks to be re-
 red and upon what occasion, 574.l.
 M. N.
Moson, a King who much admired painted tables, 543.d.
Musaeus, a fountain helping memorie, 403.d.
Musaeus his opinion as touching Amber, 606.l.
Musculus, a Physitian, 68.k.
Musculus wrote a booke of Chapters or gairlauds, 82.b.
 M. O.
Mole in face or skin how to be taken away, 140.m. 143.b.
 328.b.
Moleminum, what hearb, 248.g.
Mollitie medicines, 703.f. 76.k. 103.d. 135.d. 141.a. 178.b.
 180.g. 184.g. 185.b. 186.g. 187.e. 192.m. 206. 1903.g.
 319.g. 320.m. 423.d. 475.e. 529.f. 556.l. 560.g.
 591.d.
Mollis, what hearb, and why so called, 258.b.
Molochius, a precious stone, why so called, 619.c. com-
 mended for fasting faire and cleane, ibid. the vertues that it
 hath, 619.c.
Molon, when he is 47.a. the description, 47.a.
Moly, an hearb, 112.d. 213.f. by whom so called, 112.d.
 why found in one, 214.g. described by Homer and the
 Greeke Herbarists diversly, 112.d.
Molybden, a mineral, what it is, 520.g. b. the description,
 nature, and degrees in goodness, ibid. how the best is
 knowne, ibid. the use in Physicke, 520.g. b.
Molybdena, 474.f. See *Gallana*.
Molybden, a kind of Litharge, 474.f. it cometh from the
 lead that is melted with silver, 474.f.
Momordica, an hearb. See *Geranium*.
Mony raised cause of counterpoys, 463.d.
Mony who counterfeited and sold, 479.d.
Mony plentiful, which was at Rome, 480.f.
bafe silver *Mony* brought in by *Livius Drusus* at Rome,
 463.f.
Monochromata, what pictures, 525.b.
 what patterns were excellent therein, 533.a.
Monthly tearmes or Fleures of women, by what medicines
 procured, 390.a. 407.e. 479.f. 481.g. 543.b. 575.g. 600.k. 611.b.
 623.g. 720.f. 747.b. 756.g. 78.g. 103.b. 104.g. 105.f.
 106.g. 107.f. 109.g. 110.f. 111.b. 112.g. 122.b.
 127.e. 128.f. 177.b. 179.b. 180.d. 185.e. 187.c.
 144.g. 150.g. 153.f. 163.g. 166.f. 168.f. 171.d.
 173.a. 174.g. 177.b. 179.b. 180.d. 185.e. 187.c.
 189.e. 191.c. 192.k. 193.b. 198.f. 199.g. 200.k.
 201.a. 202.b. 206.g. 207.e. 215.g. 216.g. 217.g. 218.f.
 219.g. 220.g. 221.g. 227.d. 228.f. 229.f. 230.g. 231.g.
 232.g. 233.g. 234.g. 235.g. 236.g. 237.g. 238.g. 239.g.
 240.g. 241.g. 242.g. 243.g. 244.g. 245.g. 246.g. 247.g.
 248.g. 249.g. 250.g. 251.g. 252.g. 253.g. 254.g. 255.g.
 256.g. 257.g. 258.g. 259.g. 260.g. 261.g. 262.g. 263.g.
 264.g. 265.g. 266.g. 267.g. 268.g. 269.g. 270.g. 271.g.
 272.g. 273.g. 274.g. 275.g. 276.g. 277.g. 278.g. 279.g.
 280.g. 281.g. 282.g. 283.g. 284.g. 285.g. 286.g. 287.g.
 288.g. 289.g. 290.g. 291.g. 292.g. 293.g. 294.g. 295.g.
 296.g. 297.g. 298.g. 299.g. 300.g. 301.g. 302.g. 303.g.
 304.g. 305.g. 306.g. 307.g. 308.g. 309.g. 310.g. 311.g.
 312.g. 313.g. 314.g. 315.g. 316.g. 317.g. 318.g. 319.g.
 320.g. 321.g. 322.g. 323.g. 324.g. 325.g. 326.g. 327.g.
 328.g. 329.g. 330.g. 331.g. 332.g. 333.g. 334.g. 335.g.
 336.g. 337.g. 338.g. 339.g. 340.g. 341.g. 342.g. 343.g. 344.g.
 345.g. 346.g. 347.g. 348.g. 349.g. 350.g. 351.g. 352.g.
 353.g. 354.g. 355.g. 356.g. 357.g. 358.g. 359.g. 360.g.
 361.g. 362.g. 363.g. 364.g. 365.g. 366.g. 367.g. 368.g.
 369.g. 370.g. 371.g. 372.g. 373.g. 374.g. 375.g. 376.g.
 377.g. 378.g. 379.g. 380.g. 381.g. 382.g. 383.g. 384.g.
 385.g. 386.g. 387.g. 388.g. 389.g. 390.g. 391.g. 392.g.
 393.g. 394.g. 395.g. 396.g. 397.g. 398.g. 399.g. 400.g.
 401.g. 402.g. 403.g. 404.g. 405.g. 406.g. 407.g. 408.g.
 409.g. 410.g. 411.g. 412.g. 413.g. 414.g. 415.g. 416.g.
 417.g. 418.g. 419.g. 420.g. 421.g. 422.g. 423.g. 424.g.
 425.g. 426.g. 427.g. 428.g. 429.g. 430.g. 431.g. 432.g.
 433.g. 434.g. 435.g. 436.g. 437.g. 438.g. 439.g. 440.g.
 441.g. 442.g. 443.g. 444.g. 445.g. 446.g. 447.g. 448.g.
 449.g. 450.g. 451.g. 452.g. 453.g. 454.g. 455.g. 456.g.
 457.g. 458.g. 459.g. 460.g. 461.g. 462.g. 463.g. 464.g.
 465.g. 466.g. 467.g. 468.g. 469.g. 470.g. 471.g. 472.g.
 473.g. 474.g. 475.g. 476.g. 477.g. 478.g. 479.g. 480.g.
 481.g. 482.g. 483.g. 484.g. 485.g. 486.g. 487.g. 488.g.
 489.g. 490.g. 491.g. 492.g. 493.g. 494.g. 495.g. 496.g.
 497.g. 498.g. 499.g. 500.g. 501.g. 502.g. 503.g. 504.g.
 505.g. 506.g. 507.g. 508.g. 509.g. 510.g. 511.g. 512.g.
 513.g. 514.g. 515.g. 516.g. 517.g. 518.g. 519.g. 520.g.
 521.g. 522.g. 523.g. 524.g. 525.g. 526.g. 527.g. 528.g.
 529.g. 530.g. 531.g. 532.g. 533.g. 534.g. 535.g. 536.g.
 537.g. 538.g. 539.g. 540.g. 541.g. 542.g. 543.g. 544.g.
 545.g. 546.g. 547.g. 548.g. 549.g. 550.g. 551.g. 552.g.
 553.g. 554.g. 555.g. 556.g. 557.g. 558.g. 559.g. 560.g.
 561.g. 562.g. 563.g. 564.g. 565.g. 566.g. 567.g. 568.g.
 569.g. 570.g. 571.g. 572.g. 573.g. 574.g. 575.g. 576.g.
 577.g. 578.g. 579.g. 580.g. 581.g. 582.g. 583.g. 584.g.
 585.g. 586.g. 587.g. 588.g. 589.g. 590.g. 591.g. 592.g.
 593.g. 594.g. 595.g. 596.g. 597.g. 598.g. 599.g. 600.g.
 601.g. 602.g. 603.g. 604.g. 605.g. 606.g. 607.g. 608.g.
 609.g. 610.g. 611.g. 612.g. 613.g. 614.g. 615.g. 616.g.
 617.g. 618.g. 619.g. 620.g. 621.g. 622.g. 623.g. 624.g.
 625.g. 626.g. 627.g. 628.g. 629.g. 630.g. 631.g. 632.g.
 633.g. 634.g. 635.g. 636.g. 637.g. 638.g. 639.g. 640.g.
 641.g. 642.g. 643.g. 644.g. 645.g. 646.g. 647.g. 648.g.
 649.g. 650.g. 651.g. 652.g. 653.g. 654.g. 655.g. 656.g.
 657.g. 658.g. 659.g. 660.g. 661.g. 662.g. 663.g. 664.g.
 665.g. 666.g. 667.g. 668.g. 669.g. 670.g. 671.g. 672.g.
 673.g. 674.g. 675.g. 676.g. 677.g. 678.g. 679.g. 680.g.
 681.g. 682.g. 683.g. 684.g. 685.g. 686.g. 687.g. 688.g.
 689.g. 690.g. 691.g. 692.g. 693.g. 694.g. 695.g. 696.g.
 697.g. 698.g. 699.g. 700.g. 701.g. 702.g. 703.g. 704.g.
 705.g. 706.g. 707.g. 708.g. 709.g. 710.g. 711.g. 712.g.
 713.g. 714.g. 715.g. 716.g. 717.g. 718.g. 719.g. 720.g.
 721.g. 722.g. 723.g. 724.g. 725.g. 726.g. 727.g. 728.g.
 729.g. 730.g. 731.g. 732.g. 733.g. 734.g. 735.g. 736.g.
 737.g. 738.g. 739.g. 740.g. 741.g. 742.g. 743.g. 744.g.
 745.g. 746.g. 747.g. 748.g. 749.g. 750.g. 751.g. 752.g.
 753.g. 754.g. 755.g. 756.g. 757.g. 758.g. 759.g. 760.g.
 761.g. 762.g. 763.g. 764.g. 765.g. 766.g. 767.g. 768.g.
 769.g. 770.g. 771.g. 772.g. 773.g. 774.g. 775.g. 776.g.
 777.g. 778.g. 779.g. 780.g. 781.g. 782.g. 783.g. 784.g.
 785.g. 786.g. 787.g. 788.g. 789.g. 790.g. 791.g. 792.g.
 793.g. 794.g. 795.g. 796.g. 797.g. 798.g. 799.g. 800.g.
 801.g. 802.g. 803.g. 804.g. 805.g. 806.g. 807.g. 808.g.
 809.g. 810.g. 811.g. 812.g. 813.g. 814.g. 815.g. 816.g.
 817.g. 818.g. 819.g. 820.g. 821.g. 822.g. 823.g. 824.g.
 825.g. 826.g. 827.g. 828.g. 829.g. 830.g. 831.g. 832.g.
 833.g. 834.g. 835.g. 836.g. 837.g. 838.g. 839.g. 840.g.
 841.g. 842.g. 843.g. 844.g. 845.g. 846.g. 847.g. 848.g.
 849.g. 850.g. 851.g. 852.g. 853.g. 854.g. 855.g. 856.g.
 857.g. 858.g. 859.g. 860.g. 861.g. 862.g. 863.g. 864.g.
 865.g. 866.g. 867.g. 868.g. 869.g. 870.g. 871.g. 872.g.
 873.g. 874.g. 875.g. 876.g. 877.g. 878.g. 879.g. 880.g.
 881.g. 882.g. 883.g. 884.g. 885.g. 886.g. 887.g. 888.g.
 889.g. 890.g. 891.g. 892.g. 893.g. 894.g. 895.g. 896.g.
 897.g. 898.g. 899.g. 900.g. 901.g. 902.g. 903.g. 904.g.
 905.g. 906.g. 907.g. 908.g. 909.g. 910.g. 911.g. 912.g.
 913.g. 914.g. 915.g. 916.g. 917.g. 918.g. 919.g. 920.g.
 921.g. 922.g. 923.g. 924.g. 925.g. 926.g. 927.g. 928.g.
 929.g. 930.g. 931.g. 932.g. 933.g. 934.g. 935.g. 936.g.
 937.g. 938.g. 939.g. 940.g. 941.g. 942.g. 943.g. 944.g.
 945.g. 946.g. 947.g. 948.g. 949.g. 950.g. 951.g. 952.g.
 953.g. 954.g. 955.g. 956.g. 957.g. 958.g. 959.g. 960.g.
 961.g. 962.g. 963.g. 964.g. 965.g. 966.g. 967.g. 968.g.
 969.g. 970.g. 971.g. 972.g. 973.g. 974.g. 975.g. 976.g.
 977.g. 978.g. 979.g. 980.g. 981.g. 982.g. 983.g. 984.g.
 985.g. 986.g. 987.g. 988.g. 989.g. 990.g. 991.g. 992.g.
 993.g. 994.g. 995.g. 996.g. 997.g. 998.g. 999.g. 1000.g.

of Plinies Naturall History.

Ochre, 485.b. the virtues medicinable, *ibid.* See more in
Ochre.
Ochus, a river yielding salt, 414.n
Ocnos painted by Socrates, what it importeth, 549.
C. Offitius being embassadour, killed by K. Antiochus
492.g. honoured with a statue at Rome, *ibid.*

and Oline at war one with another, 176 g Oph
Applies their wittiness in Physicke, 168, i Oph

Oke of Ierusalem an hearbe. See Berry.
 O L
 Olach, is a rimer detestfull periwrie, 404
 Oleander what names it is knowne by, 191. f. the strange
 nature that it hath, 192. g. death to callow countrymen
 Jon to man,
 Oleatrefne, what it is, 518
 Oleum Calenae, a great Wifard of Turke, 295. e. the pra-
 use with the Romane Emphasidours to diuert the deli-
 nct and fortune from Rome,
 Olive tree gum,
 Olive leaves medicinable, 159.
 Olives white, their commendable vertues in Physicke
 159. a
 Olives blacke their properties,
 Olives in pickle, their good and harme, 159. b
 Olympeia a woman pittieffe, ibid.
 Olympeia of Thebes, an expert and sage midwife, partly alfo
 a Physician, 72. b. 339. b. see forbiiddeth women with
 child to use Gallenae,
 Olympeia the surname of Pericles, and why, 72. b
 Olyra, the vertues medicinable thereof, 301. c
 138. d
 O M
 Ombria, a pretious stone, 618. m. called likewise Notia, i-
 bow it commeth, ib. the vertues, ibid.
 Onbaphium. See Wine Periwice.
 Onchilicorax, what he be, 374. i
 O N
 Once, of all foure-footed beaſts, haue the quickest eye-
 gliffe, 316. l. their body yetteth medicines for man's
 body, 40. m. they bide their owne urine upon urine to
 makeinde,
 Onocythi the hearbe described, 317. a
 Onoclethi, or Onoclythi, 202. b
 Ononis, or Anonis, the herbe Rest-harrow, 98. the deſcrip-
 tion, ib. 275. e. the vertues medicinable, 116.
 Onopordum an hearbe, 286. k. why so called, ibid.
 Ononis, an hearbe, 286. k. the deſcription, ibid.
 Onuris, an hearbe, 259. e. the deſcription, ib. the vertues, ib.
 See Onoclethia.
 Onyches, female ſhell fiſhes,
 Onyches or Onyx, what ſtone, and where found, 444. b
 how it was employed, 573. c
 Onyx a pretious ſtone, 615. e. the deſcription and the ſundry
 kinds, ibid.
 Onyx of Indis and Arabia, ibid.
 A true Onyx, 615. e f
 616. g
 O P
 Opall a pretious ſtone, 614. g. naturally it is bred in India,
 it ſhowe it hath participat with other gems,
 Andrey kinds of the Opall, 614. b
 Opall profcribed for an Opall, ibid.
 Imperfections in the Opall, ibid. k. how falſified, ib.
 the truth thereof, ib. why it is called Paderus, 614. l
 Opall Opall beſt, ib. l. m
 Opardelos, a pretious ſtone, 629. a
 Opudon, a fiſh like a Conger, medicinable, 435. a
 Opilus a writer in Phyſicke, 300. k
 Opigenes, a race of people, aduerſe in nature to ſerpents,
 98. m.
 Opion, a beaſt, 309. a
 Opion, a wild beaſt found onely in S. adria, 322. g
 Opn n 3
 Opn

of Plinies Naturall History:

Paeonia, what signifieth, 622.b. a precious stone, ibid.
the description, ibid. the praise of it, 622.i. the best is the
Argemone, the next the Indian Senetib, their defects, ibid.
See Opal and Amethyst.

Paderio, an hearbe, 129.e
Padius borne dumbe, learned painters craft, 525.i
Pagafes, hot springs breeding salt, 414.m
Pagrius, a rimer fish, medicinale, 445.e
Pains in bones how to be cured, 144.m. 150.k
Paine of the stomacke how cured, 57.e. 60.g. 61.d
Paine occassyn by the stone, how eased, 332.k
Pain generality of the bodie, how to be eased, 74.f. 138.e
128.b. 136.k. 144.l. 182.l. 233.d. 236.o. 313.b
350.i.

*Pains ensuing upon strains and dislocations, how to be ea-
sed,* 129.a
*Paine proceeding from some secret and hidden cause, how to
be assayed,* 423.f. 351.b. 354.l
Palace lately by Paulus Aemilius, 313.d
Palacio, or Palacene, what they are, 581.e
Palampistia, what it is, 469.b
Palmaris, what thorne, 195.d. like seed medicinale, ibid.
Tallacina, what Onion, 20.k
Palas, a rich claue enfranchised, 479.e
Pallas, shell fishes, and their medicinale vertues, 443.e
Palfie the dyselby, by what medecine prevented and cured,
49.d. 52.k. 62.l. 139.c. 155.d. 161.e. 183.f. 283.f. 318.g
335.d. 388.g. 412.g. 422.k. 431.a. 432.l.

*Pambulus, a painter's painter, learned dull and grounded
in Arithmetick and Geometrie, 537.b. a deare
teacher, ibid.*

*Panaces, an hearbe, why fo called, 214.i. a common name to
many hearbes, ib. ascribed also to the gods, ib.*
Panaces Asclepien, why fo called, ibid.
Panaces Horacilem what it is, and why so named, 214.l.
it is cleped also Originum, Helicorticum, and why, ib.
Panaces Chorumum, why fo called, 214.l. the description, ib.
the flower medicinale, ibid.
Panaces Centaurum or Pharmaceum, why so named, ibid.
the descriptions, 214.m. the uses whereto it sermeth, ib.
Panchresia, what medecine, 590.b
Paserai, a precious stone, 629.a. the reason of the name, ib.
Pancration, an herbe, 287.e. the description and vertues, ib.
*Pancras, a precious stone, 629.b. commended much by
quene Iunioris, ibid.*

*Paneius a painter, when he flourished, 532.m. he painted
the battaile at Marathon, with the full proportion of the
captaines, 533.c. challenged by Timogoras and over-
come, 523.d*

*Pangonius, a precious stone, 629.b. the description and rea-
son of that name, 523.d*

*Pani, bites in the face and other emunctories, how to be
drinen backe in the beginning, 444.k. 560.b
how to be ripened and broken, 385.d. 560.h. 444.l
a singular ointment for that purpose, ib. how to be reliev-
ed and discaused, 385.e. 433.b. 437.d. 444.k*

*Panicke, the medicinale vertues thereof, 139.f
by whom called Mel-frugum, ibid.*
*Pannifcum, a picture of Tauriscus his making, why fo cal-
led, 550.i*

Pansyloftos, a precious stone, the same that Pancras, 629.b

*Pantebis, a temple at Rome, wherein the chapters of the pil-
lars were all of brass, 589.b. built by Agrippa to the ho-
nour of Iupiter Reueger, 581.f*
Pantibris, whom they would not assent, 359.b
*Papi of women and maids, ouer big, how to be taken downe,
443.c. when they shall not ouer grow vnderneath, 448.k*
Papi impotissimum how to be cured, 128.g
Pappos, See Groundwell.
Pappy reed in Egypte, the medicinale vertues, 191.d.e
Papy made thereof, what operation it is of, 191.i
Papirus Fabianus, a great Naturalist, 586.d
Paralus, a kinde of floppie, why fo called, 69.d
*Paralus the name of a famous shop pa. ned by Protagoras,
542.b.*

*Parafusa an excellent painter who chalenged Zenxis, 535.a
their peccers of workmanship, ibid. b. what Parafusa in-
uented and added to the Art, 535.c. his excellencie in
possesting, 535.c. his defect in painting, ib. his acule to
paint the people of Athens, ibid. f. his pride, arrogancy,
and vainglorious, 536.b. f. he was put downe by Thama-
tarionius in the picture of Atlas, 536.i. his speech therin, y^e.
529.b. how sophisticated, ibid. the price and value, 529.d.*

Paradalis, a precious stone, 558.i
Parados, a precious stone, 630.l
Paraga, what they be in painters works, 542.b
Paragi for walls, of Parisus his making, 595.a
Parietaria of the wall, an hearbe, 273.c. why it was called
*Periderium, 99.c. why it was not named Paridennum,
123.c. See Helixine.*

*Paris of nails superlatiously offered; 298.b. for what it
is good, 310.b.i*
*in Paris a vein of marble representing within it the image
of Silemus naturally, 505.e*
Parisp wilder Madnes, 17.f
Parisp white, See Skerrort.
*Parisp was bring called Staphylinus, the medicinale pro-
perities thereof, 40.i*

Parithemus, an hearbe. See Artemisia.
Parithenum, an hearbe, 111.e. 123.b
Passe flower Anemone, 922.b. when it flourisheth, ibid.
*Pastetes, an excellent enter in marble and ynorie, 570.b
his works, ibid. he wrote fine booke of all works of fine
workmanship, ib. how heardly he escaped a Painter, ib.*
Pasterice, a kinde of wheatenstone, 193.b

Pail to glew withall, what it is good for in Physicke, 129.e
Paffure making horsestraged, 226.g
Paffure drinke affes into madnes, ibid.
Patient hearbe described, 73.b. the root thereof, 19.d
Pauentes whose intention, 596.g
the manner of Pauing an open splaye upon a terrace, 596.k

Pauings called Lithostrotas, 596.m. Pauing Grecoan, ibid.
Provanocis, what worker in stuing, 592.b

*Pausias, a cunning pa. mter, 80.k. 546.k. his delight was to
draw small pictures and prettie boues, ib. his celerite in
works, 546.l*

Peacher, a hardesse fruit and medicinale, 169.d
*Peacocke drawe medicinale, 357.d. they eat their dung
against poison as they haue need thereof, for ennie to man-
kind, ibid.*

*Pears what kinde of meat, 166.k. the medicinale vse of
Pear, and the vses of Pear-tree, 166.c.*
Pecten

Peſſen^rerie, what hearbe, and why ſo called, 206.g. the
vertues that it hath, *ibid.*
Pecunia, why many in coine is ſo called, 462.l.
Peder Gallinace, what hearbe, 236.l.
Pedigrees and deſcends obſerved among the Romans, 523.d.
Peduncul, creepers in the ſea good for the infirmities of the
eares, 439.e.
Peduncul^r terra, what they be, 379.c.
Peinting in ſcenes time reputed a noble art, 522.g.
Peinting of flowers when deſired, 522.b.
Turpilis left handed, a neceſſary Painter, 526.b.
P. Pedum borne dimble, learned to be a Painter, 562.i.
Peinted clothes deſcribe birds, 526.l.
when the fiſt Peinted tables of a ſorreniers worke was
brought to Rome, 527.a.
Peinting with ſix of two kindes, 551.b.c.
Peinting of ſhips, 531.e.
a Peinted, the coſt the weight in gold, 533.a.
priſes propoſed for Peinters winning the beſt game, 533.d.
art of Peinting reduced into three kindes by Eupompo
to wit, Iuncke, Syconian, and Atticke, 537.a.
Peinting ſchools frequented by gentlemen ſonnes, 536.b.
Peinting with wax, 545.b.
Peinting or poſſing with a coale, who fiſt deſired, 525.b.
who fiſt Peinted with colours, 525.e.
Peinting Art, ſprung in the fiſt degree of Liberrall Sci
ences, 537.b. it might not be taught unto ſlaves, *ibid.*
Peinting, whoſe invention, 525.a.
Pilagias, what oylers, and why ſo called, 432.c.
Pelamus, the Tunis fiſh, when he is ſo called, 451.d.
Pelamus is Medicinie, 444.l.
Pelacium, an hearbe, 288.a. the deſcription, *ibid.*
Pelops, a writer in Phyſicke, 433.d.
Pelops his rib of Iuorie, 299.f.
Penelope a ſingular picture of Zenxis making,
Penicilli the ſoftest and ſineſt ſponges, 423.d. where and
how they grow, 424.l.
Penitoyall an hearbe, the vertues thereof, 60.b. male and fe
male, 60.i.
Penitoyall, why it is called in Greeke, 602.
Penitadition, what hearbe, and why ſo called, 207.b.
Penitador, what bricke, 555.e.
Penitaper, what hearbe, 228.l.
Penitaphylon, what hearbe, 228.l.
Peſpium, what hearbe it is, 69.d. the vertues thereof, *ibid.*
Peſſuſſito the eyeght, 70.k.
Peſpos an hearbe, 287.f. the deſcription, *ibid.*
Peſpones what fruit, 14.b.
Peſſerwort, See Dittander.
Percher, the albes of their heads medicinale, 444.m.
Perdicium, what hearbe, 111.e.
Perfumes by ſweet hearbs commended by Orpheus and He
ſiodus, 211.a.
Peribotus, an Image of Praxiteles his making, why ſo cal
led, 500.k.
Pericarpum an hearbe, 232.g. the kindes and deſcription,
ibid. the operation, *ibid.*
Periclimenos, an hearbe, 288.g.
Perilencos, a pretious ſtone, why ſo called, 629.c.
Perillur, a cunning braſſe founde famous for the braſen
bull to torment ſolke, 504.b.
puniſhed worlily for his owne handy worke, 504.i.

Peripneumonie or inflammation of the lungs, how to be cu
red, 167.d. 180.k. 200.d. 287.f.
Perſſion, what hearbe, 112.k.
Perſſerfion, what hearbe, 228.g. why ſo called, 231.e.
See Pernaime.
Perna, a kinde of fiſh, and the ſtrange nature thereof, 452.l.
Perpenſa, what hearbe, 104.g.
Perperſſi, what hearbe, 255.c.
C. Perreus Atticus, honoured with a graſſe chapter, 117.b.
Perreus a painter, who wrote of painting, 544.b.
Perley of diuerſe kinds, 24.g. how to be ſowne and ordered,
29.d. it ſerued in coronets, 34.b.
Perley much praſiſed, 53.e. the vertues thereof, *ibid.* male
and female, 53.f. their deſcription, *ibid.*
Perley not admitted to the table, and why, 54.g.
the diſcommodities of perley, *ibid.*
ſtone Perley, commonly called Petroſelinum, the vertues
that it hath, 54.l.
Perſilata, what hearbe, 229.c. the deſcription, *ibid.*
Perſilata, an hearbe uſed in giulands, 113.d.
Perſonages, See Images complet.
Perſonata, an hearbe. See Arcton, or Clot-burr.
Perwinkle, an hearbe deſcribed, 92.m. named Chamadaph
ne, 110.m.
Perwinkle, ſiſhes, medicinale, 442.i.
Perſent infection, by what preſeruatues to be prevented,
173.e. 201.b. 202.b.
Peſſent air, how to be corrected, 599.b.
Peſſetucum, a king of Egypt, built the fiſt Labyrinth, 578.i.
Peſſilium, what ſlowe, 89.c. the qualities thereof, *ibid.*
Petraea, a kinde of Colewort, 50.l. the deſcription, *ibid.*
the medicines that it yeeldeth, *ibid.*
Petraea Colewort, the greateſt enemy to wint, 50.l. it killeth
dogs, 51.a.
Petridum, an Herbariſt and writer, 78.g.
Petroleum, or Petreleon, a kinde of Bitumen, 415.e.
Petronius Diodorus, an Herbariſt and writer in Phyſicke,
48.b. 228.m.
T. Petronius upon his death-bed brake a rich Caſſidine
cup, 603.e.
Pencadatum, what hearbe, 229.f. See Harſtrang.
Penemene, what kinde of Litharge, 474.k.
Peſcite or Peſcite, what Aſylomies they be, 8.g.
P H
Phacos, what it is, 142.b.
Phagadene, eating ſores, 447.f. how cured, *ibid.* See Viceri.
Phagedena, what it ſignifieth otherwiſe, 259.d.
Phalangion, or Phalangites, an hearbe, deſcribed, 288.l.
the blew ſpider Phalangium deſcribed, and the ſting thereof,
300.k.
Phalangium, a venomous ſpider, the remedie againſt the
pricke, 45.e. 52.l. 54.k. 101.e. 105.e. 106.k. 168.l.
110.k. 126.k. 127.b. 153.b. 157.d. 170.b. 173.d.
174.i. 179.b. 187.d. 188.m. 190.b. 202.b. 230.i.
237.f. 274.g. i. 288.l. 290.i. 360.g. b. l. 413.b.
423.e.
Phalangium unknowne to them in Italie, 360.g. the ſundry
kindes, the deſcription, manner of ſting, and cure, *ibid.*
Phalaris, an hearbe, 289.a.
Phalaris a tyrant, who cauſed Perillus to be tormented by
his owne engine and torture, 504.b.
Phalerum

Phalerum Demetrius honoured with 360 ſtatues at A
thenes, 492.k. the ſame were all onerthrowne within one
yeere, *ibid.*
Phalereon, a painter, and his worke manſhip, 550.b.
Phalaris a Phyſician, made a treatiſe in the praife of Net
tles, 122.g.
Phaon of Leſbos, why ſo belovd by Sappho, 110.c.
Pharos the tower in Egypt, what is coſt in building, 478.g.
Soſtratus the Guidon was the architect of this watch
tower, *ibid.* the uſe of this tower, 578.b.
Pharicum, a poiſon, what it is the remedie,
Phaſagitan, an hearbe. See Xiphin.
Phaſolium, See Lepyrion.
Phaſſachates, a pretious ſtone, 623.e.
Phaſandion, an hearbe, 289.a. the deſcription and vertue,
ibid.
Phaſon, a river in Arcadie, 411.a.
Phaſites a ſhining ſtone, 592.d.
Phaſion, what hearbe, 109.c.
Phaſion, the moſt excellent imagur in ſtone that ever was,
495.f. he wrought the noble image of Iupiter Olympi
cus, 497.a. he deuiſed chaſing and emboling in met
tall, 497.e. his worke, 497.d. 566.g.
Phaſion was alſo a painter, 532.l. when he ſlowly ſed, *ibid.*
he painted the ſhield of Minerva in Athens, *ibid.*
Phaſilantropos, an hearbe. See Aparine, Clumers and Erub.
Philemon, a writer of Naturall Philoſophie, 606.g.
Philetaria, an hearbe. See Polemonia.
Philippenſis, the reſemblance of a boy in braſſe, why ſo cal
led, 503.a.
Philifum, a famous painter, 550.b.
Philifto, a writer in Phyſicke, 74.m.
Philocares, an hearbe, 74.m.
Philocares a painter, famous for the picture of Glancion
and his ſonne Antithippu, 527.a.
Philopater, an hearbe, 74.m.
Philopater and learned men, what imagers delighted to
repreſent in braſſe, 503.e. 504.g. k.
Philoxenus, a painter, 543.f. his worke and readie hand,
544.g.
Phloxista, a fontaine wherein nothing will ſinke, 404.i.
Phlogmaticke humors, what doth purge, 432.l. 442.l.
443.a. See Fleame.
Phlogotis a pretious ſtone, 630.l.
Phleon, what hearbe, 120.l.
Phlogmis, a pretious ſtone, called alſo Chryſites, 629.b.
Phloides, what hearbes, 230.k.
Phloides, an hearbe, See Lungwort.
Phlox, a flower uſed in giulands, 91.b.
Phoenicia, what hearbe, and the medicines that it afford
eth, 140.k.
Phoenicites, a pretious ſtone, why ſo called, 629.c.
a Phyſical recte made of the albes of the bird Phoenix, a
mere impoſſible and fabulous deceit, 349.d.
Phoenix, a famous imagur in braſſe, and his workman
ſhip, 502.l.
Phoenix, a great architect and engineer, 575.c.
Phonon, an hearbe, why ſo called, 98.b.
Phormion, what kinde of Alume, 558.i.
Phragmitis, a weed medicinale, 450.i.
Phrenic cured beſt by ſleepe, 260.k.
for the Phrenic, appropriat remedie, 37.b. 44.g. 499.f. 57.e.

64.i. 66.k. 75.e. 181.a. 187.f. 219.d. 350.g. 389.e.
430.m. 573.c.
Phrygiam, 391.c.
Phrygian ſtone, why ſo called, 589.d. how calcined, and
for what it is good, 589.e.
Phrymon, what hearbe, 231.a. 288.i.
the effect that it hath, the names and deſcription, 231.a.
Phthiſſike or conſumption, what remedies be reſpective to
it, 43.a. 44.b. 76.i. 127.e. 129.e. 173.j. 181.d. 183.d.
199.f. 200.l. 202.b. 224.k. 247.d. 259.e. d. 303.d. 317.e.
318.b. 319.d. e. 330.g. 336.k. 388.g. 412.k. 446.k.
588.g.
Phn, or Setwall, the vertues that it hath, 104.l.
Phycites, a pretious ſtone, why ſo called, 629.c.
Phycos Thalaſſion, See Reike and Sea-weed.
Phylon, what hearbe, 123.a. 288.m.
Phyſica, a tearme of Lipidaries, what it ſignifieth, 631.e.
Phyſicke ſlowly about the Peloponneſiſche warre, and
was profeſſed by Hippocrates, 373.d.
Phyſicke nature is ſimple, 176.k. that is the beſt, *ibid.*
Phyſicians well rewarded in old time for their cure, 344.b.
Phyſicke drugs far ſet and compounded, Plinie inveigheth
againſt, 137.d. e. 176.l.
Phyſicke in old time conſiſted of ſimpler, 211.d. 212.b.
Phyſicke moſt properly handled in the Greeke tongue, 346.l.
againſt the abuſe in Phyſicke and of Phyſicians, an im
eſtine, 347.a. c. 348.i. 349.a.
Phyſicke noted for much incertitude and no ſoliditie, 345.d.
againſt all art, *ibid.*
many times changed, 345.d.
Phyſicke ſetthered upon canonized gods, 345.d.
Phyſicke, when it was regarded at Rome, 346.k. l.
Phyſicke and Phyſicians, the occaſion of many enormities
and miſdemourors, 347.e.
Phyſicians in Rome of great name, and renowned by yeerly
fees, 344.k.
Phyſicians are not choſen and called as Iudges. Minima
ſteri and others, 347.b. c.
Phyſicians arguing about their patients, hinder the cure,
345.e.
many nations live without Phyſicians, but not without
Phyſicke, 345.d.
Phyſicke long ere it was entertained at Rome, 345.e.
ſome reſcieth, *ibid.* 349.b.
M. Cato an enemy to the Greeke Phyſicians, 346.g. h.
he condemned not Phyſicke, 346.i.
he lived according to Phyſicke of Simples, and ſo main
tained himſelfe and familie in good health, 346.i. k.
Phyſiognomiſts, who they were, 539.d. See Meſtopoſcopi.
Phyſtemma, an hearbe, P I
Pible ſtones not good for building unleſſe they be bound
with ſtrong mortar, 593.e.
Piconia, a ſpring, 408.g.
Pieris, a kinde of Lettuce or Cichorie, 241. why ſo called
99.d. 127.e.
Pictore, a ſurname to the houſe of the Fabij, wherefore
525.f.
the anſwere of a Dutch Embaſſador as touching a Picture,
527.b.
Pictures lively for the memoriall of men, 522.k. much ef
teemed in old time, 524.g.
Picturus

The Table to the second Tome

Pictures inserted within books by M. Varro, 524.g
Artius wrote a treatise of Pictures, *ibid.*
M. Agrippa his oration as touching removing of Pictures out of private houses and setting them up in public place, 527.c
Picture of Nero, Colosse-like in cloth, 120 foot high, 531.b
 burnt with lightning, *ibid.*
Pictures of sword fencers, and their fight, who deified, 532.i
Pictures unfinished, more admired than the perfect, 550.k
Prond palmeris, when they were first entertained at Rome, 482.l
Pignus, a kind of earth, 559.f, the operation, 560.g
 the *ca-Pike Lupus*, how wittie he is to avoid nets, 427.c
 how he and the booke part after he is caught therewith, 428.g
Pillars in building of four sorts, 594.a. **Doric** what they be, 503.f
Ionick, 503.f
Toscanick, *ibid.*
Corinthian, *ibid.*
Attic, 505.b
 proportion of Pillars of their length to the building, of height to their thickness, 505.b
Piles and painful swelling bigs in the fundament, how to be cured, 105.f, 106.f, 120.f, 134.g, 139.e, 158.l, 160.b, 161.c.d.f, 194.g, 169.e, 172.g, 174.f, 193.b, 195.b, 255.f, 256.g, 272.i, 278.b, 393.a, 306.f, 333.d, 351.a.e, 352.k. See more in fundament.
Pilewort. See *Celandine*.
Pills purgative, 252.b
Pills of goats dung good for the eye-sight, 325.a
Pimper nell the herbe, 233.i, the divers kinds and their description, *ibid.*
Pimples rising upon sweat how to be repressed, 161.e
Pimples red in the face or skin, by what remedies cured, 37.a, 44.i, 47.c, 52.i, 55.e, 65.e, 70.k, 76.g, 173.c, 184.k, 187.e, 320.b, 327.d, 328.b, 377.d, 421.a, 443.e, 516.b.
Pin and web, what medicines do take away, 100.l, 119.d
 144.i. See more in *Eies*.
Pine-nuts or apples their virtues in Physicke, 171.c
Pionie or *Paonie* the herbe most ancient, 214. why so called, *ibid.*
 the description, 282.k, two kinds, the male and female, 282.l, the virtues in Physicke, 214.i
 danger in digging up the roots, 282.l
Pin in pullins how to be helped, 44.m, 189.c, 193.d
Piper for water conduits of clay baked, 441.d
Pipes of Lead, 441.e
Pipes of sundry sizes, *ibid.*
Pipes Denaria, *Quinaria*, *ibid.*
Piperitis the herbe, why so called, 34.g. it is named *Silva-quadrifida*, the description, 32.k, the virtues, *ibid.*
Pismires in a garden how to be killed, 32.k, they are medicinal, and their eggs likewise used in medicines for the eares, 369.b
Pismires cure beares when they be sicke, *ibid.*
Pissibulium, what it is, 183.f, 557.b. **Natural** and Artificiall, 183.f
Pisselcan, what kind of pitch, 179.e
Pissing blood, how to be cured, 111.a, 180.k, 195.e, 199.b, 205.a, 254.m.
Pissing with diffientie how helped, 124.g, 171.e
 See *Prine*.
Pistana, what herbe, 100.b

of Plinies Natural Historie.

Plinius, his properties in Physicke, 164.k, whether to be eaten in a fever or no, *ibid.*
Pomegranate rind, what it is, 164.f, why called *Malicorium*, *ibid.*
Pomona compared with *Ceres*, *Flora*, and *Tellus*, by the way of *Prosopius*, 145.c.f
Pompeius *Lenaxus*, a Grammarian and Linguist, 209.f
 he translated into Latine the medicament recited found in *K. Adribarides* his closet, 209.f
Pompeius *Magnus* his glorious third triumph, 602.k
 what gold, silver, jewels, & precious stones, he then shewed, 602.k
Plinie enuiceth buterly against *Pompey* for this triumph, 602.m
 his bounteous liberality in the said triumph, 603.a
 his triumph set the Romans a longing after pearls and precious stones, 602.b
 he brought *Cassiodore* cups first into Rome, 603.c
Pompolix, what it is, and how it differeth from *Spodos*, 511.d.e, the virtues thereof, 511.e
Pompions. See *Melons*.
Pond-weed. See *Water-Specke*.
Pontica, the precious stones of *Pontus*, 629.b, the Jewry foris, *ibid.*
Pontife or high Priest letting fall a morsell of meat at the board was ominous, 298.b
Poppa white, a tree, what virtues it hath in Physicke, 185.a
 the description thereof, 185.a
 how it differeth from *Populus*, 185.a
 how to be used, 185.a
Poppa shod her horses with gold, 450.m
 shee kept fine hundred stone asses for to bath with their milke, 327.d
Poppie of three kinds, the seed of the white Poppie conselled, *ib.*
 If seasoned bread, 300.m
 white Poppie heads medicinal, 67.e
 blacke Poppie, 31.a, wandring Poppie, *ibid.*
 the description of wandring Poppie, 68.l
Poppies wild, their severall kinds and virtues, 67.e, 68.g
K. Tarquinus the *Prond* topt off Poppie heads, 31.a
 what he meant thereby, 31.b
Porothind or *Port* sighted, how to be helped, 367.c
 the *Porcellane shellfish* named *Periander* his ship at sea, 426.i
 consecrated at *Grindor*, 426.i
Porcius *Cato* a great student, and looking pale therewith, 61.d, his scholars affected to look pale like him by eating *Cumin*, *ibid.*
Porcettie fish *Polypus*, how he avoideth the booke like to catch him, 427.f
Porcetties not to be fadden with salt, and why, 447.a
Porphyrie marble, 573.c
Porpus fish described, 436.g, his bones venomous, *ibid.*
 The remedy, *ibid.*, his fish medicinal, 430.i
 To rect a kitchen beare, how to be fowne and ordered, 21.a, b
 the medicinal virtues thereof, 32.d. See more in *Leeks*.
Porny, what stone, 587.b
Pourlingue, what it is, 555.d, the hardest point in painting, *ibid.*
Posey for a cold, what medicines do break and resolve, 65.b
 289.e, 304.k, 377.f. See *Rhume*.
Posphimus, a semine, why so called, and the nature of it, 401.e

Pythacus, an admirable graver, 483.f. his workemanship exceeding costly, his works, 483.f. 484.g.
 Pythens the rich Babylonian, 480.g.
 Pythias Priestesses and Prophetesses, 509.d.
 Pythos, a kinde of bulbe, 19.b.
 Pythis, an excellent mason and architect, 568.l.
 Pyxianthus, a bulbe, the berries whereof are medicinable, 195.d.

Q V

Qadrans, a small piece of brass coin at Rome, 467.b. stamped with pumt or small boats, ibid.
 Quadrants, silver pieces of coin at Rome, why so called, 463.c.
 Quæstoria, what goldsoyle, 465.e.
 Quaking chills for cold, how to be helped, 136.g.
 Quinaries and delective, what castles, 342.i.
 Quercus stones ready framed, found naturally in the grounds, 588.f. turning about of the owne accord, ibid.
 Quæstane agrie: vntoward to be cured in old time by any good course of Physicke, 390.b.
 Quæstane agrie, appropriat remedies, 441. 67.a. 109.g. 120.g. 122.k. 126.k.l. 151.d. 219.g. 223.d. 260.f. 268.g. 302.b. 302.b. 309.g. 310.g. 311.b. 312.g. 315.g. 335.f. 336.g. 356.f. 390.f. 401.g. 391.a.b. 413.g. 432.m. 435.a. 445.f. 446.g. 457.c.
 Quæstian agrie, how cured, 310.i. 311.b. 335.f.
 Quicke brimstone. See Brimstone and Sulphur-vif.
 Quicke, silver, a poison, the remedies thereof, 121.e. 153.b. 318.b. 323.a. 364.b.
 Quicke silver Naturall where it is found, 473.a.
 The power thereof, ibid. 473.b.
 it purifies it, ibid. the great assistance betwene gold and it, 473.c. 474.c.
 Quid pro Quo in Physicke, dangerous and condemned, 148.f.
 Quicke fire stones, what they be, 589.a.
 good for fistulas in a campe, ibid.
 they will fissure, ibid.
 Quinarius, a piece of silver coin at Rome, of what value, 463.g. 463.h.
 Quinaces, for what good, 163.d.
 No of Quinaces, called Melinum, what vertues it hath, 64.g.
 Quindacensurs at Rome, and their collidge, 295.b.
 Quinquagesim. See Cinquiesse.
 Quinquagesim, 337.g. delegates chosen with good circumstance, ibid.
 Quiche-grasse described, 206.b. why called Gramen Ternassii, 206.k. the vertues that it hath, ibid.

R A

Rabirtus, a writer in Physicke, 308.g.
 Radicula, what bearte it is, 59.g. where it groweth, ibid. what use there is of it, ibid. what names it hath, 219.f. the medicinable vertues that it hath, ibid. why it is called Aureum Pæculum, ibid.
 Radices deserti, with their properties, 163.f.

Radishes of excessive bignesse, 17.m.
 Radishes of three sorts, 16.k. the Radish Agrion, Armon, or Armaroria, which some call Lence, 16.m.
 Radish seed, where to be sowne, 17.m.
 Radish roots how to be ordered as the grow, 173.b.
 best Radishes in Egypt, and why, 173.f.
 Radish medicinable, 173.f.
 Radish highly esteemed among the Greeke, ibid.
 Radishes cure the phisicke, 173.d.
 Radish presented in gold to Apollo, ibid.
 in the praife of Radish a booke compiled, 173.e.
 Radishes marrie teeth, and posie yorie, 173.f.
 Radishes their medicinable vertues, 39.b.
 Radishes wild, and their vertues, 39.a.
 Radishes corrected by Hyssope, 40.g.
 Ragwort an hearb. See Orchis and Satyrion.
 Rai-fish or Skate, medicinable, 439.d.
 Raine water kept in cisterns, whether it be wholesome or no, 406.g. it altereth the nature of some riuier waters for the time, 410.k. it soone doth corrupt, 406.k.
 Rainis, of what operation they are in Physicke, 148.k. especially cleared from their stones, ibid.
 Rams how they shall get none but ram-lamb, 400.g.
 Ramises a king of Egypt, erected an obelisk of one entire stone, shrouded foot long wanting one, 574.l.
 his desire to fasten his owne soune to the top end of it at the rearing, 573.b.
 Rausculum an hearb. See Crowsfoot.
 Rapes of two kinds, 162.g.
 a Rape of lead offered to Apollo, 17.d.
 a Rape raised by Manius Curius for his rebellion at the table, 38.k.
 Rapes medicinable, ibid.
 Raj-nir a fish, and the nature thereof, 428.i.
 Rajis, why called in Latine Rubus Idæus, 197.a.
 the medicinable vertues that it hath, 197.a.
 Rats and mice how to be killed, 124.b. 128.b. 195.f.
 Rat of Indis. See Ichneumon.
 Ravens thought to be ill at case all Summer long, 355.a.
 Ramp places how to be skinned, 565.f. See Gallis.

R E

Rate waters medicinable, 403.c.
 Red gum in children, how to be cured, 127.f. 306.g. 307.b.
 Reeds and canes serning in Physicke, 450.i.
 Refrigerative or cooling medicins, 46.g. 47.g. 67.g. 103.g. 120.k. 131.g. 136.g. 142.b. 147.e. 155.b. 167.b. 189.d. 192.b. 305.a. 211.c. 223.d. 236.g. 237.e. 250.g. 259.g. 287.b. 290.g. 473.d. 474.b. 475.a. 511.f. 529.f. 560.a. 591.e.
 the Regard of the etc in some cases of men held to the vncoumon, 298.i.
 Reins in the backe pained how to be eased, 37.a.e. 40.k. 42.b. 53.b. 70.b. 175.g. 283.a. 304.f. 305.g. 329.e.
 Reins, with what medicins they be purged, 77.g. 104.f. 126.l. 443.a.
 for the infirmities of the Reins, comfortable medicins, 148.k. 171.c. 181.f. 182.g. 206.f. 248.b. 275.g. 290.i. 292.b.
 Reits or Sea-weeds medicinable, 276.g. 337.e. as good as treacle, ibid. sundry kinds going vnder the name of Alga, ibid. they serue the dyer for a fine colour, ibid.
 Relaps in agues how to be prevented, 391.i.
 a Remedy for all diseases, 357.a.
 Remens,

Remena, a writer, 462.l.
 Remora, a fish. See Echeneis.
 Remus of Fawne or Hind-casse, is most aduerso to serpents, 321.f.
 Repercussiu medicins, 139.a. 158.g. 174.l. 278.c. 281.b. 290.g. 424.g.
 Reseda, what herbe, 289.e. the vertues thereof, ibid.
 Resolutive medicins. See Discussive.
 Restaurants for them that be false awake, 41.c. 127.e. 130.i. 134.b. 136.g. 139.d. 155.d. 162.m. 167.c. 171.c. 181.d. 250.g. 318.g. 413.c. 446.f.
 Resiltharow an herbe, 98.l. the description, ibid.

R H

Rhacoma, 289.b. what root, ibid. the description, ibid.
 Rhagion, a kind of spider, 360.i. the description, ibid. the manner of prick or sting, ibid.
 Rham, what kind of bramble, 197.b. their several kinds, and the description, ibid. the medicinable vertues, ibid.
 Rheaphan, an herbe. See Leontopetalon.
 Rheaphan Agria, what herbe, 253.b.
 the clarified Juice thereof is medicinable, 253.c.
 the clasp, ibid.
 Rheumaticke. See Contarion the great.
 Rheotricke, a gainfull profession in old time, 470.b.
 Rheumatism, what they be, and how cured, 124.b. 130.c. 223.c. 310.
 Rheum or distillation how to be dried and staid, 43.a. 44.b. 55.g. 55.d. 66.g. 70.k. 72.b. 84.a. 142.a. 153.f. 159.f. 161.c. 172.k. 177.d. 197.d. 223.c. 236.f. 249.f. 281.g. 287.b. 303.g. 309.d. 370.m. 380.g. 412.k. 414.b. 437.f. 443.g. 519.f. 531.c. 560.b.
 Rheumes thin, how to be thickened, 194.i.
 sitting Rheum, how to be staid, 183.g. 239.g.
 Rheume into the eye, how to be cured. See Etes water.
 Rheum, what herbe, 25.b. the description, ibid.
 Rhinichia, 278.l.
 Rhodites, a precious stone, 630.m.
 Rhododaphne. See Oleander.
 Rhododendron. See Oleander.
 neither of them both hath a name in Latine, 192.g.
 Rhodape a famous harlot, built one of the Pyramides, 578.g.
 Rhodape, what herbe, 205.d.
 Rhau, what Poppie, 31.a. how it differeth from Anemom, 109.d.
 Rhodus, one of the architectes that built the Labyrinth in Lemnos, 579.c.
 Rhopalas, an herbe. See Neuphar.
 Rhin a shrub, hath no Latine name, 193.g. the description, ibid. the medicinable vertues that it hath, ibid. why it is called the Curriers shrub, ibid.
 Rhyparagobus. See Pyreus.
 R I
 Ribwort. See Plantaine.
 Ricinus an herbe, 161.a. the seed, berries, and oyle thereof, what properties it hath in Physicke, and otherwise, ibid.
 Ricinus in Mulberry trees, what they be, 170.i.
 Riding on horsebacke, in what cases good, 303.d.
 Ring of gold worn at first vpon the left hand, 455.b.
 the reason thereof, 450.g.
 Ring of iron used by Romans and Lacedæmonians, 455.b.
 Rings vpon the fingers a bad example, 455.a.

Rings of Gigei, 455.g.
 Ring dinerly named, 455.d.
 Rings of gold, to whom allowed first at Rome, 455.e.
 how used, 455.f.
 wedding Rings of yron, 455.d.
 the Rings not knowne in Homers time, 455.f.
 a law for wearing of Rings, 460.b.
 when Rings were worn ordinarily at Rome, 455.m.
 Rings worn at Rome by Senators only, as a badge of their honorable place, 457.c.
 when they were more ordinarily by Senators, Gentlemen and Commons, 457.f.
 three kinds of Rings at the battaile of Cannæ, 457.d.
 a Ring caused the quarrell betwene Drusus and Capto, from whence arose the Marrian warre, 457.f.
 ancient Senators wearing Rings of yron only, 457.f.
 Rings with signets to seale, 458.g.
 Rings set with precious stones, 458.d.
 Rings, massive sealing without a stone, 458.b.
 Ring first put upon the fourth finger of the left hand, ibid.
 an order or regularitie set downe by Tiberius, as touching the use of Rings vpon the fingers, and whereupon, 460.b.
 the ceremony of laying a Ring vpon the table before sitting downe to meat, for what purpose, 297.d.
 Ring with a signet or figure manuell, vpon what finger worn in Rome, 458.k. the cause and occasion of much mischief, ibid. used for assurance in contract, ibid. it began by occasion of vnture, ibid.
 Ringworms, what remedies they be killed, 36.g. 49.d. 124.b. 128.g. 139.a. 146.k. 158.m. 172.i. 187.e. 194.b. 252.b. 265.d. 285.a. 300.a. 307.c. 413.b. 419.b.
 Riparis, what Stallion, 378.f.
 Risings in share and other emunctories, how to be repressed or refused, 122.g. 126.f. 137.b. See more in Graue, Pushest, and Pans.
 Risels or wrinkles in the skin of womens faces, how to be laid euen and smoth, 38.l. 103.b. 127.d. 150.b. 161.b. 171.d. 184.b. 268.k. 319.c. 327.c. 416.b. 437.f. 439.a. 441.a.
 Riuier waters, 406.l.
 what Riuers ordinarily haue bad waters, 406.l.
 what Riuers yield wholesome waters, 410.i.
 Riuers at all times not of like taste, 410.i.
 the water of the same Riuier not at all times alike wholesome, 410.i.
 Riuier fresh turning to be salt, 411.b.
 Riuers of salt where, 411.d.
 R O
 Roar-Robart. See Geranium.
 Roget robbing how to be secured, 315.d.
 Roget the herbe, good in a sal. d. with Lelluce, 29.a.
 the medicinable vertues thereof, 55.c.
 why called by the Greekes Enzomus, 58.f.
 Rocking, a good meane to procure sleepe, 303.g. good also for leish, ibid.
 Romans a second Sun-shining to the world, 269.g.
 Romans in an ill name for countenances, 463.a.
 Rome, admirable for stately aduices, 581.d.
 Roofe of fores how to be taken off, 141.d. 448.b.
 Roots of dumer kind, 19.d.
 Rootyng hidden all winter season, 13.d.
 Root

Root of an herbe broken within the ground, thirty foot long, 214. g.

Roots kille effectually, if the herbes be suffered to seed, 291. f

Ropes made of rubies and other matter, 7. a

Rose bushes, how to be set or planted, 84. b

Roses grafted, 83. d

The Rose bush and the Rose described ofse of Roses, 83. b

The medicinale vertues of Roses, 83. b

Roses fersed up with wounds, 83. d

The best Rose, 83. d

Roses, their severall parts and names to them, 102. b

their disshitt vertues, 83. d

Rose of Persuée, 83. a. of Capua, Miletum, Trachinie, and Alabanda, 83. c

Rose Spineola, 83. d

Rose Centisfolia, why so called, 83. d

Rose Campan, 83. e

Greece Rose, 83. e

The Rose Gracula, 83. e

Rose Mosceton, 83. f

Rose Coroucla, 83. f

where the best Roses grow, 84. g

Rose of Campanie, 84. b

Rose bushes how to be diered, 84. b

Rose leaves how to be oved, 162. l. m. their vertues, 84. g

kaffie Roses blowing all winter long, 84. g

Rose oile odorisferous, 83. e

Rose wine, 102. b

Rose oyle, 83. f

Rose juce medicinale, 102. l. k

Rose of Iericho. See Anomum.

water Rose. See Nensupia.

Rosemary called Libanotis, 103. a

Rosemary of two kinds, 139. g

in Rosemarie, why: Cachrys is, 84. b

Roseta, a rich painters colour, 528. i

how it is made of Triphy or goldsmiths earth died, 530. l

Rose of Meeds the best, and why, 531. a

the price of Rose, 182. b

Rosins of sundry kinds, 182. b

Rosins dry of Pine and Pitch trees, 182. b

the medicinale vertues of all Rosins, 182. b

of what trees the Rosins be best, 182. k

of what countries and places the Rosin is best, 182. k

Rosins how to be dissolved for plasters and outward medicines, 182. k

how for potions, 83. d

Rosina, the publique place of orations at Rome, why so called, 491. a

living upon the water for what diseases good, 303. d

Rue a counterpoison for Libard. baïne, 57. b

Rue male and female, 58. l. f

Rue killeth the infant newly conceived, 58. l. f

Rubbing of the body maketh for health, 303. d

hard and soft, worke divers effect, 83. d

See more in Frictions.

Rubie a pretious stone, 616. b

why Rubies be called Apyroy, 616. b

Rubies of divers sorts, 616. i

Rubies of India, of the Garamans or Carchedonij, 616. i

Rubies of Ethiopia and Alexandria, 616. i

Rubies Alabandens or Almandens, why so called, 616. i

Rubies male and female, with their descriptions, 616. i

Rubies Amethystizers, which they be, 616. i

Rubies Syrtie, what they are, 616. i

Rubies of India called Lithizontes, 616. k

Rubies Orchemenian, 617. a

Rubies Trazenian, 617. a

Rubies of Marjils and Lisbon, 617. a

Rubies are much sophisticated, 617. a, how the frauds are discovered, 617. b

Rubie minerall, called Anthracites, 617. b

Rubies of other sorts, 617. b

Rubrica, a red earth or ruddle in great request in Homers time, 476. g

Ruddle or Rubrica, a painters colour, 528. b

Rubrica of Lemnos caused the best and most medicinale, 528. m.

Ruddle for carpenters, which is best, 529. b

Romax, what herbe, 73. b

Running of the reins how it may be staid, 72. l. 130. c

Ruptures inward, spasmes, and convulsions, how to be healed, 167. f. 272. l. 385. 444. 446. i

Rupture when the guts be falne downe, how cured, 444. b. i

Rupture waterish called Hydrotides, how to be healed, 385. c

Ruptures in young children bursten, what remedies, 337. e. f

398. b.

against all Ruptures in generally good medecins, 390. 41. d

444. k. 48. g. 58. l. 64. k. 73. l. 75. b. 103. b. 108. k. 123. d. 128. j. m. 129. f. 130. l. 138. b. 142. b. 150. g. 154. g

162. b. 178. m. 179. a. f. 180. g. 186. k. 198. l. 199. e. 240. b

254. g. h. i. 263. d. 264. g. 275. e. 283. j. 286. m. 289. e

290. i. 313. e. 320. e. 332. b. 335. g.

Ruina an hearb, 111. i. the vertues thereof, 83. d

how it is to be prepared for medecin, 83. d

Ruins or Ribles sundry kinds, and their uses, 100. k

Ruif of yron, how it is souelt scoured away, 413. c

Ruif of yron medicinale, 516. g

S A

S A

<i>Rue killed with the touch of a menstruous woman,</i>	308.m	<i>S</i> Above stone, how it will burne of a light fire,	588.l
<i>Rue a medicinale herbe,</i>	56.k	<i>S</i> acall: the name that Ambrose,	606.k
<i>the juice of Rue taken in great quantitie is poyson,</i>	ib.	<i>S</i> acopannum, a physical herb, 300. called <i>S. agapannum,</i>	57.d
<i>what is the remedy,</i>	ibid.	the vertues wherof it hath,	ibid.
<i>Rue steele, shrineth beef,</i>	23.e	<i>S</i> acrificing mans flesh, when forbidden at Rome,	373.f
<i>when and where to be sowne,</i>	29.a.b	<i>Saffron a medicinale spice,</i>	104.m
<i>Rue giues in a largeesse at Rome,</i>	29.b	<i>Saffron the beaue and flower,</i>	ibid.
<i>Rue and the Fig-tree, fort well together,</i>	ibid.	<i>how to be get. ib. where is the best,</i>	86.f
<i>Rue doth propagat, and set it selfe,</i>	29.c	the manner of choosing Saffron,	86.f.k
<i>the weeding of Rue is troublesome,</i>	ib.	<i>how it is cled,</i>	ib.
<i>how thus may be helped,</i>	56.i	the manner of the growing,	99.c
		<i>Sage,</i>	Sage,

Sage, a precious stone, 417.
Sage, what herbe, 417.
Sagittaria, what they are, 418.
Salt Crystall, what it is, 418.
Salt of Herbs commended, 418.
Salt makers posson, with what medicins repressed, 418.
121.e. 150.f. 157.g. 160.k. 318.h. 358.m. 432.b.k.
434.i.
Salamander of divers sorts most dangerous, 358.
he destroyeth whole nations at once, 358.
by what means, 358.
his venome is Nicotike and extreame cold, 358.
of Salt-wanders, sure feed without danger, 358.
whether his body do extinguish fire or no, 359.
Salt from what plant, and why so called, 149.e. the virtues thereof, 418.
Salt the priests, what chapters of flowers they wore, 82.g.
Saltines, what herbe, described, 82.g.
the use thereof, ibid.
Salt gem, 105.f.
Saltore. See Willow.
Salt Theriac, or Theriacale, a kind of medicinable salt, 266.l.m.
Salt, a learned and expert midwife, who wrote of Physicke, 300.k.
Salt-petre, 412.b. how the best is knowne, 412.b.
Salt-pore, or Saltinge, what it is, 417.d.
Salt seafresh wounds, 176.i.
Salt be it natural or artificiall, proceedeth of two causes, 414.i.
Salt in what places made by drying in the Sun, 414.k.
Salt an herb build crull, 417.b.
Salt Spanish, for what infirmities it is most medicinable, 419.a.
Salt compounded for to get an appetite, 416.l.
Salt mountains, 415.a.
Salt minervall, 415.a.
Wells and houses built of Salt, 416.k.
Salt for Physicke, which is best, 416.k.
Salt growing easily in the night season, 415.b.
Salt left for ponding or seasoning meat, 416.l.
Salt Ammoniacke, 415.b. why so called, 415.c.
the description, ibid. it is medicinable, 415.c.
light within earth, becaue above ground, and the reason why so, how it is sophisticated, 415.c.
Salt or poole Salt, 415.c.
the manifold uses of Salt in Physicke, 418.l.
Salt for the kitchen, which is best, 416.k.
Salt artificiall how it is made, 415.d. of seawater, 416.k.
out of certaine springs or wells, 418.f.
Salt Springs, 416.g.
Salt for the table which is best, 416.k.
Salt made by fire, 416.g.
Salt blacke, 418.i.
Salt made of albes, is of silk pickle or brine, 418.i.
Salt water, for what garden feed it is good, 33.b.
poole Salt, which is best, 416.b.
sea-water. Salt which is best, 418.i.
the nature and temperature of Salt, 418.l.
in what seasons and constitutions of weather, Salt engendred most, 416.i.
Salt not sparkling in fire, but in water, 416.i.

Salt of sundry colours, 417.b.
floure of Salt, 417.b. the properties thereof, 417.b.
how sophisticated, 110.d.
the nature of Salt, 605.a.
Sales in Latine, what they signifie, 416.m.
Sales in what they be, 417.a.
Salavia, viz. a street, why so called, 418.i.
Salutius Dioscorus, a famous Physician, 440.g.
Salutio, a surname or addition to the family of the Scipios, 523.
Samian earth of two kinds, 559.d.
Samian stone, 591.a. good to burnish gold, good also in Physicke, 418.i.
Samolus, an herbe, with what ceremonious circumstances to be gathered, 193.f.
Samothracia, what they be, 458.f.
Samobracia, a precious stone, why so called, 458.f.
Sampier, what herbe, 236.k. the description, 254.k.
the manifold uses that it hath, 254.l.
Sampier Savage, 576.l.
Sand of the sea, pore for what medicinable, 414.f.
Sand yfsted to floure and saw marble with, 572.b.k.
Sand for mortar, which is good, 594.k.
Sand of Pateoli, of a wonderfull nature, 554.l.
Sand of Nilus, wherefore used at Rome, & elsewhere, 555.a.
Sandaracha, a painters colour artificiall, 528.k.
Sandaracha artificiall, how made, 530.g.
the right colour and the price, 530.g.
Sandaracha natural, where it is found, 520.m. which is best, ibid. the qualities thereof, 530.g.
Sandares, a kind of gem, 617.d.
Sandifer and Sandarofon, 617.e.
Sandarofon, a kind of gem or precious stone, of the base sort 617.e. called by some Garamantides, the description thereof, and why it is much regarded by the Chaldeans, 617.d. male and female, 617.e.
Arabian and Indian, 617.e.
which Sandarofon is best, 617.e.
how Sandarofon Sandifer, Sandarefon, and Sandareses, be distinguished, 617.e.
Sandner, 416.k.
Sandix minervall, a painters colour, 528.k.
Sandix artificiall, how made, 530.g.
the price of Sandix, 530.b.
Sandix, Virgil tolke to be an herbe, 530.g.
Sandragon, a colour of painter, 528.i.
Sangenon, a kind of Opal, 616.f.
Sanguis Draconis or Sandragon, what it is, 417.k.
how it is sophisticated, 417.b.
Sanguis-Rod, what plant, 489.g.
the medicinable vertues that it hath, 489.g.
Santerna. See Borax of goldsmiths, 509.e.
the vertues medicinable that it hath, 509.e.
Sapa. See Cui.
Sampshire, a precious stone, 620.l.
diuers sorts, and which be best, 620.l.
hard to be cut, 620.l.
which be the male, 620.l.
Sapron, what it is, 318.l.
Sarcion, a fault in gems, 612.m.
Sarcolleia, what it is, 197.e.
the medicinable vertues thereof, 197.e.

Serpocapum a stone, why so called, and the nature thereof, 587.d.
Sarda or *Sardoina*, a pretious stone called the *Cornalline*, 615.b. it is the one halfe of *Sardonyx*, 616.g.
Sardoin or *Cornalline* scale faist of any other, 618.b.
 they be found much about *Sardis*, and thereupon take their name, *ibid.*
 from *India* there came *Sardoin* of three sorts, 618.b.
 for their severall differences, *ibid.*
 male and female, 618.i.
 in what regard his stone is accepted, *ibid.*
Sardachate is a pretious stone, 623.e.
Sardonyx of *Cy* *Polycrates*, 601.a.
Sardonyx, a pretious stone, highly esteemed by *Scipio Africanus*, 615.5. why so called, *ibid.*
Sardonyx blind, which they be, 615.b.
Sardonyx the best to seale withall, *ibid.*
Sardonyx of sundry kinds: *Arabicke*, *Indian*, *Armenian*, 615.5.
Sardonyx artificiall, 613.e.
Sarmus wrote first of *Horsefmanship*, and therefore pourtrayed on horsebacke in brass by *Demetrius*, 505.f.
Sars, what they are, 6.g.
Sars, as well, 404.i.
Satyrion, what it signifieth, 257.d.
Satyrion, an herbe, 257.a. b. 226.b. the description, *ibid.*
Satyrus a great architect, 575.e.
Satyrus, a writer in *Natrall Philosophie*, 575.e.
Savine flamm, what curib, 128.b.
 Savorie the herbe described, 30.k.
Savage, an herbe, 246.k. the description and medicinalite properties thereof, 142.k.
Savage de Bois an herbe. See *Polemonia*.
Savine, a plant, of two sorts the names that it hath, 193.e.
 used in *Physicke* for *Cinamon*, 193.d.
Savrit, a pretious stone, 629.d.
Savritones, an image of *Praxiteles* his making, why so called, 500.l.
Savros and *Batrachos*, two excellent workemen. See *Batrachos*.
Saxifrage, one of the names of *Maiden-haire*, and whereupon, 127.b.
Saxum, the ordinary white chancke, 560.i.
Sayles for ships of purple and other colours, 5.c.
Saying into *Ægypt*, wherefore wholefome, 412.l.
Saying upon the sea, for what diseases good, 303.d.
 against *Saying* and navigation, an insect, 2.g.b.c.c.
 S C
Scall, the head, how to be cured, 52.g. 56.i. 43.f. 52.i. 59.d. 60.g. 72.g. 104.g. 105.e. 127.e. 133.e. 141.b. 142.l. 147.b. 155.f. 157.g. 158.m. 161.b. 163.b. 177.f. 178.g. 180.g. 191.e. 196.b. 201.e. 207.f. 232.l. 249.e. 277.d. 287.e. 306.i. 324.b. 341.d. 353.a.
Scalls with seething water, how the fire may be taken forth, and the place kept from blistering, 351.e.
 See *Burns*.
Scalpi, medicinal, 438.k.
 good to cleanse the bladder, 444.b.
Scammion an herbe, 251.b.
 the uice of this herbe, *ibid.*
 how it is drawne, and to be chosen, 251.d.
 how to be used in purging, *ibid.*
 how sophisticated and discerned, *ibid.*
 petis *Scammion*, what herbe, 199.e.
 how it is eaten and what effect it worketh, *ibid.*
Scandix, the herbe, 130.g.
 a bafe woort, *ibid.*
Scaricut, a pretious stone, 630.i.
Scasum his exceffe in marble pillars uncontrolled, 563.b.
 his symptoms building compared with *Nero* and *Caligula*, 583.d.e.
Sceletyre, what disease, 112.k.
 See *Stomacace*.
Scepius a *Philosopher* and writer in *Physicke*, 308.k.
Schista, what onions, 20.b.
Schista, what egg, 347.e.
Schiston, what kind of milke, *ibid.*
 the making of it, *ib.*
 the vertues thereof, 361.c.
Schistos, a kind of *Alum*, 558.b.
Schistos, a stone of siffrone colour, 367.d.
Schistos, a kind of bloudstone, 590.g.
 the vertues medicinale, *ibid.*
Schyttam, what it is, 471.b.
Sciatica, the gout in the backe bone, what medicines it cured with, 50.a. 56.k. 74.i. 105.e. 108.g. 114.m. 141.d. 155.d. 161.e. 180.g. 185.a. 186.k. 188.b. 190.k. 192.k. 199.a. 219.e. 224.k. 238.m. 248.i. 255.e. 265.e. 271.d. 273.e. 275.a. 275.b. 276.i. 281.e. 284.k. 287.e. 289.d. 290.k. 291.b. 315.a. 330.b. 334.i. 382.g. 385.a. 418.k. 419.e. 431.a. 442.k. 444.i.
Scincus described, 316.i.
Scincus medicinal, *ib.* 433.e.
 how be differeth from the land *Crocodile*, 316.i.
 one of the ingredients of *antidote*, 316.k.
Scipio surnamed *Serapio*, and why, 81.f.
 honoured with a coronet of flowers by the people of *Rome* *ibid.*
 he died poore, *ibid.*
 interred by a generall contribution of the people, 82.g.
Scipio Africanus the second, how much plate and coine he had when he died, 480.m.
 what treasure he shewed in triumph and brought into the citie chamber, 481.a.
 what *Scipio Africanus* gave to his souldiers upon the winning of *Numantia*, 481.a.
Scipio *Alabrogicus* how much plate he had, *ib.*
L. Scipio allowed his charges by the citie of *Rome* for his foemen plate, 480.i.
Scipio *Æmilianus* received an obdional or gaffe coronet, 117.e.
Sciolecia what it is, and how made, 509.b.
 why so called, 509.e.
 the vertues thereof, *ibid.*
Sciolecion, what it is, 177.e.
Scioleponides, their venomous prick how to be cured, 509.d.
 60.g. 61.b. 62.g. 75.e. 127.b. 155.f. 306.k. 418.l.
Scioleponides of the sea burst with fasting spittle, 300.k.
Sciolepus the herbe described, 98.i. 130.m.
 the vertues which it hath, *ibid.*
Scembris,

Scembris, if it, how employed, 418.g.
Scopa, a *Ægypt*, what flower, 85.e.
Scopa, a *Ægypt*, an herbe and a kind of *Asbillea* good for the gargle and spewaine in swine, 216.l.
Scopas, a singular *Imaginer*, 566.m. his worker, 567.e. d. f. there were two of that name, both cunning workemen, 504.k. wherein they excelled, *ibid.*
Scordium or *Scordus*, an herbe found by *K. Mithridates*, 212.g. the description by him set downe, *ib.* the vertues medicinale, good for the bladder and the stone, 254.g.
Scordus, 245.f.
Scorus in trying of gold or and other mettals, what it is, 467.b.
Scorpias a pretious stone, 630.i.
Scorpion, an herbe, 250.i. why so called, *ibid.* See *Tragac*.
Scorpius hurt with *Aconitum*, how they be cured, 270.i.
 pricked once by a *Scorpion*, shall never after bee hurt by *Hornet*, *Waife*, or *Bee*, 299.e.
Scorpius neuer sting the ball of the hand, 361.c.
 against *Scorpions* and their sting remedies, 36.k. 39.c. 40.m. 42.b. 43. a. d. 45.e. 46.l. 54.e. 55.e. 56.i. m. 59.a. b. 60.g. 61.g. 62.g. 63.d. 64.b. 65.b. 69.d. 71.e. 73.g. 74.g. 75.e. 76.m. 77.e. 101.g. 103.f. 105.g. 106.k. 107.b. 109.a. 110.k. 111.g. 121.e. 126.b. 131.d. 134.i. 138.l. 143.f. 153.b. 155.f. 166.l. 167.e. 168.m. 170.k. 173.e. d. 174.i. 178.k. 179.b. 181.f. 184.k. 194.i. 195.i. 199.g. 199.b. 206.g. 230.l. m. 237.f. 246.k. 270.b. 276.g. 277.e. 288.l. 289.b. 301.e. 324.k. 361.b. 442.g. 413.b. 418.g. 444.g. 451.b. 453.f. 454.b. 455.f. 556.m. 561.d. 624.g.
Sea Scorpion medicinal, 438.g. 444.f.
Scorpion, what herbe, 126.i.
Scorpius, an herbe, 122.l. why so called, *ibid.* two kinds thereof, *ibid.*
 Scratching of the body is healthfull, 303.d.
Seylus, an *Imaginer* and grauer in *Marble*, 568.b.
Seyricum, 476.l. an artificiall painters colour, how made and used, 530.b. 528.k.
Seyros the Island yieldeth a stone of a strange nature, 587.d.
Seythica, what it is, and why so called, 123.a. the vertues, *ib.* from whence it cometh, 269.d.
 S E
Sea waters made hot, in what cases medicinal, 412.k.
Sea water actually cold, medicinal, *ib.* outwardly applied, for what good, *ibid.*
Sea water ought to be had from the deepe, farre from land, 413.a. how to be given inwardly, *ib.* how to be tempered for procuring vomit, *ibid.*
Sea water cythized, *ibid.*
Sea water artificiall how to be made, 413.d.
Sea a most wonderfull element, 415.e.
Sea weed called in *Latine* *Venus Marinus*, 258.b.
 the description, *ib.* three kinds thereof, *ibid.*
Seals, their vertues medicinal, 437.g.
Seale of the *Romane* Embleffadour, was the image of *Augustus* *Cesar*, 601.d.
Secundarius, what kind of *Minium*, 476.k. 477.d.
Secum, an herbe, See *Honflecke*.
 Seeds of herbes how they differ, 33.a. b. c.
 garden Seeds, some more strange than other, 33.a.
 Seeds of herbes lesse effectfull, after incision made in the roots, 292.g.

Serpents how to be brought after, and mortified, 316.b
 Serpyllum, what herbe it is, and the sundry kinds, 75.d
 Serranus, a familie in Rome wearing no linnen, 2.l
 Serratula, an herbe. See Betonic.
 Serta and Servia, what they are, 80.i
 Servants many retained in one house, what abuse and in-
 convenience thereof, 459.a
 M. Servilius Nonianus what a foolish ceremony he obser-
 ved to leese himselfe from bearded eyes, 298.k
 Servus Tullius K. of Rome, how hee was supposed to bee
 concuied, and whose sonne, 599.d
 Sefama, the medicinale vertues that it hath, 140.g. the
 difference of vertues proceeding from it, ibid. the oyle
 thereof, 46.b
 Sefamides, an herbe, and the medicinale vertues there-
 of, 140.g.b
 Sefeli. See Siler.
 Sefoftris a prond prince, K. of Aegipt, vanquished by Efu-
 bop, 464.i
 Sefterius, a silver piece of coine at Rome, worth what,
 463.a.b
 Sefanos, a kind of Bulbe, 19.b
 Sefum the vertues thereof, 104.l
 Sefum Niger, a writer in Physicke, 72.b. 316.k
 S H
 Shadow in pictures, 528.b
 Shadow-like fish Sciana medicinale, 444.k
 Shaking of time how to be helped, 141.b. See reme-
 dium.
 Sharewort, an herbe, 256.b. the description, ibid.
 Share, and the infirmities thereof, how to be avoided, 256.b
 See more in Groine and Pulber.
 Sleepe hurt by using Timpere, how they cure them-
 selves, 234.d
 Sleepe without gall in Pontus, and the reason of it, 276.i
 Sleepe rotten or otherwise diseased, how to be helped, 144.b
 211.a. how to recover their stomakes, and make them
 fall to their meat, 351.c
 Shells of fishes serving as trumpets to sound withall, 451.e
 in stead of conches to lade oyle, ibid.
 Shells of eeges and fishes, why crushed and broken when the
 meat is eaten forth of them, 296.i
 Shields and sentenches of armes, in memoriall of ancestors,
 who brought up first at Rome, 524.i
 Shields why called Clypej, ibid.
 Shields presented the lively images of those which bare
 them, ib.
 Shield of Aflrball, 524.m
 Shingles how to be cured, 14.k. 105.a. 122.k. 139.a. 143.c
 146.k. 157.g. 158.m. 174.k. 265.j. 278.f. 284.k
 287.b. 309.d. 337.g. See more in S. Antonies
 fire.
 Ships provided for transporting Obeliskes out of Aegipt to
 Rome, 575.e
 Shoulder blades pained, how to be eased, 255.g. 312.b
 379.c
 Shouds of Flax how employed, 4.k
 Shred-shew biting is venomous, and the remedies against
 it, 43.g. 50.g. 55.g. 56.m. 71.e. 167.g. 168.m. 277.c
 322.k. 360.m. 361.a.
 Shit will not goe over a cart-trail, 361.a.

S I

Sibylls, three Prophetesses, their statues at Rome of Brasfe,
 491.f
 L. Siccius Dentatus, a brave warrior, 116.k. honoured
 with sundry chaplets for his good service, ibid.
 Sicche aire killeth scorpions, 623.e
 Scycione, a city famous for workemen in mettall and mine-
 rals, 564.b
 Sicyone in name for cunning painters, 547.b
 Sides, pain or stitches how to be eased, 57.d. 123.a. 246.l
 247.b. 248.b. 275.g. 381.g. 442.k. See more in
 Plentif.
 Sideritis what herbe, 123.b. the vertues thereof respectiue
 to the eyes, 233.f. wonderful in staunching of blood,
 263.e
 Sideritis, a precious stone, 629.d. the vertues there-
 of, ib.
 Sideropaciloz, a precious stone, 629.d. why so called, ibid.
 Signet or signe manuell. See Ring.
 Signina, what kind of work it is, 554.k
 Sil, a colour mincrall, what it is, 484.b
 Sil, which is best, 484.b. the price, ibid.
 Sil Atticum, ib. the price, ibid.
 Sil Syricum, 484.f. the price, ibid.
 bright Sil, ib.
 the use of all sorts of Sil, 484.i
 Silanum, a fine Image in brasfe, 502.l. he likely expressed
 Apollodorus the cunning workman, ibid.
 Silanus, an herbe, 255.c. the description, ibid.
 Silence at the board from one end to the other, what it pre-
 jageth, 298.g
 Siler or Sefeli, an herbe, 41.c. the description thereof, ib. the
 severall kinds and properties that it hath, ibid.
 Siligo, the fine wheat, what medicines it doth afford,
 137.f.
 Silphium, S. h. engendered by shewes of raine, 133.e. the
 medicinale vertues thereof, 133.f.
 the root of Silphium hard of digestion, and breederh veno-
 fies, ib. it stoppeth the passage of urine, ib.
 Silphium a fish medicinale, 441.b
 Silphium, an herbe, 248.g. the vertues, ibid.
 Silphium, a base herbe, 130.m
 Simonides, a painter, 550.h. his works, ib.
 Simples and compositions compared together, 135.b
 Simples or herbes of like effect, the more they bee used,
 292.g.
 Simus a painter, 551.b. the pictures of his drawing, ibid.
 Sinadan gray marble, 522.i
 Sineses for monks, how to be mollified and drawne out, 129.b
 134.l. 138.g. 173.c.
 Sineses fuffe how to be made supple, 161.f
 Sineses benumbed with cold, what doth recover, 74.d
 for fueses and their infirmities in general, comfortable
 medicins, 48.m. 49.b. 137.a. 187.c. 212.l. See more
 in Nernes.
 Sinopis or Sinopum, a painters colour, why so called, 528.k
 of divers kinds, ib. which is the best, ib. the price, ib.
 the use in painting, ibid. the medicinale vertues,
 528.l.m.
 Sinesse, water, medicinale, 402.l
 Sin, what herbe, 130.k. the description, ibid.
 Siphonian stone, employed in vessels to seeth meat,
 592.b
 Sinia-

Sinias in children, what diseases,

Sinias, a strange and unknowne beast, 399.d
 Sifapoz, a territory in Spain famous for a mine of Vermilion,
 yielding to Rome a great rent yearly, 476.i
 Silybium, an herbe described, and the vertues that it
 hath, 75.f
 Silybichos, a kind of bulbous herbe, 19.b. the strange na-
 ture that it hath, ibid.

S K

Skab and scurf in man or beast how to be healed, 36.g
 42.b. 49.e. 58.b. 64.k. 74.i. 128.k. 129.a. 146.i. 149.c
 155.f. 161.a. 166.l. 168.j. 169.a. 173.c. 197.d
 319.f. 338.l. 333.g. 370.f. 377.d. 413.b. 418.m. 419.b
 420.g. 443.m. 450.b. 506.k. 516.b. 557.g.
 Skald head how to be healed, 43.f. 52.g. 59.d. 60.g. 72.g
 105.f. 127.c. 133.c. 141.b. 142.f. 143.g. 155.f. 157.g
 158.m. 161.f. 163.b. 177.f. 178.g. 180.g. 191.g
 196.b. 201.a. 207.f. 232.g. 249.f. 277.d. 287.g. 306.i
 324.b. 334.l. 357.a.
 Skarefire named at the table ominous, 297.e
 how the danger of a Skarefire may be averted, ibid.
 Skars and their strokes or marks remaining, how to be re-
 duced to their natural colour, 36.b. 39.f. 53.f. 61.b
 65.a. 144.g. 149.g. 189.f. 266.b. 286.f. 287.g. 319.f
 328.b. 339.a. 394.f.
 medicines skinning without Skars, 51.a
 Skars or marks how to be taken out of the skin, 239.d
 245.a.
 Skars rising up above the flesh, how to be brought downe,
 430.d. 448.b. 475.a. 518.l.
 Skege or wild Plums what vertues they afford medicina-
 ble, 169.d
 Skin of face or body blemished with spots and speckles un-
 derneath by what means it may be cleansed, 37.a. 106.i
 144.g. 157.f. 160.f. 171.g. 184.k. 185.g. 200.k
 207.g. 268.j. 308.g. 311.g. 314.k. 318.m. 377.b.e
 475.a.
 Skin pulled and skaled, and full of scurf, how to be mended,
 103.b. 158.m. 377.c.
 Skin of the face rough and rined, how to be made smooth
 and even, 192.k. 368.k. 311.g. 327.g. 377.g. 420.g
 489.a. 591.g.
 Skin looking wne and dead, how to be made fresh and lue-
 ty, 377.f
 Skinned and itching how to be deliued, 337.a
 Skin of the body how to be made faire, white, and smooth,
 399.i. 413.b. 559.f.
 Skin forshed with cold wines how to be helped, 311.a
 Skin worn wild, the properties thereof, 41.a
 Skin worn too accepted by Tiberius the Emperour, 18.b
 how to Skare clothes, 157.f

S L

Slaves three enfranchised by Claudius the Emperour, sor-
 passed T. Craffus in riches, 479.e
 Slaves who having bin chalked on their feet for the market
 were made really afterwards, and in honourable estate,
 561.a.b
 Sleepy what manner it may be procured, 42.g. 43.d. 44.b
 46.g. 49.a. 63.i. 67.g. 68.g. 102.k. 103.b
 165.m. 161.g. 162.g. 166.g. 171.d. 191.g. 234.c
 239.d. 259.d. 260.k. 277.c. 303.c. 311.g. 398.k. 421.l
 450.c.

Sleepe how to be dissolved in a drowsie disease, 144.b. 398.E
 446.b. See more in Lithurgie and Drowsie dis-
 ease.
 Sleeping on the right side commended, 303.e. See Lying
 in bed.
 how to Sleepe securely without fearefull dreames and visi-
 ons, 357.a. See Illafions.
 Slen, their vertues in Physicke, S M 169.d

S M

Smagardes, a mountaine, why so called, 612.m
 Smaragd, small fishes medicinale, 444.m
 Smyrnium, the herbe, how strangely it groweth, 30.g. why
 it is so called, ibid.

S N

Snap-dragon, an herbe, 231.E. the description and ver-
 tues, ib. See Calnet frons.
 Snakes with shells excellent for the lungs, 380.k. how to
 be dressed, ibid. which be the best, ibid. those of the ri-
 ver and their medicinale vertues, 435.e
 Snake slough of great efficacy, 376.l
 Snake, whether they cast their slough at the rising of the
 Dog Starre, or no, 376.k
 Snake dedicated to the god of Physicke,
 in the forme of a Snake Asclapius came to Rome,
 358.b
 Snakes when they are venomous, 358.g
 for Snakes and Adders poison, what remedies be appropri-
 at, 226.m. 227.a. 294.l. 358.g. 435.c.
 in Sneezing, why we wish health to our neighbour & friend,
 297.e
 Tiberius Caesar very ceremonious in that point, of being
 salued when he sneezed, 297.c
 Sneezing by what means it is provoked, 55.d. 109.b. 193.a
 218.k. 232.l. 239.e. 291.a. 430.l
 Sneezing immoderate, how to be staid, 66.i. 155.e. 183.e
 218.l.
 Sneezing in what cases wholesome, 304.k
 Snow laid for and sought in Summer, 11.e
 Snow water, whether it be lighter and bitter than spring
 water, 406.g

S O

Sodars of sundry kinds, 472.g. of Gold, ibid.
 of Iron, 472.b. of Brasfe in masse, ibid.
 of Brasfe in plates, ibid. of Lead and marble, ibid.
 of bucke Lead, ib. of Tiney, of Silver, ib.
 Sochis, a King of Aegipt that reared Obeliskes, 574.l
 Socrates, a famous Imaginer in marble, 569.a
 Socrates a painter highly commended, 549.a. 569.a. his
 works, 549.a
 Sola fish medicinale, 443.f
 Solanum, what herbe, 112.b. the hurtfull qualities that it
 hath, 112.i
 Soldanella, or sea Colewort, a purgative, 51.e
 Soldanella, 359.c
 Solting, or Solpuga, what Insects, & the remedies against
 them, 145.b. 361.e
 Solon of Smyrna a writer in Physicke, 71.b
 Soluble how the body may be made and kept, 74.b. 121.f
 122.b. 126.b. 137.a. 172.l. 164.b. 166.b. 167.a
 169.c. 170.g. 172.f. 180.k. 181.a. 182.m. 186.g
 199.l. 199.e. 250.k. 254.l. 267.c. 276.b. 277.a
 279.e. 287.b. 288.g. 311.b. 387.d. 331.f. 380.j
 384.k

384.k. 417.d. 419.e. 437.f. 442.l. 443.g. 470.k.
 a Soot to beautify and colour the eyebrows, 324.f.
 Sops, whose invention, 328.l. how it is made, ib.
 Sops and scouring balls consisting of salt, 417.d.
 Sopswort or Fillers weed. See Cudicula.
 Sphacelus his foolish opinion as touching Amber, 607.d.
 Sopylos, a brime painter, 551.b.
 Sores in face or head how to be healed, 202.b. See Vlcers.
 Sorcerie condemned by Pliny, 273.e. See Charmes.
 Sorrel or Sorewood, 33.d. 73.a. the description and properties thereof, 73.b.
 Sornatus, a writer in Physicke, 438.b.
 Sorsifera, a fruit, their medicinale vertues, 171.b.
 Sorie, a mineral, 509.g. 510.g. of divers kinds which is best, 509.g. hurtfull to the stomacke, ib.
 Sotismene, a Physician and writer, 66.l.
 Sotistratus, a famous Architect and Engineer of Gnidos, 578.b.
 Sotacra, a writer, 586.m.
 Sotira, an expert midwife and writer in Physicke, 309.e.
 Sow-bread, what herbe, 122.g. d. See more in Syclama-mus.
 Source-milke. See Cherne-milke.
 Sow-thistle, an herbe, described, 131.b. the kinds thereof and the properties, 131.b. c.
 S P
 Spaine, a country studious in simples and herbes, 221.b.
 Spaine the goodliest country next to Italie, 632.m.
 Sparganium, what herbe, 228.l.
 Sparta, what they are, 6.g.
 of Sparte, 6.g. hath description, ibid. appropriat to Spaine, and may be called Spanish broome, ibid. the uses thereof, 6.i. k. l. the nature thereof, ib.
 Spartopolis, a pretious stone, 630.m.
 Spartum what it signifieth in Greeke, 188.g.
 Spartacus forbid to haue plate of silver or gold in his camp 463.f.
 Speed or successe how to be obtained in law suites, 627.f.
 in warre, 628.g.
 Spasme. See convulsion and Cramps.
 Spels. See Charmes and Words.
 Spels. See Zen.
 Spereage of the garden excessive big, 11.d.
 Spereage wilde of the garden, and of a middle nature, 27.c. d.
 Catoes rare for their ordering, 27.e. f. 28.g. b. their medicinale vertues, 53.a.
 Sperme. See Seed Naturall.
 Spheix in brass most curiously wrought by Phidias, 566.b.
 Spheix a man of brass worke in Aegypt, 577.b. hath description thereof, 56.b. c. thought to be the monument wherein king Amasis was entomb'd, ib.
 Spheix, certain pretious stones that scale fairest, 620.b.
 Spheix what earth, 529.a.
 Spheyrana, a fish. See Sudi.
 Spicknell. See Menn.
 Spilamene, an image of Praxiteles his making, 500.k.
 Spirit how revived and recovered, 59.c. 830.b.
 Spirit made dull by some water, 430.g.
 Spitting observed superstitiously in averting witchcraft, 300.g. in preventing leucemey, ibid. in turning away the displeasure of the gods for some bold petition, ibid.

in curing the operations of medicines, 300.b.
 in forcing the party that one hath hurt, and repented therefore, ibid. in helping a beast fainted or hipped by a blow given, 300.g. in giving a sweeter blow to an enemy, ib.
 Spittle conueighed backward behind the eare, what it signifieth, 297.d.
 Spittle fasting of what vertue, 300.g. k.
 Spittle fasting of a woman medicinale, 308.b.
 Spittle of certaine men, medicinale against serpents, 299.a.
 Splanchnotes, an image in brass curiously wrought by Strapax, 502.l. why so called, ibid.
 Splanchnotes, 123.e.
 for the Splene pained, swelled, hard, obstructed, or otherwise diseased, proper remedies, 39.d. 40.k. 45.e. 49.f. 51.b. 52.g. 56.b. i. 60.g. 61.a. 62.f. 64.f. 67.d. 73.d. 75.e. 101.b. 103.f. 104.g. 105.e. 119.d. 121.e. 122.g. 124.f. 127.g. 128.k. 130.k. 143.b. 144.b. 146.k. 150.g. i. 164.g. 167.e. 169.f. 173.d. 178.g. 180.k. 187.g. 188.b. 189.e. f. 190.f. l. 193.a. 196.f. 198.i. 207.d. 208.g. 216.m. 253.d. e. f. 254.g. 263.a. 274.f. 275.f. 277.e. 287.g. 288.b. 289.d. 290.i. 291.e. 313.b. 318.i. 339.b. k. 341.d. 352.a. 381.d. e. 424.b. 430.g. 431.g. 443.f. 444.g. 447.a. 516.f. 529.b.
 Splenion, what herbe, and why so called, 217.a.
 Splenichs, sores in the skin, how to be brought to a fresh colour, 339.a.
 Spodium of Lead, 520.g. how washed, 158.l.
 for Spodium a succedan, ibid.
 Spodos what it is, 511.f. the nature of it, ibid.
 Spodos of sundry sorts, 512.g. how to be washed, ibid. b. the vertues, ibid.
 Spodos Lawritios, the best Spodos, 512.i.
 what things serve in stead of Spodos, 512.i.
 Spodylimm, an herbe, 181.a. the vertues thereof in Physicke, ib.
 Spodum, a fish, medicinale, 446.i.
 Spodum in Spereage, what they be, 27.d.
 Spodum, a pretious stone, why so called, 620.d.
 Spots and speckles blacke in the skin, how to be taken out, 621. 161.f. 266.b. 314.k. 377.d.
 Spots or yron moles how to be taken out, 47.d. 161.e.
 Spraines of sinewes how helped, 334.m.
 of Springs and fontaines a discourse, how to find them, 408.k. l. m. 409.a. b.
 Springs of waters arising upon the stocking up and cutting downe of woods, 410.k.
 Sprus salted, medicinale in some cases, 434.b.
 Spuma Argenti. See Litharge.
 Spunge of fresh water, a kinde of herbe, 280.g. why called Conferva, ibid.
 Spunge of male sex, 423.a. it was wont to be died purple, ibid.
 Spunges of female sex, 423.b.
 Spunges how they are made white, ib.
 Spunges have a sensible life, 430.g.
 Spunge stones what they be, 589.d. why they be called Testiculi, ibid.
 Spunges used in frictions, and rubbing of mens bodies, 424.k.

whether Spunges haue hearing or no, 423.e.
 which Spunges be best, ibid.
 the generall use of all Spunges, 423.e. f.
 they serve in stead of Lana Succida or unwashed grease woad in wounds, 424.g.
 Spunge afflicke medicinale, 424.g.
 Spunges commonly divided into African and Rhodack, 424.k.
 where the finest and most delicate Spunges be found, ib.
 Spunge, an herbe, 284.g. the description, ibid.
 Spurge. See Testimales.
 Spiders venom, what remedies for it, 65.b. 187.d. 196.g. 431.f. 433.f.
 S Q
 Squama, a fish, the skin whereof is medicinale, 444.l.
 Squilla or Sea Onion, 18.l. the description & properties, ib.
 more qualities that it hath, 99.g. the sundry kinds, 18.m.
 how to be ordered, 19.a.
 Thymagoras wrote a booke of Squilla, 18.m.
 Squilla male and female, 51.c. how to be prepared, ib. how to be boiled or calcined, 51.e.
 Squilla the leaf. See Pancration.
 Squillitice vinger the vertues thereof, 156.l.
 S S
 Scanzianca, a disease of the throat, with what medicines it is cured, 361. 39.d. 42.k. 44.g. 61.e. 66.g. 75.e. 76.i. 103.e. 104.l. 135.i. 147.e. 157.b. 158.g. 172.b. 183.g. 196.g. 205.f. 212.d. 245.k. d. 277.d. 287.d. 301.d. e. f. 311.f. 318.k. 378.k. l. 419.b. 422.k. 432.i. 442.g. 471.e. 510.i.
 Squinath, a fish, described, with the kinds and vertues thereof, 102.g.
 S T
 Sta. by the herbe described, 199.e. the vertue thereof, ib.
 Stag, Hind, Hart, and Doe, enemies every way to serpents, 321.f. their horns, ib. skin, ib. e. remnet of a Hind-calf, 321.f.
 genetrix of a Stag, and his pizze, ib. rim of the pannch ib. teeth, ib. their blood draweth serpents together, ib.
 Staining of clothes in Egypt, how it is practised, 550.e.
 the commoditie of clothes so stained by sweating, ibid. d.
 Staphis or Atyphis Ariana, what herbe it is, 248.l.
 Starre-fish medicinale, 433.f.
 Starre-floure, the properties of it, 140.l.
 Statere, what drinking cups or mazers they were, 482.b.
 Statice, what herbe, 250.b.
 Staty Statues first when they came up at Rome, 482.l.
 Romanes honoured at Rome with Statues by strangers, 493.a.
 Statues erected for them at Rome who were killed in embassage or service for the state, 491.f.
 the measure or ordinarie of Statues, three foot, 492.g.
 Statues in use at Rome, 492.l.
 Statues of plures, when first admitted in Rome, 492.m.
 three Statues of Anniball enen in Rome, 493.e.
 Statues what herbe, what a disease coming from the Greekes, 490.f.
 women honoured with statues on horsebacke, 492.l.
 Statues riding triumphant, or otherwise in charriots, when they were first seene at Rome, 490.m.
 Statues erected upon columns, are of great antiquity, 491.a.
 what they signified, 492.k.

Statues without any robe, 491.e.
 Rome full of Statues and images, 491.f.
 Statues Thesaurica, 491.f.
 Statues described, 148.l. it is not Vasa Taminia, ibid.
 where it loveth to grow, ibid. m. the kernels dangerous inwardly taken, 149.a. the undecidable vertues, ibid.
 Statues, a pretious stone, 630.b.
 Stomatoma, what kind of wens and how cured, 265.e.
 Steele what it is, 514.i. divers kinds, ibid. k.
 Stedra, a word about what it importeth, 388.i.
 Stellion (the Lizard) their venomous, flightfull, and envious nature to mankind, 388.i. most dangerous to scorpions, 361.b. how they cast their tongue or skin, 388.k. l. the same is medicinale, ibid. i.
 the diverse names and description of these starre-Lizards, 361.b.
 Stellion, 361.b.
 against the sting and poyson of Stellia, remedies, 140.g.
 Stephanomelus, what herbe, 263.f.
 Stephanoplos or Stephanoplos, a picture of Glycena, 80.l.
 made by Pansias the painter, who loved Glycena, 546.l.
 Stephanus an image of Praxiteles his making, 500.k. why so called, ibid.
 Stedilios, what kind of Litharge, 474.k.
 Stereobron, an herbe. See Hysiocke.
 Q. Stertinus, a famous Physician at Rome, and a great taker of fees, 244.k. he and his brother rich, impudent, and dead wealthies, 344.f.
 Stenagor such like bardesse rising in the eyelids, how to be cured, 324.m.
 Stribi or antimonie, 366.g.
 Stribum. See Stimm.
 Striches in sides how to be eased, 120.b. 120.f. 121.e. 126.k. 195.a. 202.g. 516.g. See Sides and Plurisie.
 Strife and starke for cold, how restored, 263.a.
 Striffenest of times how to be made limmer & supple, 422.k.
 Stilo Praconius his merrie scoffe upon a Spaniards figure 601.e.
 Stimm, a mineral, 473.g. of two kinds, ib. their description, ibid. their medicinale vertues, 473.g. f. principal for the eyes, ib. how to be prepared, 473.f. 474.b.
 Stinking smell of any part of the body, how palliated, 128.b. 161.d.
 Strapax, a curious imaginer and his worke, 502.l.
 Stipendium and Stipend, whereof these words are derued, 462.f.
 Strabe, what herbe, 110.f.
 Strachan, an herbe, where it groweth, 289.f.
 Stomacacum, what disease, 110.k. See Scelytyrbe.
 anguish of Stomacke is most painfull next unto strangurie, 213.e.
 Stomacke weak and feeble how to be comforted, 285.g.
 383.b. 437.e. 558.k. 591.a. 624.l.
 paine of Stomacke how eased, 76.l. 102.k. 106.m. 135.m. 163.e. 172.m. 186.l. 196.b. 283.g. 312.b.
 for Stomack infirmities and diseases in generall, appropriate remedies, 37.f. 38.f. 48.a. 42.k. 46.g. 47.e. 48.b. k. l. 50.l. 51.d. 52.e. 55.e. 57.g. 60.f. 63.m. 70.b. 74.g. k. 76.f. 77.e. 78.m. 102.k. 111.e. 119.c. 122.g. 129.a. 130.g. 141.f. 142.g. 147.a. b. 158.g. 161.f. 163.b. 164.k. 170.b. 174.k. 197.g. 200.k. 246.f. m. 288.i. 380.d. m. 434.g. 437.g. 609.c.

Stomachicall conuulser how cured, 329.f.
Stomachicall conuulser how to be pacified, 283.g, 329.d
Stomachicall competition, and the effect thereof, 104.m
The reason of the name, *ibid.*
Stomachicall, and other stomachicall, how made, 170.b, 192.b.
Stone, a sing. in berbe. See *Sedritus*.
Stone that forueth life, 593.d.g
A Stone swimming whole, sinking broken, 587.d
Stones are not of life nature to abide the weather, in building, 593.c, d
Aure of a miners nature and constitution for building, 588.d
Stone in bladder, or kidney how to be broken and expelled out of the body, 394.d, 546.b, 600.k, 664.7.k, 73.d, 74.l, 76.f, 77.g, 78.g, 101.a, 104.b, 111.a, f, 120.a, k, 132.b, 125.c, 127.b, 128.l, 130.l, 143.a, 173.b, 175.b, 182.m, 195.d, 196.k, 206.l, 254.g, 255.c, d, 281.b, 283.b, 284.m, 289.a, 301.c, 312.b, 332.d, m.
The paine of the stone how eased, 194.b, 384.g, h, i, 402.l, 403.b, 430.g, 443.c, 444.g, h, i, 489.d, 629.f.
A Stone voided out of the body, 301.c
Stones fished for building, how to be prepared that they may serve, 593.c
A Stone dog-biten, causeth diffention in what house sooner it is, 285.a
The use of a Stone, what vertues it hath, 595.c
Stone cutting and graven more ancient than painting or casting brass, 595.c
Storax the gum how to be chosen, 180.l, the vertues that it hath, *ibid.*
Storax, *ibid.*
Strawberry tree. See *Arbutus*.
Strangerie counted the most painfull disease, 213.c
For strangerie or pissing dropicall, the remedies, 40.k, 41.d, 54.f, 58.g, 106.b, 111.a, d, 119.d, 127.c, 131.d, 157.f, 179.b, 185.a, 188.b, 195.c, 199.c, 202.g, h, 216.b, 254.g, 255.f, 274.k, 283.b, 284.m, 290.m, 316.m, 354.g, 384.g, h.
Strawgine what causeth, 384.b
Strawgine, what berbe, 203.m, the description, 205.a, the vertues medicinale that it hath, *ibid.*
Strawgine the Quercus wife to K. Autocubus, pictured vnder the C. Cleides, 549.e
Strawgine, a cunning grauer, 483.e, his workmanship, *ibid.*
Strawgine of mines how to be fished, 316.b
Strawgine in yron what they be, and why so called, 514.i
Strawgine of gold, what they be in Spaine, 465.e
Striking of the head at such a day of the Moone obserued for what purpose, 298.i
Stromb, a certaine Winkles or shell-fishes medicinale, 446.i
Stromb, what Almes, 558.f, of two sorts, and their description, *ibid.*
Strophis and Stropholia, what they be, 80.i
Stromon. See *Crownfoot*.
Stromon, what berbe, 280.g
Strutium, what berbe, 10.g
Strophon, 280.g, what berbe, 112.b
Strophon, a fountain yielding a venomous water, 400.b, 405.a
S V
Sulphuric, what it is, 606.b
Successe in petitions how obtained, 314.g

Successe against aduersary at the barre, and enemy in field, how to be procured, 315.f, 354.f, 354.g, 357.b. See more in Speed.
Succinum Amber, why so called, 607.e
Sudinet, a writer, 573.c
Suda, a fish, 452.l, the nature of it and the description, *ibid.*
Sulphur, what kind of *Aluromet*, 132.m, their deadly poison, 133.a
Sulphur in borset, 338.l
Sulphur-vit is naturall, 556.i, why it is called *Apron*, *ibid.* See more in *Brimstone*.
Sumach of curriers, 192.g
Sumach of the kitchen, *ibid.*
Sun-burning how to be taken away, 161.b, 306.b, 327.e, 419.b
Sun and sale singular for the goit, 629.e
Sunt gem, a precious stone, why so called, 294.l, as their Superstitious ceremonies, obserued at their meat, 297.f, f.
Attaching Superstitious ceremonies, *Servius Sulpitius* wrote a booke, *ibid.*
Suppuration how to be discharged out of the breast, 200.l
Swabbing of the feet how to be helped, 185.b
Sweet spiss how to be helped, 303.k
Sweet in general what doth resist, 115.d
Sutherland, the berbe, described, 91.b.c, the vertues that it hath, *ib.*
The degrees in goodnesse, 108.i
S W
Swallows young that be wild, are better for Physick than other, 378.i, those called *Ripari* be best, *ibid.*, how to be calmed, *ibid.*
Swelling occasioned by windnesse, how cured, 136.k. See *Pneustics*.
Swelling hard how to be allued, 337.b. See *Tumours*.
Sweat of certaine mens bodies medicinale, 299.a
Sweats how to be procured, 67.b, 103.g, 122.b, 160.f, 102.k, 167.g, 182.g, 187.f, 193.g, 202.b, 233.g, 284.k, 290.k.
Sweats symptomaticall, diaphoreticall, sinking, and immoderat, how to be repressed, 48.k, 78.k, 102.m, 153.e, 160.i, 161.e, 174.k, 241.e, 251.f, 558.k, 560.i.
Swimming in water for what it is good, 414.g
Swine how they will follow one, 399.f
How cured of squinsies, 268.l
Swine how to be cured of all their diseases, 206.b, 450.k
Sword-fish his names, 428.i, his description and nature, *ib.*
Swimming or fainting of the heart how to be recovered, 55.b, 180.g, 381.b.
S Y
Sybaris, a river, 403.c, the water thereof is wonderfull operation, *ibid.*
Syce, what it is, 41.d
Syce. See *Peplor*.
Syctis, a precious stone, 631.a
Sycomore, what tree, and the vertues in Physicke, 169.e
Sylla Dictator the richest Roman that euer was, 479.d
Sylla Dictator honored with a chaplet of greene grass, 117.c, d.

be

he signed with the image of King Ingurtha prisoner, 601.e
Syluer when it was first stamped into coine at Rome, 402.m
Romans imposed their tribute to be paid in Syluer, and not in gold, 464.b
Caesar Dictator furnished the solemnity of the cirque games with Syluer, 464.k
A. Antonius exhibited his plaies upon a scaffold of Syluer, *ibid.*
C. Calpurnius for pageants oil of Syluer, 464.k
Syluer tried out of gold ore, 467.b
Syluer found only by digging pitt, 472.i, cannot be tried without lead or lead ore, 472.k
Syluer mines found in all places, but the best in Spaine, *ibid.*
damps in Syluer mines precious, but to doge especially, 473.a
Syluer of two kinds, 478.g, how the best is knowne, *ibid.*
Syluer in plate painted by the Egyptians, and why, 478.l
Syluer images enamelled blacke by what means, 478.m, 479.a
Syluer for fish-worme in lead of gold, by whom, 483.a, b
Syluer much used by souldiours, *ibid.*
Syluer employed in case and vnicely used, 483.b, c
Symbo, an, what it signifies, 455.b
Symmetrie obserued by Lysippus the Imaginer, 499.e
Symmetrie is a terme that cannot be expressed by a Latin word, *ibid.*
Sympathies obserued, 175.f
Sympathie in naturall things, 35.c
Symponia, an hearb, 247.f, the description and vertues, *ibid.*
Symphitum Petrum, an hearb, 275.d, why called *Symphitum*, *ib.*, why *Petrum*, *ibid.*
Synarsisense, 174.b
Synecismus, a picture, 650.a
Synochitis, a precious stone and the vertues of it, 511.a
Synodontes, certaine fishes, 629.e
Synodontis, a precious stone, *ibid.*
Synonym, a writer in Physicke, 59.d
Synum or Syron, the juice extrahed of Lillie flowers, 1032.i, the vertues thereof, *ibid.*
Syron what hearb, 247.a
Syropicon, a kind of Sami in earth, 559.d, the use in Physicke and how it is knowne, *ibid.*
Syrtis, a precious stone, 629.e
Syrtetris, a magicall herb, and the effects thereof, 204.g
Why so called, *ibid.*, why named *Protomedica*, *ibid.*
Zgum, what it signifies, 74

T A
Tables at Rome twaine, all of silver, 481.e
Tada or Torch wood, what vertues medicinale it hath, 148.g
Tania, a sea-fish, 429.d
Talc, or glass-stone, where it is found, 592.i, k, the nature of it and manner of engendering, *ib.*
exceeding durable in all weathers, 592.l
The use of Talc reduced into flakes and smaller pieces, 592.l.
Talent simply signifies the Attick Talent, 548.k, what it amounteth to, *ibid.*
Talent Egyptian what it weigheth, 464.i
Tallow or seuer of the same nature that greace, 320.k
how to be ordered and prepared, *ibid.*, which is the best, *ibid.*
Tamaricus a river, the fountaines whereof foretell future events, 404.l
Tamarix or Tamariske, a plant, 188.k
the sundry kind and names thereof, *ibid.*
Tamariske, how it is employed, 188.b, the medicinale uses thereof, *ib.*, the antiquitie between it and the plectre, *ib.*
why called the *unluckierree*, 188.k
Tammacum, what hearb, 111.e
Tangle, a sea-weed, 437.c. See *Reiti*.
Tanos, a bastard Emerald, 613.a
Taor, a precious stone, 630.k
Tapertwort, an hearb. See *Mullen* and *Longwort*.
Taphisius, a kind of Eagle stone, 590.b, why so called, *ibid.*
Taphosia, a citie in Egypt, 277.e
Tar, what medicinale vertues it hath, 183.e, how it is made *Palmipila*, *ibid.*
Taracia Caia, a benefactresse to Rome, honoured with a statue, 492.b
Tarentum the citie had the name for making the best candlesticks of brasse, 488.l
K. Tarquinius Priscus, by what policie he kept his people at worke vnder ground about his vaults and finks, 582.k, l.
K. Tarquinius Priscus his rampiers, a wonderfull piece of worke, 582.b, the foundation of the Capitol, and the vaulted finks which he made, are admirable, 582.b, c
Tast in the month how to be recovered and seasoned, 148.g, 183.e.
Tast indiciall of bitter and sweet, why not in all persons alike, 136.k
Tattauus salt, most medicinale in what case, 419.a
Tauri fier, a kind of Beetle, 379.e, why so called, *ib.*, they be named also *Pedunculati Terra*, *ibid.*
Tauriscus of Tralles, a grauer in marble, 569.b
Tauriscus a cunning grauer in brasse, 483.a
Tauriscus a painter renowned for his worke, 550.i
Tazil, what berbe, 239.c, the description, *ibid.*, 280.k, the vertues, *ibid.*
T E
Teats of milch-beasts sore, how to be healed, 148.g
Teclithi. See *Spunge* stones, good to expell and break the stone in wans body, 629.f
For all accidents of the Teeth, a remedy, 443.e
eye-Teeth of man or women dead, supposed to bee of great vertue, 302.g
Teeth how they may be made white, and so kept, 641, 129.a, 140.i, 160.i, 168.g, 326.a, 352.l.
Teeth corrupt, hollow, worme-eaten, and sinking, by what means cured, 159.b, 168.k, 239.b, c, 252.b, 440.k, 624.i.
Teeth how to be preserved from rottenesse and the worme, 168.g, 190.i, 419.b.
Teeth rotten and hollow, how they may be broken and had out by peccemeale, 179.c, 190.i, 239.e
P p p
Teeth

Teeth hollow and rotten, how they will fall out with ease, 138.b. 150.d. 179.e. 302.g. 376.k. 440.g.
 Teeth hollow in paine how to be eased, 276.b. 440.k
 acb of the grinders or great iaw Teeth, how to be remedied, 440.b
 Teeth loose by what means they may be set fast, 38.g.b
 41.e. 70.g. 72.g. 73.e. 109.e. 124.b. 156.b.m. 159.b.c
 160.g. 184.d. 185.d. 184.b. 196.b. 197.a. 238.i. 239.b.c
 326.a. 331.b. 377.a. 440.e.
 Telephus, a famous Imageur and his works, 500.b.i
 Telephum an hearbe, thought to be Opvine, 290.i
 the description and vertues, ibid.
 Telicardus, a pretious stone, 629.d
 Telirrhizos, a pretious stone, ibid.e
 Telmeius, a superstitious city, addited to soothsaying and magicke, 372.i
 Tempest and thunder how to be raised, 315.e
 Temple of Diana in Ephesus how long a building, 159.b
 how it was founded and scituar, ibid. the description thereof, ibid.
 Temple of Cyzicum and the description thereof, 581.a. by whom built, ibid.
 Temple of Diana Anaitis, religious and sacred, 470.g
 spoiled by Antonie the Triumvir, ibid.
 Temple of Peace built by Vespasian the Emperour, a stately piece of worke, 581.f
 Temple of Fortuna Sera, built by Nero the Emperour, all of Phoenician stone, 592.m
 Tephris, what kind of Marble, 573.e
 Tephris, a pretious stone, 629.f. the description, ibid.
 Tepula, a water ferring Rome, 585.d
 Terebinth or Terpineum tree, what medicinable vertues it hath, 181.e
 Terpentinosus is the best, 182.k. good to nourish the body and make it fat, ibid.
 Terra Sigillata or Lemnia, 529.a. it was sealed in old time, and thereupon called Spargu, ib. the medicinable vertues thereof, 529.a
 Terraces, whose invention, 596.g
 for Terrian agues, what remedies are convenient, 70.l
 112.g. 123.k. 125.a. 126.k. 205.b. 223.d. 260.b.k
 287.c. 302.b. 309.e. 310.a. 391.e. 403.b. 424.i
 446.a.
 Testiculum Canic. an hearbe, 279.d. the description, ib.
 a double root it hath like to dog stones, ib. the different vertue and operation of these roots, ib.
 Testes, what they are, 442.k. their description and vertues medicinable, 443.e.d
 Tetradoron, what kind of bricke, 555.d
 Tetragnathum, a kind of Phalangium or venomous spider 360.k the manner of their prick and the accidents ensuing thereupon, ibid.
 Teters called Lichenies, disfiguring the face, how cured, 156.g. 173.e. 183.e. 192.a. 224.d. m. 245.a. 437.e. 556.d. 557.d. 560.b.
 for other tetter, meet remedies, 56.g. 45.e. 49.e. 52.i. 56.k
 72.g. 75.b. 103.b. 124.b. 128.k. 142.i. 143.e. 144.l
 146.i. 157.e. 166.l.m. 168.k. 169.a. 172.a. 187.e
 252.b. 300.i. 413.b. 419.b.
 Teuca queen of the Lybians, put Romane embassadours to death, 491.f
 Teucris, a famous graner, 494.g

Teucris, an herb, 247.b. a speciall hearbe for the liver, ib.
 Teucris, an herb, why so called, 216.l. the description ibid.m
 and vertues, ibid.
 T H
 Thalassigle, what hearbe, 203.e. why called Potamantis, ib.
 the strange effects thereof, ibid.
 Thalassomeli, a syrrop how to be made, 413.d.e. the singular vertues thereof, ibid.
 Thalesium or Thalsitram, an hearbe, 291.a. the description and vertue, ibid.
 Thapsia, an hearbe, the root whereof is medicinable, 245.b.
 Theamides, contrary in nature to the Leadstone, and reiecth yron, 587.c
 Theangelis, a magicall hearbe, and the vertues thereof, 203.f.
 Theatre of M. Scaurus, a most wonderfull and sumptuous piece of worke, 583.e. with the description thereof, ib.
 Thebau salt, for what infirmities good, 419.b
 Thebes a city in Egypt built hollow upon vaults, 580.b
 it had about it an hundred gates, ibid.
 Thelygonum, what hearbe, 257.d. the vertues that it hath, 268.b
 Thelyphonon, what hearbe, 230.d. the description, ib. l.m
 the reason of the name, ibid.
 Thelypteri, a kind of Eoane, 281.d
 Thelmon, a professor in Physicke, 344.i. he wrote a Treatise in praise of Plantaine, 223.b
 scholar to Asclepiades, ib. he reiected his masters Physicke, and brought in new, 344.i
 Theodorus, a writer in Physicke, 52.i
 Theodorus, a most curious and fine Imageur and graner in brasle, 503.a. he cast his owne image and a coach, &c. most artificiall, ibid.
 Theodorus one of the Architects that built the Labyrinth in Lemnos, 579.c
 Theodorus, a painter, for what pictures hee was famous, 550.b.i.
 Theombrotion, a magicall hearbe, described, 203.e
 the nature thereof, ibid.
 Theomenes his opinion as touching Amber, 506.l
 Theon, a painter, and his worke, 550.i
 Theophrastus his opinion of Amber, 606.k
 Theophrastus wrote of flowers and hearbes, 82.l
 Theriac, a kind of grape, 148.i. the medicinable vertues thereof, ibid.
 Theriac, what troches, 377.e.f. how they be made, & their use in present time antidots, ib.
 Theriaca, a magicall hearbe, the strange effects thereof, 203.d.
 Therionacea, another hearbe described, 229.c
 the reason of the name, and the effects that it hath, ib.
 Thesius, a picture of Euphrator his doing compared with another that Pirajius made, 547.d
 Thesium, what hearbe, 129.e
 Thesimporia, what castles, 187.b
 Thestides the nine Muses wrought in brasle by Emblicrat, 500.g
 Thestides also engraven in marble, 570.g
 Thessalie practised Magicke, whereupon Magicians were called Thessalians, 377.i
 Thes-

Thessalia, a comedie of Menander, detelling the vanities of Magicke, 372.m
 Thessalus, a Physician, 344.l
 ibid. he flourished, 344.l
 he altered the Physicke of his predecessors, 344.m
 he was taught openly against them, 344.m
 he entailed himselfe upon his tombe Latronices, 345.a
 Thoudactylus, a pretious stone, 930.b
 Thoralis, an hearbe, 287.a
 Thotus, what monet in Egypt, 286.g
 against Thirsifene appropriat remedies, 43.b. 51.e. 60.b.i
 67.b. 70.g. 73.a. 120.b. 129.b. 171.e. 275.e
 Thylasi or Thalsie, what hearbe, 291.a
 of two kinds, ibid.
 their description, ib. why so called, ibid.
 Thorne Arabian, the medicinable vertues that it hath, 194.i.
 Thracian, a pretious stone of three kinds, 629.f
 Thracian stone foolest burneth by the meane of water, 472.b.
 Thrasillus, a writer in Physicke, 435.d
 Thre-leafe graffe. See Trefoile and Clauer.
 A fish bone sticking in the Throat, how to be removed, 302.l
 328.k.
 Throat swelled, how to be assuaged, 158.i
 Throat sore and excruciating, how to be healed, 418.b. 328.i
 378.g. 589.b. 609.b.
 for Throat infirmities generall remedies, 41.f. 59.e. 74.k
 120.b. 113.e. 157.b. 180.d. 245.b. 246.f. 317.a
 328.i.
 Thyrsillus, what hearbe, 230.k
 Thumble of K. Pyrrhus medicinable, 295.f
 Thumble bending downward, a signe of approbation, 297.d
 Thourianus, a famous potter, 553.a
 he made the Image in the Capitoll of Iupiter in clay, ib.
 Thunderbolts do sent or smell of brimstone, 557.a
 Thufcanica, what petie images, 494.g
 ibid. i. 494.g
 Rome full of them, ibid.
 Thyme of Attica is best, and therefore the honey from thence is chiefe, 90.k.
 Thyme of two kinds, ibid.
 when it flourisheth and how, ib.
 by it is knowne what a yere will be of honey, 107.e.d
 the description and nature of Thyme, 90.k
 the vertues, 107.d
 running Thyme, 75.d, why it is called Serpyllum, ib.
 wild Thyme, where and how it groweth, 31.c.d
 the properties that it hath, ibid.
 Thymbracum, what hearbe, 233.e. the vertue, ibid.
 Thysicium, what hearbe, 233.e. the vertue, 98.b.g
 Thysiles and their sundry kind, 98.b
 Thysiles wild of two sorts, 98.l
 Thysiles forbidden to be eaten by Roman Commoners, 111.d
 T I
 Tiberius Censor a grimfist, yet delighted in pictures, 527.f
 See Tiberius.
 Tier of Flax, 41.k
 Tiker in dogs how to be killed, 121.i
 Tikes highly esteemed by Magicians, 587.b.d
 their fooleries in the use of Tikes, 419.b.
 Timagoras, an antique painter, 537.d

Timaeus, a naturall Philosopher, 666.i
 Timotheus, an excellent painter, 536.k. famous for the picture of Sphigonia in Andides, ib. a man of fine conceits, ib.
 Timarete, a paintresse famous for her penfull, 534.g. 551.a
 her picture, ibid.
 Timomachus, a painter of good note, 548.k
 his picture, ib.
 Timotheus, a famous Imageur and cutter in stone, 568.l
 rich Tintillures, which three be principall, 88.k
 Timeum, what disease it is, 249.a. the remedies thereof, 44.i. 49.e. 55.e. 66.i. 70.b. 72.k. 73.d. 126.g. 143.o
 172.b. 249.b. 278.l. 283.b. 318.k. 332.b. 359.e. 382.k
 413.a. 437.e. 443.d. e. 474.b. 520.i.
 Tinglaffe. See Leadwhite.
 Tin of diuers kind, 517.e.d
 sundry uses of Tin, ibid. how it is sophisticated, ibid.
 Tin Tertarium, what it is, 517.d. the use thereof, ib.
 Tin Argentarium, what metall and how employed, 517.e
 Tysse, 466.g
 Tithymales, a kind of wild Poppie, 69.c
 Tithymalus, what hearbe it is, 251.e. the sundry names thereof, ib. what is practised with the milke iuice of it, 251.e.f.
 Tithymall of many kinds, ibid.
 1. Tithymalos Characius, 251.f. the description, ib.
 the iuice extracted, 252.g. the vertue, ib.
 2. Tithymalos, Myrsinites, or Caryites, 252.a. the reason of both names, ib. the dose thereof, ibid.
 3. Tithymalos Paralius, or Tithymalus, 252.l. the description and dose, ibid.
 4. Tithymalus Helicopisus, 252.l. the description, ib. the reason of the name, ib. the vertue that it hath, ib. the dose, ibid.
 5. Tithymalos Cyparissius, why so called, 253.a. the description and operation, ibid.
 6. Tithymalos Platysphyllos, 253.a. the reason of that name, ib. why it is also called Corymbites, ib. why named Amygdalites, ib. the vertues, ib.
 7. Dendroides, Cobion, or Lepiophyllon, the description and effect, 253.a.b
 Titum, a man noted for being full of the soule Morpheus, 403.a.
 Titvill in young children hanging forth, how to be reduced, 451.e. See Eusmandum.
 Tlepolemus, a Physician, 67.a
 T O
 Toads or venomous frogs described, 434.l. why called in Latine Rubeta, ib. wonders written of them, ib. a bone in one of their fides of great efficacie, ib. and 435.a
 how to be found, 435.a.m
 against the venomous poison of these Toads, remedies, 119.e
 223.d. 251.a.b. 252.g. 300.k. 307.e. 431.f. 434.i
 435.b.e.
 Toadflax, an hearbe, 286.i. See Oxyris.
 Toadfootes, 7.f. 132.l.m. See Musli. Pomeri
 Tongue of man medicinable, and of power to avert ill fortune, 300.m
 Tongue blistered and sore, how to be cooled & healed, 328.i
 Tongue furred and rough how to be mundified, 59.e. 192.i
 419.b.
 Tongue speechlesse how it may be recovered, 60.k
 Tongue

Tongue-pals: how to be cured, 134.m
Against an Ulcer at the lying Tongue, a remedy, 316.b
Toos in painting, what it is, 528.b
Toniffs: what they are, 135.d. inflamed or sore how cured, 183.e. 196.g. 197.d. 378.g.b. 437.d. 444.e. 507.f. 509.e. 510.i. 609.f. See Amygdalites.
Tooting in children how to be eased, 105.b. 311.b.c.d. 376.b. 397.e. 398.g. 449.e.
Tooth or biting of man or woman mad, is venomous, 301.a the same in some cases is medicinal, ibid.
in a fist of a Tooth one killed himselfe, 135.a
for the Toothach proper remedies, 36.g. 38.g.b. 109.m. 42.b. 44.g. 45.b. 47.g. 53.d. 56.i. 57.j. 62.i. 64.f. 65.b.c. 70.g. 74.e. 73.f. 74.g. 102.l. 109.e. 123.a. 128.i. 149.a. 161.e. 168.g. 169.a. 171.a. 178.g. 179.e. 180.k. 181.e. 184.g.b. 187.l. 190.g. 199.f. 201.f. 206.l. 238.b. 239.g.b. 252.b. 273.a. 274.k. 286.i. 302.g. 312.g.b. 316.l. 326.i.k.l.m. 327.a. 373.f. 367.g.b.k.l.m. 419.f. 422.g. 431.f. 432.j. 449.g. 510.b. 557.f. 589.e.
Topaze thought to be the Chrysolith, a precious stone, 618.k where it was first discovered, ibid.k.l. it is first traced by queene Berenice, ib. the image of queene Arpines, wife to Ptolemaus Philadelphus, made of the Topaze, ib.d.
Topaze of two kinds, to wit, Praseoides, and Chrysopoeus, 618.m. it is filed, in it weareth with use, ibid.
Topazus, an Island why so called, 618.l.
Tordale, what it is, 206.b.
Tordition, what it is, 74.b.
Tortois live both in land and water, 431.d. their manifold uses, ibid.
Tortois of divers kinds, ibid.
Tortois of divers kinds, 431.e. their crime also is effectually in Physicke, according to the Magi, 432.g.
sea-Tortois medicinal, 432.b. 438.g. their blood, 132.a. their gall, ib.
more Tortois described, with their properties, 432.l.
finer Tortois, and their vertues, 432.m.
Tortois how to be dressed to cure the quartane ague, 433.a. how to be let blood artificially, 433.b.
a Tortois foot in a Physicker her course, ibid.
Tortois are medicinal, ibid.
they be fished for rois and wantonnesse, 431.b.
Tortois fishes when used at Rome, 432.g.
Touchstone, 477.f. where it is found, 472.g. how to be chosen and used, 472.g.
Tow of flax, what it is, 340.l. how employed, ib.
Toxica be poisons, what remedies against them, 119.a. 150.m. 177.d. 180.b. 323.d. 355.c. 364.b.
Toxicaria kind of Ladanium, 249.d.

T R
Trachina, an herbe, 291.e. the incredible effects which Democritus attributeth to it, ib.
Tragacantha, a great healer, 264.k.
Tragi, what Spenger, 423.b.
Tragion or Tragion, an herbe, 291.e. the description, ibid.
Tragegon, an herbe, 291.d. the description, ibid.
Tragionum, an herbe, 64.d. the description and the vertues, ib.

Tragos, an herbe, 291.d. the description, ibid.
Transplanting curesh many diseases in herbes, 33.d.
Trachelers, what wine they may drinke, 155.d.
Tracle or Theriaca, the composition thereof, 79.b. it was K. Antiochus his counterpoison, ibid.
another Tracle or Theriaca reproued, and the composition thereof, 348.i.
Trebus Niger, a writer, 428.i.
Trees how they prove harder to be hewed, and wax drier, 176.g.
Treasure at Rome of gold and silver, 464.d. m. 465.a.
Trembling of joints, or shaking of limbs, how to be cured, 49.d. 67.d. 121.b. 155.d. 162.k. 183.e. 219.d. 261.m. 283.f. 312.i. 359.e. 431.a. 447.a.
Trembling of the heart how to be cured, 48.b. 49.f. 174.i.
Tricium art, what they were at Rome, 459.f.
Trichter, a kind of eAllum, why so called, 558.k.
Trich, madame. See Prick madame.
Tricomanes, what kind of Maiden-haire, 127.a.
Trich, a precious stone, 629.e. the description, ib.
Tricocum, 126.g.
Tridachna, certaine Oysters, 437.b.
Trident, a small piece of brass coin at Rome, 463.b. the Trident or brass piece of the Scervil at Rome, and the wonderful nature thereof, 513.a.b. fed with silver or gold, ibid.
Trifolite or Trifolite of three kinds, 60.f. the vertues thereof, 107.b.
supposed by Sophocles and others to be a venomous herbe, 107.b.
not to be used but as a counterpoison, 107.c.
Trigletes, a precious stone, 630.i.
Triptaminum, what, 554.g.
Triptichalmus, a precious stone, 630.b.
Triorchet, what herbe, 221.b.
Triorchis the Hawke defendeth the herbe Centaure Triorchet, 221.c.
Trips or Goldsmiths earth, 530.l. how it is coloured, and which is best, ibid.l.m.
Triptolium, what herbe, 247.e. the description, ib.
the vertues, ibid.
Triptanum, what kind of Colewort, 26.i.
Tricium, the Wheat, where it is sown in Physicke, 138.g.
Trisium, a kind of painters colour, 435.a. the Price, ibid.
Triumphall Coronets, 115.f.
Triumphall capaines, why they rode painted with Vermillion, 475.e.
Tridachnes of Elaterium, for what they are good, 36.g.
Trichuket of Peppie, in what cases used, 68.g.
Trichet of Cyclamine whereto employed, 234.b.
Trichuket of Scammone, 151.c.
Trichis Theriac, 557.e.
Traczen, a territory, wherein the people be subject to the gout, and the reason why, 403.b.
Trogus, a writer, 424.i.
Trojan at Rome who they were, 461.a.
why the horsemen were called, ibid.
Trich, 475.e.

Trychnis, an herbe. See Strjchnus.
Tryxalis a kind of Insest, and the vertue thereof in Physicke, 381.b.

T V
Tuccia, the Nun or vestall votarie, put to prone her virginity, 295.a. she carried water in a sieve, 295.b.
Tullius Hostilius K. of Rome killed with lightning, and wherfore, 295.d.
for hard Tumors and swelling bunches, appropriate remedies, 37.e. 44.k. 45.f. 64.b. 65.f. 66.l. 73.a. 77.f. 105.d. 108.g. 111.g. 111.y. 121.k. 123.e. 135.i. 135.d. 136.k. 141.e. 142.g. 146.i. 159.a. 160.l. 160.m. 166.i. 168.k. 174.f. 178.b. 181.b. 185.d. 186.i. 189.e. 193.d. 195.e. 218.k. 223.e. 236.i. 245.e. 250.e. 262.i. 337.b. 349.f. 392.b. 531.e. 448.g. 475.a.
how such hard Tumors or schirrosities may be evaporated and dissolved, 139.f. 412.d. 419.f. 424.i. 500.b. 588.m.
Tungriz, a city famous for hot baths, naturall and medicinal waters, 403.b.
Tunie fish salted, called Cybium, medicinal, 434.b. 440.g.
Turbot fish medicinal, 444.g.
Turbyllum, what it is, 471.b.
Turps. See Rapet.
Turning the body about, was the gesture of mispitting the gods, 297.e.
Turnell an herbe, 126.g. two kinds thereof, Tricocum, Helioscopium, the description, ibid.
Turpius, an excellent painter and yet left-handed, 52.b. 619.a.
Turquois or Callais, a precious stone, 619.a. the description, ibid. which be the richest, ibid. a.c. where they grow and how they be gotten, 619.b. how the Indians were them, 619.c. what breeths them, and how they be falsified, ibid.c.
Turrets and watch-towers raised of earth were, most durable, 555.c.
Turrets in Cyzicium rendering echoes, 581.c.
Tulligod. See Poleson or Coughwort.
Tutellor god, or the protectour and patron of Rome city, not knowne and divulged, 296.a. the reason thereof, ibid.

T Y
Tiberius Caesar, the first knowne sick of the collicke at Rome, 242.g. See Tiberius.
Tyllet. See Linden tree.
Tympane what curesh, 219.d.
Tyridates K. of Armenia, a famous Magician, 374.m. he travelled out of his owne kingdom to Rome by land for to do homage to Nero, 375.a. why he took not the sea, ib. he instructed Nero in the principles of art Magick, ibid.

V A
Valens Valerius a Rhetorician and Physician, 344.d. inward and outward familiar with Messalina the emperress, 347.e. he erected a new sect and schoule of Physicke, 344.i.

Valerian, an herbe. See Setwall.
Valare chapters what they were, 115.e.
Tamie of Magicians reckoned up and derided, 302. per totum page, 310.b.
Varro, a writer in Physicke, 42.k.

V E
Veientana, a precious stone, 630.g.
Venis (swelling called Varices), how to be eased, 123.e. 164.g. 257.e. 279.e. 334.d. 385.e.
Venis broken by overstraining the voice or sides, how to be knit againe, 264.g.
Velnus, a lake medicinal, 402.d.
against the danger of venomous arrows, 316.a.
against the price and poison of venomous beasts, remedies, 41.f. 42.m. 43.e. 55.e. 57.a. 69.f. 113.e. 118.m. 127.f. 134.d. 155.f. 157.f. 173.d. 187.d. 231.e. 431.g. 435.e.
Venison, how the Frenchmen make more tender, 210.g.
Venusties in stomacke, bellie, or elsewhere by what means assisted, 46.g. 50.g. 53.a. 55.b. 57.c. 61.b. 61.d. 62.i. 63.a. 66.b. 68.m. 67.f. 77.b. 102.g. 105.f. 106.l. 107.f. 108.m. 119.g. 121.e. 125.f. 129.f. 143.e. 153.g. 154.g. 160.l. 186.i. 187.g. 195.e. 196.f. 219.e. 237.a. 250.f. 253.g. 259.g. 277.a. 280.a. 290.k. 337.g. 359.e. 363.e. 383.b. 422.f. 431.a. 443.g.
Venus, a precious stone, blacke, and shining withall, 629.f.
Venus of Apelles, i. the grace of his picture, which the Greekes call Charis, 563.f.
Venus Palatina, who was called, ibid.
Venus, a lone affliction, how to be abated, 435.b. how to be forgotten for ever, 450.b.
Venus, Nautil, an herbe. See Vmbilicus veneris.
Venus, for lust to the act of generation, by what means incited, 38.l. 40.g. 43.b. 44.j. 52.k. 53.b. 55.d. 56.g. 67.b. 72.i. 105.m. 126.f. 128.k. 129.g. 130.g. 131.m. 144.k. 181.e. 189.a. 191.d. 200.g. 226.f. 256.g. 247.a. 256.g. 279.d. 310.m. 321.f. 316.i. 341.f. 342.g. 359.a. 398.f. 399.a. 433.g. 435.a. 450.g. 450.g. by what means repressed, 53.d. 56.g. 70.a. 113.d. 187.a. b. d. 189.a. 257.a. b. d. 299.d. 316.k. 318. 341.b. 342.g. 398.l.m. 399.f. 404.b. 432.g. 435.a. 450.g. 518.l. condemned by Democritus and wherfore, 304.l. it helpeth some infirmities, 301.e. moderately used it is wholesome, 304.l.
Venus, an Image in Marble knowne by the name of Aphrodite is now at Athens, whose workmanship it was, 503.d.
Venus, an Image wrought by Agoracritus, 565.i. by what occasion called Nemesis, ibid.
Venus of Guidus naked, wrought in marble by Praxiteles, an admirable piece of work, 566.i. a wanton fellow enamoured on her, ibid.
Venus vailed, by him also made, 566.k.
Venus naked wrought by Scopas, 567.e.
Veneratrum, what herbe, 218.g.
Verbasum, an herbe. See Longwort.
Verbenas, what they were, 115.d.
Verbenarius, what officer at Rome he was, ibid.
Verd de Asius, a painters rich colour, 528.i.
why called Armenius Lapis, 531.e. the price, ibid.
the, ibid.

the use in Physicke, *ibid.*
Ver de gris, what it is, 507.e. 508.g. *Achilles first used it in a cure,* 213.f
Verd de Terre, a painters colour, 528.i. See *Borax.*
Vermine of grapes, 146.g. the medicinale vertues, 146.m.
Vermilion the best is sophisticated with a second kind, 476.l. with *Scyrium*, *ibid.*
 which is the best *Vermilion*, and how knowne, 476.m.
 477.a.
Vermilion a minerall, 454.g.
 workmen about *Vermilion*, are marked, and why, 477.b.
 in great account among the *Romans*, 475.f. and *E-*
thiopiens, *ibid.* when it came first into use, 475.e.
Vesica limbing booke, and *seculchre*, 477.c.
 what it is, and how prepared, 475.e.
 the lustre of *Vermilion* hurt by *Sun* and *Moone*, 477.d.
 how that may be prevented, *ibid.*
Vermilion, a *crampeson*, taken inwardly, 476.b. 477.e.
 where the best *Vermilion* is, 476.i.
Vermilion reckoned for a rich and lively colour, 528.i.
Vermilion how carefully it is looked vnto, and sent sealed from *Silapione* to *Rome*, 476.k.
Vermine, as *ants*, *Cankerwormes*, and such, how to be driven out of a garden, 32.k.
 against all such *Vermine* and *wormes*, 42.k.
Vetres prescribed by *Antonie* the *Triumvir* for his faure *Corinthian* ocell, 487.d.
Vetrum Flaccus, a *Romane* writer of *Chronicles*, 296.g.
 466.g.
Verrucaria, an herbe, why so called, 126.b.
Vervaine, an herbe, 228.g. the sundry names that it hath, *ibid.* much esteemed among the *Romans*, *ibid.*
 the diuers kinds, *ibid.* the vanity of the *Druide* and *Magi* about this herbe, *ibid.*
Vesica in the kitchen of *silver*, by *Calvus* the *Orator* his daughter, 580.i.
Vestas chappell at *Rome* conered with *brasse*, 489.b.
Veteran *Delirium*, a temple, 428.l.
Vetonica, an herbe. See *Betonie*.
 V I
Vibones, what they be, 112.l.
Victorinus, what piece of *silver* coine at *Rome*, 463.c. why so called, *ibid.*
Vitiorie in the field how it may be obtained, 337.c. See *Speed* and *jasceffe*.
Vindex Iulius how he deccined *Nero* the *Emperour* with his pale lookes, 61.e.
Vine compared with other trees, 146.g. the vset thereof in *Physicke*, *ibid.*
Vingere, the nature and properties thereof, 155.d.
 the inconuenience and discommodities, 156.b.
 the force of *Vingere*, *ibid.*
Vingere of boye, or *lained*, medicinale, 96.g.
Vingere dregg, the nature and vertues, 158.g.
Vingere *quassitie* how it is made, 51.d.
 the vertues thereof, *ibid.*
Violet of *sundry* sorts, 85.d.
March Violet, *ibid.*
 yellow *Violet*, or wall-flowers, *ibid.*
Tuscan Violet, *ibid.*
 sea-Violets, *ibid.*

Celastrian Violets, *ibid.*
 the medicinale vertues of *Violets*, 103.e.
Violet flowers best dried, 104.g.
Viper venom, by what medicines it is killed, 64.b. 115.b.
 173.a. 357.d. they yeld remedies for their own sting, 357.d.
Vipers how to be prepared for meat at the table, and to preserve eye-sight, 367.a.
 decoction of *Vipers*, for what it is medicinale, *ib.*
Virginie, or the contrary, what doth shew and bewray, 589.e.
Virgo a water ferring *Rome*, 408.b.
 why so called, *ibid.*
Virra, what ornaments they are, 462.g.
 why called *Celtice*, *ibid.*
Viriole, what ornaments they be, 462.g.
 why called *Celtiberica*, *ibid.*
Village in some countries painted with the iuice of certaine herbes, 114.l.
Village how to be preferred from *Sinne* burning, 351.e.
Village and conuenience how it may be preferred yongful, 65.e. 101.b.
Village how to be cleansed from specker, scales, freckles, yed pimples, and such like blemishes, 75.b. 94.k. 103.d. 107.g. 108.b. 127.e. 130.f. 141.b. 145.b. 149.e. 161.b. 185.e. 186.f. 187.a. 197.d. 290.f. 308.g. 310.f. 314.k. 328.g. 351.e.
 how it may be made to shew selfe faire and lovely, 171.d. 341.e.
Vitellius the *Emperour* his monstrous charger or platter of earth, 554.b. his excellency and vanitie that way, noted by *Mastianus*, 554.b.
Vitex, what tree, and the vertues thereof, 187.a. why called *Agave* or *Chast-tree*, *ibid.*
Vitrioll naturall, a minerall, 530.i. the wonderful nature of it, 510.f. how engendered, 510.m. 511.a. of two kinds, and how engendered, 536.i.
Vitrioll so aspringent, that it will bind *Beares* and *Lions* month like a *muzzle*, 511.d.
Vitrioll or blacke, a painters colour artificiall, 528.k.
Vitrioll *Stalagmias*, what it is, and why so called, 511.a.
Vitrioll *Leucius*, *ibid.*
 the best *Cyprian Vitrioll*, the medicinale vertues of it, 511.b.
 V L
Ulcers cancerous, corrosiue, and eating deepe, as *wolues* and such like, by what medicines cured, 40.g. 41.g. 45.b. 46.f. 47.e. 49.a. 50.g. 56.k. 62.m. 70.f. 72.m. 76.k. 101.e. 103.b. 106.f. 107.g. 122.f. 125.e. 138.m. 143.b. 144.i. 149.d. 150.i. 158.l. 160.b. 162.g. 163.b. 165.a. 168.f. 173.e. 174.k. 178.g. 180.g. 181.a. 183.d. 184.g. 188.b. 189.e. 190.k. 192.b. 193.d. 194.m. 197.d. 206.g. 207.b. 208.g. 263.d. 264.k. 265.e. 266.g. 285.e. 287.d. 300.a. 301.b. 302.b. 304.g. 320.b. 338.b. 339.g. 343.f. 394.g. 418.k. 419.f. 422.b. 443.g. 447.e. 559.b. 510.k. 516.k. 519.d. 559.g. 559.f.
Ulcers of inward parts by what means healed, 105.a. 154.g. 317.d.
Ulcers filthie, full of dead fesse, and tending to mortification, how to be mundified and cured, 45.e. 44.f. 69.a. 70.b. 105.e. 109.f. 121.d. 125.e. 128.g. 132.e. 157.b. 159.b.

141.b. 420.d. 256.f. 442.b. 518.m. 521.d.
 Voice helped by some water, 403.e.
 what hurteth the Voice, 443.a.
 straining and exercising the Voice maketh for health, 303.d.
 Voice, what it is, 132.b.
Vomit what medicines do ster, 37.c. 41.b. 47.e. 55.g. 55.e. 59.e. 60.k. 62.b. 66.i. 70.b. 75.e. 76.a. 105.f. 146.g. 146.l. 156.m. 164.f. 17.k. 206.d. 219.b. 248.b. 273.g. 275.b.
Vomit by what means it may be prouoked, 37.e. 40.g. 67.a. 71.e. 105.d. 121.e. 128.i. 136.f. 173.b. 173.g. 204.m. 218.d. 248.g. 252.k. 253.g. 289.g. 291.b. 413.a. 412.b. 471.e. 507.a. 511.b.
 appresse to beane, cast, and vomit, how to be helped, 145.b. 253.e. 155.d. 181.e. 184.b. 198.i. 219.e. 224.f. 247.a. 287.e. 303.d. 305.e. 312.b. 352.l.
 Vomiting was taught vs by dogs, 355.e.
Vomit bitter how to be allayed, 148.g.
Vomit ordinary, in cure of diseases, condemned worthily by *Aclepiades*, 243.f.
Vomit now and then is healthfull, but not usually, 303.e.
 Vomiting at sea for what it is good, 412.l.
 Vomiting of blood out of the stomack, how to be cured, 329.d. See *Blond* casting and *Reaching*.
Vomels in the proper name of persons, significant for their fortune, according to *Puhagoras*, 295.d.
 V R
Ranoscopus, what fish, 438.i.
Ricolaris what herbe, 112.d.
Ricolaris yndat of singular operation to prevent bleeding of haire, and to reconvert it againe, 364.l.
Ricobis, the strange nature both of him & his vein, 364.g.
 sea *Ricobis* medicinale, 436.b. 438.g.
Ricobis beaust. See *Baffles* and *Bifontes*.
 Rine and the speculation thereof obserued in the iudiciall part of *Physicke*, 306.k.
 of *Rine* ambours haue written, *ibid.*
Rine white and cleare what it betokeneth, *ibid.*
 deepe coloured and yellow, *ibid.*
 red *Rine*, *ib.* 306.l.
 blacke *Rine*, *ib.*
 full of Bubbles, *ibid.*
 full of fresh, *ibid.*
Rine of a thicke substance, what it importeth, *ibid.*
 hypostasis of *Rine* beaust, what it signifieth, *ibid.*
 hypostasis or sediment white, what it doth betoken, *ibid.*
Rine greeneish, what it presageth, *ib.* pale, *ibid.*
 contents in *Rine*, brannie, brackish, and cloudie, what they presage, *ibid.*
 of *Rine* of children ought to be thin and materly, *ib.*
 in others what it sheweth, *ib.*
Rine, what medicines do procure, 37.b. 39.a. 40.k. 41.b. 45.f. 47.b. 51.f. 53.b. 54.b. 55.e. 56.i. 60.k. 62.i. 63.e. 64.k. 65.d. 67.b. 72.l. 73.d. 74.b. 75.e. 76.b. 77.b. 101.d. 102.g. 103.f. 104.i. 105.a. 108.k. 110.g. 111.b. 112.b. 122.g. 124.e. 125.f. 127.f. 128.f. 129.d. 130.g. 131.a. 142.b. 143.g. 150.g. 162.i. 164.i. 167.g. 171.d. 172.l. 174.i. 181.e. 182.m. 184.g. 185.e. 187.g. 189.f. 192.i. 193.e. 195.d. 196.g. 198.i. 199.b. 200.g. 202.g.
 P p p +

of Plinies Naturall Historie:

[illegible]

*W*heales *argylli*, small pools, and such
 be cured, 46.b.70.2.140.
*W*h. g. 183. b. 187. c. 219. f. 317. d.
 443. b. 437. d. 558. i. 559. b. 589. b.
*W*heating in the chest, how helped,
*W*hey of cows milke for what medicines
*W*helfes or young puppies sucking in
 at Rome,
 they learned there for an expiatorie
 they made adish of meat at their fa-
*V*the losses of sundry kinds,
 which be cured with water, & white
 Spanish *V*White. See Ceruse burnt.
 Spanish *V*White, or Ceruse naturall,
*V*Whites in women, how prescribed, 516.
 men.
*V*Whiteflaves about the nates how to
 I. 41. a. 147. b. 158. f. 160. g. 174. f.
 516. b.
*V*Whiteflones,
 W I
*W*ild-fires and such like setting on
 quised, 72. g. 75. b. 106. b. 124. b.
 287. b. 529. b.
*W*ildings or crab apples and their na-
 wild-vine called *Ampelos* *Ægia*, des-
 the virtues,
*W*ild-vine *Labrusca*,
*W*ild-white vine *Ampelocence*,
 the root hath many vertues,
*W*herbe *V*Willow. See *Lisimachia*.
*W*illow or *W*ithie, what medicinal use
*W*illow yeldeth a juice of three kin-
*W*ine of *B*acchus, what,

[illegible]

Wolues, how they may be kept out of a territorie, 320.
 Wolues greace much esteemed in old time, 320.
 the bride therewith striked the dore sides of her husbands
 house, *ibid.*
 Wolues, sores, how to be cured, 149.
 See more in *Pleces* cancerous and eating deepe.
 Wombe. See *Bellie* and *Guts*.
 Women with child longing and having a depraved appetite,
 how to be helped of that infirmities, 155.
 Women's breasts aking, how to be assuaged, 340.
 Women's breasts or paps enflamed, swollen, hard, sore, and
 imposts, by what means cured, 167.
 148, 182, 183, 266, 279, 307, 320.
 Medicine of blond one of Women's breast heads, how to be fran-
 ched, 263.
 Women's breasts over big, how to be brought downe, 340.
 haire bringing about their breast nipples, how to be rid
 away, 268.
 for all infirmities of Women's breasts in generall, convenient
 remedies, 70, 72, 104, 108, 138, 142, 143, 161, 164, 166, 169, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

gents delighted to expresse in brasse, 503.
 Women's exesse and prodigall wast of gold in Plines time,
 taxed, 462.
 Women excellent painstresses, 551.
 Wood-eun in sleepe, how to be helped, 218.
 Wood, sweet or wood-forsell, an herbe. See *Oxyi*.
 Wood-ind, an herbe, 288, the description
 the verties, *ibid.*
 Words pronounced in charms or spells, whether they should
 be strange or familiar, 296.
 whether Words barely uttered anate not in curing dis-
 ease or no, 294.
 A set forme of Words in praier, innocations, and exorcisms,
 belide be materiall in many respects, 294.
 Worms of divers sorts medicabile, 393.
 Worms in the bellie how to be killed and chused out, 39.
 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Wounds

Wounds made by sword edge weapon, what healing me-
 dicines they require, 338.
 Wounds occasioned by the whip or scourge, together with
 the water of their lasses remaining after, blacke, & blew,
 how to be healed, 394.
 Wound-beares, and great healers, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 69

The Table to the second Tome

of Tron sundry sorts,	514.b.k	ibid. how long hee was about it, and what payment hee had for it,	496.b
Tron, better or worse by reason of the water,	514.k	Zenon, a writer in Physicke,	131.e
for good Tron and Steele cunnies renowned,	ibid.	Zenathemis, a writer in Naturall Philosophie,	606.b
of Tron sundry degrees in goodnesse,	413.k.l	Zeros, a pretious stone,	623.c
edged tooles of Tron, how to be hardened,	513.m	Zenzia, a most renowned painter, 534.b. whou he flourished, ibid. his praise, ib. his wealth, ibid. his beautifull mind and high opinion of his owne pictures,	ibid.
Tron blade having once shed mans blood, given euer after to rust and canker,	515.a	his Mot under Penelope by him drawne in a picture, ib. his other work,	534.l
Tron what vertue it receiveth from the loadstones,	ibid.	what was his fault,	534.l. 535.a.b.c
Troie. See Elephants tooth.			
Tway. See Darnell.			

Z A

Z Achatis a Babylonian and writer in magicke,	627.e
Zanthenes, a pretious stone,	630.g
Zaratus a magitian,	37.a.i
Zarmocenedes, a magician,	ibid.
Z E	
Zea or Spelt, a graine, what vertue it hath in Physicke,	138.b
Zedonim. See Setwall and Phu.	
Zeno the philosopher his image, Cato would not sell with other pillage,	504.m
Zenodorus, an excellent imaginer and engraver,	496.g
he made the Colosse of Mercurie at Auvergne in France	

Z M

Zmilaces, a pretious stone,	630.g
Zmilau, one of the architects that made the Labyrinth in Lemnos,	579.c

Z O

Zopphibalmos, what herbe,	237.c
Zoprus, a notable graner,	483.f
two cups of his making of great price,	ibid.
Zopissa, what it is, 184.g. which is best, ib. the vertues, ibid.	
Zoroastres first practised art Magicke,	372.b
Zoromios, the Magicians gem,	630.g

Z V

Zura, what it is,	145.b
Z Y	
Zyklus, a kind of ale or drinke made of corne,	145.b



An Aduertisement.

WHereas in the former edition this page was stuffed full of Errata, which were occasioned by reason of the various matter and words used in this Historie, not common obvious in other Authors; such care in this second Edition hath beene taken, as that they haue all beene amended, whereby the Readers paines to mend, or be offended with them, is taken away. This I thought good to giue notice of, least any should thinke them omitted, not amended.

